2018 Hard-to-Reach
Standard Offer Program

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1. Background

Since 2001, Texas' electric distribution utilities have been implementing energy efficiency programs under new rules developed to increase the level of energy efficiency in Texas. Here are some of the highlights of the new rules:

CenterPoint Energy (CNP) is required to achieve an annual energy efficiency program goal equal to 30% of its projected growth in demand. Utilities can no longer provide "competitive energy services" directly to customers.

In order to achieve the 30% demand reduction goal, CNP implements "standard offer programs," and "market transformation programs" as prescribed by the Public Utility Commission of Texas (PUCT).

Utilities are required to ensure that 10% or more of these energy savings come from "Hard-to-Reach" customers.

Hard-to-Reach (HTR) customers are customers with an annual household income at or below 200% of federal poverty guidelines, or who meet certain other qualifications.

Who can submit an application to be a project sponsor?

The Hard-to-Reach Standard Offer Program (HTR SOP) is open to a wide range of contractors, service companies, community agencies and other organizations. No individual project sponsor may apply for more than 20% of the HTR SOP incentives per year, which will allow numerous businesses and organizations the opportunity to participate as project sponsors.

The PUCT has issued a wide range of rules and requirements for the standard offer programs. The purpose of this manual is to identify and explain these program requirements, and act as a reference for project sponsors.

- All administration questions and/or concerns should be directed to Roxanne McFarland, 713-207-3511 or roxanne.mcfarland@centerpointenergy.com

1.1. 2018 Program Highlights

- The 2018 Hard-To-Reach Standard Offer Program applications will be open on the database on Monday, November 14th.
- A/C tune up measure in now eligible for the 2018 program for HVAC certified contractors
- A/C changeout minimum requirement 15 SEER 12 EER
- For ceiling insulation any site that is claiming R5 or below will be required to provide a photo of pre-existing & Post insulation levels. With the post you must have picture of ruler showing the new insultation level.
- Resubmittals will not be allowed. All documentation and customer signatures must be provided upon submission of project. Any sites that are missing documentation or customer signatures will be excluded from the project.
- LEDs are eligible for the 2018 program
- The program database can be found here, http://centerpoint.anbetrack.com

- Customer forms are now required to be uploaded to the project in the database.
- A/C Sponsors are required to provide an AHRI certificate. Please refer to section 5.1.7
- Please note the, 'No Heat', option for heating shall be added to the RES and HTR

- A reference letter is required for those sponsors that are applying for Duct Sealing and Air Infiltration measures. Please refer to section 2.7.1.
- Leakage to outside testing is the only acceptable testing method for Duct Sealing measure. Please refer to section 2.7.1.
- A HERS rater, with a current certificate, must be on site for all Duct Sealing and Infiltration testing. Please refer to section 2.7.1.All Project Sponsors who desire to install duct efficiency measures will be limited to scheduling two homes per day until notified by the project manager. Please refer to section 5.1.4.
- Project Sponsors are only allowed to subcontract for <u>one</u> other company. If your company has a subcontractor, you may not subcontract for any other company. Please refer to section 5.1.3..
- Please submit multifamily projects for approval and pre-inspection before work is started. Please refer to section 2.6.
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2. Program Design

2.1. HTR Program Template

All HTR SOPs to be implemented by the investor-owned electric utilities in Texas are required to comply with a number of program conditions approved by the PUCT. The primary objective of these program requirements is to ensure that comprehensive energy-efficiency retrofits are provided, and that the residents' health and safety are not jeopardized.

2.2. Program Description

The HTR SOP was developed by CNP to provide financial incentives to suppliers of energy services for implementing electric energy efficiency projects at CNP's existing HTR single and multifamily customers' residences. New Construction is allowed under this program provided they are not-for profit housing or social services organizations built to current ENERGY STAR standards. The primary objective of this program is to achieve cost-effective reduction in our summer peak demand, winter peak demand, and annual energy consumption.

In a standard offer program (SOP), project sponsors propose to deliver certain levels of peak demand savings (measured in kilowatts, or kW) and annual energy savings (measured in kilowatt-hours or kWh). CNP pays a fixed ("standard offer") price for each kW and kWh of savings. All payments to project sponsors are based solely on kW and kWh savings. CNP pays all incentives directly to the project sponsors, not to customers. Project sponsors are not required to provide any direct incentives to customers, but are required to execute a contract with customers which indicates that the project sponsor is participating in a CNP program and is receiving incentives for participating.

CenterPoint Energy has designed the HTR SOP to encourage electric energy efficiency improvements that go above and beyond the efficiency gains typically achieved in replacement-on-burnout projects. Consequently, energy savings credits for such measures will be based only on energy savings that exceed current federal minimum efficiency standards, if such standards apply. In cases where standards do not exist, and on early replacement or retrofit of existing equipment, demand and energy savings will be based on efficiency improvements relative to typical efficiencies in like circumstances (subject to other limitations as specified herein).

For a definition of "baseline" and other terms used in this Manual, please consult the Glossary, included as Appendix D.

2.3. Project Sponsor Requirements

A project sponsor is any organization, group, or individual who contracts with CNP to provide energy savings under the HTR SOP. The following types of organizations are eligible to participate as project sponsors:

- Owners or operators or multifamily residential buildings;
- Energy service companies (ESCOs);
- Local contractors;

- Not-for-profit housing or social service organizations;
- National or local companies that provide energy-related products (e.g., lighting or HVAC); and
- Retailers are also eligible if they install the particular energy-efficient products sold as part of this program.

Project sponsors in the HTR SOP must meet eligibility criteria, comply with all HTR SOP rules and procedures, submit Project Application forms and supplemental documentation describing their projects, and execute CNP's HTR SOP Agreement. CenterPoint Energy requires project sponsors to demonstrate their qualifications as part of the application process to help ensure that the proposed projects will be successful in delivering the estimated energy savings. Project sponsors must provide specific information on their qualifications in the areas of insulation installation and duct sealing, if these measures are to be included in the proposed project. Project sponsors proposing to utilize a subcontractor to provide these services are required to identify the subcontractor and provide information on their qualifications. This requirement is described in further detail in Section 5. CenterPoint Energy requires project sponsors and their subcontractor to carry all insurance required by law, and all insurance as described in the Standard Offer Program Agreement.

One of the features of the HTR SOP is that CNP will rely upon the marketing capabilities of project sponsors to sell projects to CNP's residential customers. CenterPoint Energy will not directly market any energy efficiency-related product or service to its customers. **Entering into an agreement with CNP as a project sponsor does not imply CNP's endorsement or approval of any company, product, or service.**

2.4. Participant Eligibility

2.4.1. Home Eligibility

Homes built after January 2002 are not eligible.

Homes which previously received the ENERGY STAR® certification are not eligible.

2.4.2. Affordable Housing Single-Family New Construction

New affordable single-family homes are eligible for incentives under the Hard-To-Reach SOP. For 2018, $50,000 in incentives has been allocated for these homes. In order to qualify, the home must:

- Be constructed to meet ENERGY STAR® standards, as certified by a qualified home energy rater, and
- Target populations with incomes at or below 200% of the Department of Health and Human Services Poverty Guidelines (see http://centerpoint.anbetrack.com for details).
- If the home is being constructed inside Houston city limits, the central A/C unit installed must be 14.5 SEER or above and the windows must have a Solar Heat Gain Coefficient (SHGC) of 0.30 or less to qualify.

Projects targeting populations with incomes at or below 80% of the statewide or local median family income are eligible to participate in the "affordable housing" new construction program. Single-family homes constructed under the following programs are categorically eligible:

- Habitat for Humanity
- HOME
- CDBG
- Housing Trust Funds (state or local)

Other affordable single-family new construction projects may be eligible if it can be demonstrated that they target hard-to-reach homebuyers.

The incentives paid for affordable single-family (ASF) new construction shall be based on the per-home energy and demand savings values that are calculated for each home, using the methodology approved for CNP's ENERGY STAR® New Home Market Transformation Program. The ASF program has specific incentive rates.

2.4.3. Documenting the Eligibility of Hard-to-Reach Customers

Hard-to-Reach customers are defined as those customers with a total household income of less than 200% of current federal poverty guidelines. These income levels are as follows:

2018 - 2018 HTR Annual Income Eligibility Guidelines*

Size of Family	HTR Household Income Threshold 200% of Federal Poverty Guideline
1	≤ $23,540
2	≤ $31,860
3	≤ $40,180
4	≤ $48,500
5	≤ $56,820
6	≤ $65,140
7	≤ $73,460
8	≤ $81,780

* Notice: Income ceilings are for **February 1, 2016 – January 31, 2018 or until 2018 values are published**.

Examples of target populations include:

- Apartment complexes subsidized by the U.S. Department of Housing and Urban Development that provide housing for households at or below 80% of household medium income, such as Section 8 and Public Housing Authorities.
- Households denied weatherization or utility assistance program benefits because income exceeds 125% of federal poverty guidelines.

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

interested in serving other target populations would be responsible for verifying the customer's eligibility.

For multifamily projects, the property manager will provide eligibility information, not the individual tenants. A multifamily property automatically qualifies if the residential units are individually-metered and the property participates in one or more of the following programs:

The following is a list of eligible types of developments:

- Public Housing Authority
- Multifamily Bond Program
- Project-Based Section 8
- HOME Rental Housing Development
- Housing Trust Fund
- Low-Income Housing Tax Credit Program
- Affordable Housing Disposition Program
- Rural Rental Section 515 (FMHA)

For multi-family projects, Project sponsors are eligible to receive the higher hard-to-reach incentive payments for measures installed in all units if 75% or more of the residents qualify as hard-to-reach.

2.5. Income Eligibility Verification

The PUCT has approved two forms for the purpose of verifying the income eligibility of customers:

- Property Owner Certification Form of Tenant Income Eligibility
- Self-Certification Form of Income Eligibility

These forms outline the various methods in 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. The customer needs to complete the form, and it should not be typed. It is not the project sponsor's responsibility to verify the information provided by the participants.

Copies of the income eligibility forms for individual customers and property managers are available on the program database. With the permission of CNP, project sponsors may change the layout of either of these documents, as long as nothing in the wording or the order of the wording is changed, and the font remains clearly legible**.** Project sponsors may replace page 2 of the Property Owner Certification Form of Tenant Income Eligibility with a computer printout, so long as the printout provides all the required information.

2.6. Multifamily Property Eligibility

Each individually metered multifamily residence is considered a separate residential account. Common areas are classified as commercial accounts, and are not eligible under this program. Master-metered apartments are also considered as commercial accounts, and are likewise not eligible under this program. These facilities may be eligible to participate in one of CNP's other SOPs.

For multifamily properties of four or more dwelling units, the project sponsor must submit the proposed project to CNP prior to the installation of any measures. CenterPoint Energy reserves the right to conduct a pre-installation inspection of the property, and to approve the proposed project prior to the installation of any measures. CenterPoint Energy has ten business days from the date of submission to approve or disapprove of the project.

2.7. Eligible Measures

Energy efficiency measures in residential applications shall be evaluated by category and priority in order to reduce electric energy consumption and system peak demand at the host customer site(s).

Project Sponsors are required to adhere to the Eligible Measures and Installation Criteria (see Appendix B) when evaluating measures for applicability and cost-effectiveness. If, for example, the CO and blower door tests indicate that all measures should be considered for installation, then the Project Sponsor should evaluate the following measures:

1. Envelope Measures

- Single-family dwelling insulation measures (insulate the ceiling, floor, or all exterior walls)
- Multifamily insulation measures (insulate the ceiling, floor, or all exterior walls). If an insulation measure is adopted for a particular building, that measure shall be applied to the entire building.
- Air infiltration control measures (minimum of 10% air leakage reduction, calculated from pre and post-installation blower door tests)
- HVAC duct integrity (repairs, replacements, and sealing with mastic or aerosol-based duct sealants)
- Within a home at which air infiltration measures will be installed, the project sponsor may make structural repairs prior to performing the pre-installation blower door test. These repairs must not exceed $100 and must have a useful life of at least 10 years. Cost of repairs will not be reimbursed by CenterPoint Energy. Please refer to section 2.7.1 for further information.

At least one of the above measures must be installed in order for any measure listed below to be eligible for incentives.

2. Interior Energy Usage Measures

- Lighting
- Hard-wired replacements, or compact fluorescents (minimum 3 hour daily usage)
- Water heating
- Showerheads, aerators, pipe insulation and water heater jackets
- Refrigerator replacement (ENERGY STAR® models)

3. HVAC Measures

- Room air conditioners
- Split system (Complete coil and compressor replacement)
- Packaged unit (Installed to manufacturer's specifications)

See Appendix B for additional details on measures and standards.

4. HVAC Tune up Measure *

For all HVAC tune ups the following checklist below must be performed:

- Tighten all electrical connections and measure voltage and current on motors
- Lubricate all moving parts, including motor and fan bearings
- Inspect and clean the condensate drain
- Inspect controls of the system to ensure proper and safe operation. Check the startup/shutdown cycle of the equipment to assure the system starts, operates, and shuts off properly.
- Clean evaporator and condenser coils
- Clean indoor blower fan components
- Inspect and clean or change air filters; replacement preferred best practice.
- Measure airflow via static pressure across the cooling coil and adjust to manufacturers specifications.
- Check refrigerant level and adjust to manufacturer specifications
- Check capacitor functionality and capacitance and compare to OEM specifications

2.7.1. Additional Energy Efficiency Measure Eligibility

CenterPoint Energy will consider other measures not contained in Appendix B for HTR eligibility at the time a project application is submitted. Proposed energy efficiency measures must meet the following requirements:

- Measure must produce a measurable and verifiable reduction in either purchased electric energy, measured in kWh, or peak demand, measured in kW, or both.
- Measure 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).
- Measure must meet or exceed minimum federal or other efficiency standards as provided in the program manual.

- On single-family detached residences, the duct efficiency and air infiltration measures must be applied to the whole home. Multiple-story homes cannot be treated on a per-story basis.
- Homes must be occupied and the HVAC equipment must be operational in order for any measure to be eligible for incentives.
- Homes heated through the use of electric space heaters, window unit air conditioners, or any plug-in or portable heating devices will not qualify as an electric heated home. The heating type for these homes should be designated as "no heat".
- A maximum amount of 15 LEDs may be installed in each home. "Hollywood" fixtures are not eligible per the Texas Technical Reference Manual.
- Leakage to outside testing is the only acceptable testing method for Duct Sealing measure.
- As of May 1, 2013, CenterPoint Energy allowed a new repair program requirement:

  Within a home at which air infiltration measures will be installed, the projectsponsor may make any structural repairs prior to performing the pre-installation blower door test. These repairs may include, but are not limited to, sheetrock repair and repairs to cracked windows. The total cost of repairs must not exceed the amount of $100 and must meet a minimum useful life of 10 years. Costs of repairs will not be reimbursed by CenterPoint Energy.

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 Commission's Energy Efficiency Rule can indeed be achieved through the proposed measure(s).

If any of the baseline equipment at a project site has been removed prior to the execution of the SOP Agreement, or if any of the proposed energy efficient measures have been installed prior to the execution of the SOP Agreement and applicable Host Agreement(s), the project, or the affected portions thereof, will be disallowed.

CenterPoint Energy will be the final authority on whether any particular measure is eligible for incentives.

2.8. 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 carbon monoxide (CO) test shall also be conducted for each residence with combustion (e.g., natural gas or propane) equipment or appliances. All project sponsors that are installing air infiltration or duct efficiency measures are required to have a certified HERS rater on site.

Project Sponsors will be required to measure and record pre- and post-installation CO readings and must 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. All CO measurements shall be taken with the furnace operating. Appendix C contains additional information on CO testing.
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 in the following table:

Minimum Final Air Exchange Rate*

Shielding	**Single Story**	**Two Story**	**Three or More**
Well Shielded	1.18	0.95	0.83
Normal	0.99	0.79	0.69

Exposed	0.89	0.71	0.62

* Measured in cubic feet per minute at 50 Pascal per square foot of conditioned area.

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.

As an example, the minimum post-installation air exchange rate for an 1800 square foot, one-story home with normal shielding is 1782 CFM_{50} (1800 x 0.99). 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 1960 CFM_{50} (1782 x 110%) in order to be considered for air infiltration control measures.

If the results of the pre-installation carbon monoxide or air infiltration tests indicate that the installation of air infiltration control measures, duct sealing, or wall insulation could possibly result in post-installation CO or CFM levels not meeting program standards, the Project Sponsor should exclude these measures from the list of those to be evaluated for installation.

2.9. Ineligible Measures

The following measures are ineligible to receive incentives under the HTR SOP:

- All exterior lighting measures
- Radiant Barrier
- Load shifting/load management measures
- 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 utility-sponsored program
- Repair and maintenance projects
- Energy-efficient gas measures when replacing non-electric technologies
- Measures that result in negative environmental or health effects
- Envelope measures on homes that have received the ENERGY STAR® label. These measures include:

  Duct efficiency
  Air infiltration

  ENERGY STAR® windows

  Ceiling Insulation Homes constructed during or after 2002.

2.10. For More Information

The database (http://centerpoint.anbetrack.com) will be the key informational resource and should be checked regularly for any program updates. Company representatives will respond to questions of general interest by posting answers on the database.[1]

[1] CNP will attempt to answer telephone inquiries, but no response will be considered official unless the question has been posted and responded to on the official CNP energy efficiency program database.

3. Program Incentives

Note that in all cases, payment procedures and amounts specified in the SOP Agreement supersede this and any other documents.

3.1. Incentive Budget and Project Funding Limits

CenterPoint Energy has budgeted a total of $1,000,000 in incentives for the HTR SOP. The incentives will be allocated as follows:

- $950,000 for Retrofit Projects
- $50,000 for Affordable Single Family

To ensure that funding will be available to multiple participants, CNP has set the monthly maximum invoice request of $30,000, with a minimum of $2,500.

A project sponsor may submit multiple applications, and participate in multiple projects, subject to the project sponsor incentive limits as outlined above. No project sponsor has unconditional entitlement to the SOP incentive funds.

3.2. Incentive Rates

The following table states the incentive rates* by measure.

Hard-to-Reach Incentive Rates	Demand (kW)	Energy (kWh)
Standard (all other measures)	$275	$0.090
Ceiling Insulation	$400	$0.15
LED Lighting	$215	$0.12
HP Replacements	$450	$0.30
Central AC Replacements 14.5 – 18+ SEER	$475	$0.30
Window AC Replacement Only	$200	$0.15
Affordable Single Family Construction	$475	$0.20
A/C Tune Up	$125 per tune up	

*If the customer has window unit & an operating central HVAC, there is an option to replace Window Unit with ENERGY STAR® unit and perform duct efficiency at the above listed rate.

All window units in the home must be replaced with ENERGY STAR® units. Window units used as primary cooling system will not be eligible.

3.3. Adjustments to Incentive Payments

Incentive payments may be adjusted in any of the following instances:

- A project sponsor's incentive payments may be adjusted based on the results of CNP's site inspections as described elsewhere in this document and in the SOP Agreement.
- CenterPoint reserves the right to modify program guidelines during the program year to help achieve program objectives. Guidelines that are subject to change include, but are not limited to, the program budgets, incentive levels, and project sponsor limits.

4. Program Process and Timeline

4.1. Application Process

Potential project sponsors may apply using the Project Application on the program database, (http://centerpoint.anbetrack.com/)

4.2. Monthly Project Invoice Submissions

Monthly invoices will have a required minimum submission amount of $2,500. The maximum monthly in voice amount is $30,000. All projects must be submitted to the database within 35 days of the installation to be eligible for incentives.

4.3. Implementation Period

During the implementation period, the project sponsor will be performing marketing and implementation activities, and reporting progress on a regular basis to CNP. Installations should be completed on November 6th, 2018 so that all implementation data can be submitted to CNP no later than November 13th, 2018.

Installation and equipment standards are included in Appendix A.

4.4. Payment Procedures

CenterPoint Energy will make the Incentive Payment upon the approval of invoices, post inspection. Sections 6 and 7 of this Manual describe the process for submitting documentation and invoices.

- Complete invoices
    - Correct information
    - All signatures
- 5 day window

Any administrative errors will be given a five (5) day correction period. Any info not received after 5 days will result in customer exclusion and not be eligible for re-submittal.

5. Project Application Procedures

5.1. General Application Requirements

CenterPoint Energy has determined that the fairest and least-cost application procedure is to accept applications only via the Internet. The application forms, instructions, frequently-asked questions, and helper applications are accessible on program's database, (http://centerpoint.anbetrack.com). All applications must be completed and submitted online.

5.1.1. Project Sponsor Information

The information listed below is required of all project sponsors:

- Project sponsor name;
- Federal tax identification number of project sponsor;
- Completed W9 Tax Form;
- Parent company and/or affiliated firms (if any);
- Contact name, address, phone number, fax number, e-mail address; and
- Name, address, etc., of subcontractor.
- Names of each employee who will enter the home of the end use customer, as well asa photo ID and proof of criminal background check.
- HERS rater certificate.

5.1.2. Project Sponsor Requirements

- All employees must have background check (with results) and photo ID.
- All vehicles must be clearly marked with sponsor's company name.
- HERS rater is required to be on site for all duct efficiency and infiltration testing.

5.1.3. Project Sponsor's Qualifications

CenterPoint Energy requires project sponsors to demonstrate their qualifications and experience as part of the application process to help ensure that the proposed projects will be successful in delivering the estimated energy savings. The project sponsor's application should include the following:

- A brief statement of the project sponsor's capabilities.
- Project sponsors will be allowed to subcontract for one other participating sponsor. Evidence that project sponsor and any subcontractor possess all applicable licenses will be required. Evidence includes a list of applicable licenses, license holders, and license numbers. For project sponsors proposing to install duct efficiency or air infiltration control measures, the name(s) of employee(s) with current HERS certification should be

included. This HERS rater will be required to be on site for all duct efficiency and infiltration testing.

- Description of previous participation in other Texas utility standard offer programs. The information provided should include the utility name, contract amount, and utility contact. If the project sponsor has no prior experience with Texas standard offer programs, provide three client/customer references for projects similar in nature to that proposed in this application (include contact name, address, and phone number).
- Disclosure of any legal judgments pending, or entered in the previous two years, against project sponsor, or the designated subcontractor(s), as well as a current list of pending litigation filed against project sponsor or designated subcontractor(s).
- Project sponsors should also include evidence of their financial strength and capability. This may include company description, approximate annual revenues, trade references, and/or other information deemed appropriate by project sponsor.

5.1.4. Additional Requirements for Project Sponsors Proposing to Perform Duct Sealing

For project sponsors proposing to include duct sealing as part of their projects, the following additional information is required. Project sponsors who do not provide this information will not be allowed to include duct sealing as part of their projects.

- Project sponsors will be permitted to schedule 2 homes for duct efficiency per day.
- The project sponsor should indicate whether duct sealing will be performed by direct employees of the project sponsor, or by a subcontractor. If the project sponsor intends to utilize a subcontractor for any part of the implementation of this measure, then the subcontractor must be identified, and the information provided in this section should pertain to the subcontractor. Project sponsors who do not identify their proposed subcontractor as part of this application process will not be allowed to use a subcontractor for this measure.
- The project sponsor should provide a description of previous experience in providing this service. This should include, if applicable, a list of other Texas utility projects completed by the project sponsor or subcontractor, including the number of homes treated with this measure. All project sponsors that are installing duct sealing are required to have a certified HERS rater on site to perform testing. Provide a listing of certifications or licenses held (e.g., HVAC license, HERS rater certification, etc.), or relevant third-party training courses completed. Also, please provide a description of the equipment and techniques to be utilized to measure duct leakage.
- A reference letter is required from a utility in which the sponsor has participated in installing duct efficiency and air infiltration measures.
- The leakage to outside testing method is required for duct efficiency improvement measures installed.
- The program manager will send notification via email to sponsor who have been approved to expand duct efficiency beyond 2 homes per day.

5.1.5. Additional Requirements for Project Sponsors Proposing to Install Ceiling or Wall Insulation

For project sponsors proposing to include ceiling and/or wall insulation as part of their projects, the following additional information is required. Project sponsors who do not provide this information will not be allowed to include ceiling or wall insulation as part of their projects.

- The project sponsor should indicate whether insulation services will be provided by direct employees of the project sponsor, or by a subcontractor. If the project sponsor intends to utilize a subcontractor to implement any part of the insulation measure, then the subcontractor must be identified, and the information provided in this section should pertain to the subcontractor. Project sponsors who do not identify their proposed subcontractor as part of this application process will not be allowed to use a subcontractor for this measure.
- The project sponsor should provide a description of previous experience in providing insulation services. This should include, if applicable, a list of other Texas utility projects completed by the project sponsor or subcontractor. Provide a description of the training provided by the project sponsor or subcontractor to its installers.

5.1.6 Reporting Procedures for Ceiling Insulation

The deemed savings associated with a base R-value of zero will only be utilized for installations where there is no existing insulation of any kind. Project sponsors will also be required to check a box to affirm that an insulation installation certificate was permanently affixed near the attic opening. These certificates must comply with the Federal Trade Commission's Home Insulation Rule 460 (16 CFR 460).

CenterPoint Energy may adjust the incentive payment based on findings from field inspections.

5.1.7 Reporting Requirements for A/C

For project sponsors proposing to install central A/C unit replacements, the following information is required. Project sponsors who do not provide this information will not be able to submit these installations for incentives:

- AHRI Certificate
- Condenser Model Number
- Condenser Serial Number
- Coil Model Number
- Coil Serial Number
- Picture on nameplate
- For early retirement you must provide picture of gauges showing that the syste is currently working along with photo of the nameplate.

5.2. Project Application Guidelines

Project sponsors will be able to access the program application on the program database, (http://centerpoint.anbetrack.com), beginning on November 1, 2014 through December 1, 2014. All applications and required documents must be submitted via the database during this time. CenterPoint Energy will continue accepting applications until all funds have been reserved.

CenterPoint Energy will review sponsor applications based on the following criteria:

- Previous work experience, participation in utility energy efficiency programs, and performance in prior CenterPoint Energy programs (if applicable)
- Overall quality and comprehensiveness of information provided on the application

After the application information has been reviewed by CNP, the project sponsor will be notified of its project award status.

5.3. Project Sponsor Application Requirements

In addition to the application information outlined in Section 5.2, project sponsors will be required to provide the following information about their proposed projects. CenterPoint Energy will incorporate estimated maximum kW and kWh incentive payments into the HTR SOP Agreement.

5.3.1. Project Description

Provide a description of the proposed project in the space provided. Briefly describe the proposed project, including target customers, end-uses, and marketing approach.

5.3.2. Project Description – Estimated Impacts

The project sponsor should refer to the Texas Technical Reference Manual (TRM), which may be downloaded from (http://centerpoint.anbetrack.com), to create estimates of average kW and kWh savings per installation site.[1]

The minimum project size is 20kW of deemed or measured peak demand savings. The maximum project size is determined by the limit on incentives that can be paid to any one Project Sponsor. There is also a limit on the amount of incentive payment that can be attributable to a project's lighting savings. For affordable single-family new construction projects, there is no minimum.

[1] These values are subject to modification during the 2015 program year, based on the outcome of proceedings to approve further modifications to these values.

5.3.4. Project Implementation Schedule

On this form, a milestone date is generated for the Project. No inputs are required from the project sponsor. Measure installations resulting in at least 25% of the project sponsors total estimated incentive payments must be completed by April 5, 2018, additionally 50% of the project sponsor's total estimated incentive payments must be completed by June 5, 2018. Finally, measure installations resulting in at least 75% of the project sponsor's total estimated incentive payments must be completed by September 5, 2018.

CenterPoint Energy reserves the right to withdraw some or all of the project sponsor's awarded incentive contract for failure to achieve the applicable milestone. For project sponsors who fail to meet the milestone, but who have achieved a substantial percentage of their milestone goal, CNP may withdraw awarded incentive contract according to the percentage below the milestone. For example, if a project sponsor has only achieved 30% of the goal by the 50% milestone date, 20% of the awarded incentive for that project sponsor may be withdrawn. However, in the event the project sponsor has achieved little or no progress toward achieving the goal by the milestone date, CNP reserves the right to withdraw the project sponsor's entire incentive contract.

5.4. Customer Affidavits

If a project sponsor anticipates requesting more than $10,000 in incentives for measures installed at any one customer site, an affidavit of participation signed by that host customer must be submitted within ten business days of Internet application.

5.5. Application Review Procedures

5.5.1. Application Evaluation

CenterPoint Energy 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 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; and
- CenterPoint Energy, in its sole judgment, determines that the project sponsor is incapable of fulfilling the terms and conditions of the HTR SOP Agreement.

CenterPoint Energy reserves the right to limit or disqualify the participation of project sponsors who have performed poorly in previous standard offer programs.

CenterPoint Energy will notify each project sponsor of its application status within 10 to 15 business days of the submittal of the application. If a project application is found incomplete or insufficient, CNP may, at its sole discretion, reject it.

CenterPoint Energy may request clarification of, or additional information about, any item submitted as part of the project application. Project sponsors will have five business days to respond to such requests. If the clarification or additional information provided is not sufficiently responsive, CNP may, at its sole discretion, request additional information, or discontinue its evaluation of the submittal. Any project sponsor submitting an unsuccessful project application may reapply for project funding by submitting another project application. However, the project sponsor will lose its initial position in the order of submittal for budget reservation purposes.

5.5.2. Project Sponsor Approval

If CNP approves the project application, the project sponsor will be expected to sign and return the SOP Agreement as soon as possible after notification of project application approval. (Project sponsors who have participated in a previous CNP SOP may not be required to sign an additional agreement).

5.6. Program Contact

The HTR SOP Program Manager is Zachary Patterson. All program correspondence, reports, and any other required materials should be directed to Mr. Patterson at:

CenterPoint Energy
1111 Louisiana, Houston, TX 77002
713.207.7481
Zachary.Patterson@CenterPointEnergy.com

5.7. Other Important Program Information

CenterPoint Energy will not reimburse any project sponsor for any costs incurred by participating in the SOP, including costs of preparing the Project Application, reviewing or executing the SOP Agreement, or preparing and submitting implementation or performance reports.

CenterPoint Energy's SOP is subject to oversight by the PUCT, which may request a copy of any SOP materials that CNP receives. Sensitive information submitted by the project sponsor to CNP will be treated confidentially to the fullest extent possible, and will not be provided directly to outside parties other than the PUCT. CenterPoint Energy will have no liability to any project sponsor or other party as a result of public disclosure of any submittals.

6. Implementation Procedures Project Sponsors

During the implementation period, the project sponsor will be performing marketing activities, implementation activities, and reporting progress on a regular basis to CNP. This allows CNP to monitor each project sponsor's progress in a timely manner and allows CNP the ability to reallocate program funding, if necessary, in order to achieve its overall energy savings goals.

Installations should be completed on November 4th, 2016 so that all implementation data can be submitted to CNP no later than November 11th, 2015.

6.1. Required Forms

Prior to commencing any installation activities, project sponsor shall submit its insurance certificate to CNP, as well as the following required forms for approval:

1. *Host Customer Agreement (HCA)*. Project sponsors may download a pre-approved version from the database, or may draft their own HCA. This is a standard agreement executed by the project sponsor and the host customer. It includes all the customer protection provisions and disclosures required by the PUCT. CenterPoint Energy requires that the project sponsor use an approved HCA, but does not require that copies of signed agreements be turned in to CNP.
2. *Residential Customer Acknowledgment*. This is a form in which the residential customer acknowledges that the measures described in the Host Customer Agreement have been installed to his/her satisfaction; and that CNP is allowed to access to the host customer site. Project sponsors may draft their own Customer Acknowledgement and submit it to CNP for approval, or they may download a pre-approved version from the database. Copies of signed Customer Acknowledgements must be turned in with each installation report and invoice.
3. *Household Income Self-Certification Form.* This form is to be used by customers to certify hard-to-reach eligibility. Copies of signed forms must be turned in with each installation report and invoice.
4. *Customer Repair Acknowledgement Form.* This form is to be used by customer to acknowledge repairs made by the sponsor in order to achieve air infiltration goals.

CenterPoint will NOT accept forms created independently by the sponsor.

The Host Customer Agreement and the Customer Acknowledgment may be combined into one document.

6.2. Program Implementation Timeline

After Project Acceptance:

SOP Agreement returned to CNP (unless instructed otherwise)

Prior to Marketing:

1. Certificate(s) of Insurance (Please Refer to Appendix D)
2. Completed W-9 Tax Form
3. Proof of current HERS Rating Certification (if project sponsor is proposing to install air infiltration or duct sealing measures)
4. Employee list, photo IDs, and proof of background check
5. Signed CenterPoint Energy Contract (agreement to accept electronic payments strongly encouraged)
6. Submit draft Host Customer Agreement to CNP for approval, or download pre-approved Host Customer Agreement from database.
7. Submit draft Residential Customer Acknowledgement form to CNP for approval, or download pre-approved form from database.

Prior to Installation:

1. Work hours are standard business hours, Mon – Fri, 8-5pm. No weekend scheduling is allowed. Inspection appointments may be requested no later than 4pm to allow completion time by close of business.

2. Provide a daily work schedule via the Program database by 7:00 a.m. of that day's installation appointments. All installation appointments must be scheduled in advance, with the exception of limited "fill-in" appointments.[1]

3. Limit "fill-in" appointments to 2 a day. Notification for "fill-in" appointments and canceled appointments must be sent in writing to the EE inspector email at EEInspections@CenterpointEnergy.com. Notice must be received within 1 hour prior to the appointment and must include appointment times.
4. Determine customer eligibility, based on HTR eligibility guidelines. Complete single-family or multifamily certification form.
5. If installing air infiltration control, wall insulation, or duct sealing measures, perform pre-installation blower door, duct leakage, or CO tests, as required. A certified HERS rater must be on site for all blower door and duct leakage testing.
6. Have the customer sign the Host Customer Agreement and notify of possible CenterPoint Energy post inspection.

Project sponsors may not schedule work on the following Holidays:

New Year's Day	Monday, Jan.1, 2018
Good Friday	Friday, April 14, 2018

[1] Fill-ins only qualify if there is a work schedule for that day.

Memorial Day	Monday, May 29, 2018
Independence Day	Tuesday, July 4, 2018
Labor Day	Monday, Sept. 4, 2018

After Installation:

1. If air infiltration control, wall insulation, or duct sealing measures, was installed, perform post-installation blower door, duct leakage, or CO tests, as required. A certified HERS rater must be on site for all post-installation blower door and duct leakage testing.
2. Have residential customer sign the Customer Acknowledgement.
3. Report installation data and submit project invoice via database.

6.3. Installation Incentive Calculation

1. A local community agency plans on weatherizing two homes during over a one-month period during the spring. The anticipated measures consist of the following:
    - Air infiltration control measures at both homes
    - High-efficiency air conditioner for one customer
    - Duct sealing for one customer
    - Attic insulation at for both customers

4. Project Sponsor logs on to the HTR program database, checks available funding, and makes applies requested incentives to the project.

5. Project Sponsor installs must be submitted within the database by month end.
6. If Project Sponsor implements other installs during the project invoice period, then these are combined on to a single report and project invoice. Otherwise, Project Sponsor submits a report and project invoice for this single install.

Please note that the project sponsor may use the incentive received in any manner they see fit. By signing the Host Customer Agreement, the customer acknowledges that the project sponsor is receiving incentive through a ratepayer funded program.

6.4. Required Database Submittals

The primary reporting instrument is the program database. All project sponsors shall submit monthly installation data and project invoice forms (see below). Electronic project invoices must be submitted no earlier than the 25th of the month and no later than the last day of the month. Paperwork for the invoice period must be provided to CNP by uploading to the project documents tab in the database before submission.

The program database training guides can be found in the sponsor portal, http://centerpoint.anbetrack.com

6.4.1. Installation and Project Invoice Reporting

CenterPoint mandates that project sponsors provide a daily work schedule via the program database. The day's schedule must be entered in by 7:00 a.m. via the database Work Schedule menu the morning of the installation appointment. The following information is required for each project completed via the database:

Add Customer Site

Upon completing the installations for a project, the project sponsor should input the implementation information on the Program database Site List as soon as possible. The following information is required for each project completed:

Please navigate to the database Site List.

1. Select "Add" icon
2. Enter ESI ID number
3. Select program from dropdown menu
4. Enter Customer First and Last Name
5. Enter Customer Telephone number

You can navigate to the measure tab and add a measure at this time. Details can be added to the measure at a later date if desired.

Add/Edit Measure

Please navigate to the database Site List and select "Edit" icon next to the site in which you would like enter measure details.

Please navigate to the measure tab in the site.

1. Select the "Add" icon to add measures.
2. Select the measure from the dropdown list.
3. Select "Include."
4. Enter measure details.
5. Select "Save & Show." Incentive requests will be calculated according to functions embedded in the official implementation reporting database and may not be modified by project sponsors.
6. Repeat process for additional measures

Once all measures details have been added to the site, select "Submit" in the work flow box at the top of the screen. All sites must be in the "Submitted" status to be included in a project invoice.

Create Database Project Invoice

Please navigate to the database Project List.

1. Select the "Add" icon to add a project.
2. Select the program from the dropdown list.
3. Select "Add."
4. In the Project General Tab, enter the project name: "Company Name_HTR_Month Number_Year. For Multifamily projects, please add "HTRMF" instead of "HTR ."
5. Enter the months end in the completion date field.
6. Select "Save."

Map Sites to Project

Please navigate to the database Site List.

1. Check the boxes next to the sites you would like to map to the monthly project created above. (Sites must be in the "Submitted" status.)

2. Select the "Move" icon at the top of the site list.
3. Select the project (created previously) from the drop down list.
4. Site will be moved.

5. Repeat this process for adding additional sites.

Database Project Invoice Reporting

Please navigate to the database Project List.

1. Select the "Edit" icon next to the project desired.
2. Review the project and measure details. You can edit the measure details if desired.
3. Review your estimated incentives in the Cost tab.
4. You may attach a file to the project in the Documents tab if desired.
5. Once the project details have been reviewed and all measure details have been entered/edited, please select the workflow button at the top of the Project page. Select "Submit."

Projects will not be processed for payment unless they are in the "Submitted" status.

Project Documents

Please navigate to the database Project List.

1. Select the "Edit" icon next to the project you are submitting.
2. Navigate to the Documents tab.
3. Select the "Add" icon at the top of the document list. Upload customer forms and supporting documents
4. Database project may be submitted beginning on the 25th of each month. All projects must be submitted in the database by the last day of the month.
5. All installations must submitted by current month's end.

The project sponsor should submit monthly project invoices with the Customer Acknowledgment Form(s) by the fifth of each month. CenterPoint Energy may adjust the incentive payment based on findings from field inspections.

Payment terms are net 45 days.

6.5. Monthly Submittal Review Procedures

6.5.1. Administrative Review

Once the monthly report is submitted to CNP, it will be reviewed for accuracy. If any discrepancies are found in any of the reports, CNP will notify the project sponsor. The project

sponsor shall have 5 business days from the date of CNP's notification to correct any administrative discrepancies.

6.5.2. Installation Inspections

During the review process, CNP will take a random sample of customer sites and make field inspections to determine if each measure has been installed properly, and is capable of performing its intended function. All measures installed in the Residential SOP must conform to or exceed the standards listed in Appendix A. If measures installed do not meet these standards, they will not be eligible for incentives. The CNP or its designee report on the customer site is final. There will be no "do-overs" or "re-testing" by CNP or its designees.

After field inspections are completed, all installations will be evaluated on a measure-by-measure basis to calculate an adjustment factor for energy savings and incentives. This adjustment factor will consider the ratio of savings of the measures that pass the inspection to the total incentive specified in the Measure Inspection Report and project application. The adjustment factor will then be applied to the incentive amount for payment. The algorithm for calculating the adjustment factor is described below:

Adjustment Factor = Total incentives per measure that pass inspection ÷ Total incentives for all measures selected for inspection

This assumes all figures on the implementation report are correct. Any errors will be corrected prior to finalizing the adjustment factor.

In the event the project sponsor disagrees with the payment adjustment, the project sponsor may request that all information be reviewed again after additional clarifying information is provided by the project sponsor.

Three (3) or more failures of the same measure type will result in suspension of the project sponsor until further notice by CNP. This includes subcontractors.

6.6. Project Milestones

Measure installations resulting in at least 25% of the project sponsor's total estimated incentive payments must be completed by April 5, 2018. Measure installations resulting in at least 50% of the project sponsor's total estimated incentive payments must be completed by June 5, 2018. Measure installations resulting in at least 75% of the project sponsor's total estimated incentive payments must be completed by September 5, 2018.

CenterPoint Energy reserves the right to withdraw some or all of the project sponsor's budget reservation for failure to achieve the applicable milestone.[2] For project sponsors who fail to meet the milestone, but who have achieved a substantial percentage of their milestone goal, CNP may withdraw Budget Reservation according to the percentage below the milestone. For example, if a project sponsor has only achieved 30% of the goal by the end of the 50% milestone period, 20% of the incentive Budget Reservation for that project sponsor may be withdrawn. However, in the event the project sponsor has achieved little or no progress toward achieving the goal by the end of the milestone period, CNP reserves the right to withdraw the project sponsor's entire Budget Reservation.

7. Frequently Asked Questions

1. What are the work hours permitted in this program?

Work hours are standard business hours, Mon – Fri, 8-5pm. No weekend scheduling is allowed. Inspection appointments may be requested no later than 4pm to allow completion time by close of business (Please refer to section 6.2: Prior to Installation).

2. Is there a maximum or minimum amount of money a participating sponsor can invoice in a month?

The minimum monthly invoice amount is $2,500. The maximum monthly invoice amount is $30,000. (Please refer to section 3.1: Incentive Budget and Project Funding Limits).

3. How is the performance of the participating sponsors evaluated?

Milestones will be assessed on a quarterly basis, 25% by April 5th, 50% by June 5th, 75% by September 5th (Please refer to section 5.3.4).

4. What is the maximum amount of LEDs that can be installed in a home?

The LED maximum is 15 (Please refer to section 2.7.1: Additional Energy Efficiency Measure Eligibility and Appendix B).

5. What if a customer cancels an appointment?

Notification of canceled appointments must be sent in writing to the program manager, Zach Patterson, and Tim Griffin. "Fill-in" appointments are permitted as long as notification is received in writing 1 hour in advance of the appointment.

6. Do I have to give all or part of the incentive to the customer?

No. The project sponsor may use the incentive in any manner they see fit. In the Host Customer Agreement, the customer acknowledges that the project sponsor is receiving incentives through a ratepayer-funded program (Please refer to section 6.3: Installation Period).

7. When are invoices due?

- *When are project invoices due?*

Sponsor installs must be submitted via the database by months end (Please refer to section 6.3 Installation Period & 6.4.1: Installation and Invoice Reporting). Sponsor may submit monthly project invoice via the database beginning the 25th of each month and ending the last day of each month. Customer forms and supporting documents should be uploaded to the database project prior to submittal.

I. Ceiling Insulation Measure Overview

Example: *A contractor in Houston installs 1000 sq. ft. of ceiling insulation into an electrically air conditioned, gas heated home that had existing insulation equal to R-10. The final R-value of the installed insulation is R-30. The energy and demand savings to be claimed for the measure are 170 kWh and 0.153 kW.*

Measure Description

Ceiling insulation savings are calculated per square foot of treated ceiling area above a conditioned space. To qualify for these deemed savings values, ceiling insulation may be added only for customers with electric air conditioning in their homes, or for customers who have evaporative cooling systems and who participate in hard-to-reach (HTR) programs

Eligibility Criteria

This measure applies to customers with electric air conditioning in their homes, or to customers who have evaporative cooling systems and who participate in hard-to-reach (HTR) programs.

Baseline Condition

In existing construction, ceiling insulation levels vary greatly depending on the age of the home, type of insulation, and activity in the attic (such as using the attic for storage and HVAC equipment). Deemed savings tables are based on the current level of ceiling insulation in the home from R-0 to R-22. The current insulation level of each home will be determined and documented by the insulation installer. Degradation due to age and density of the existing insulation should be taken into account.

In the event that existing insulation is or has been removed, the existing R-value will be based upon the R-value of the existing insulation prior to removal.

High-Efficiency Condition

A ceiling insulation level of R-30 is recommended throughout Texas as prescribed by the Department of Energy. The combined R-values of the existing insulation and the insulation being added will total at least R-30. The R-value of the existing insulation can be no greater than R-22.

Energy and Demand Savings Methodology

Savings Algorithms and Input Variables

For climate zones 1 through 4, building load simulation software that calculates hourly load data was used to create energy and summer peak demand savings for a series of models. The software used was ESPRE 2.1 (EPRI Simplified Program for Residential Energy.) The base model of the prototype home wasa model that was calibrated to residential load data by Planergy, Inc. The load data used for calibration was based on the South Texas End-Use Study, 1990 by Central Power and Light.

Building shell measures are sensitive to weather, and Texas is somewhat unique because there is a great difference in weather patterns between Amarillo in the northern panhandle and Corpus Christi in south Texas. A series of models were created to determine the difference in weather data throughout the eight weather regions in Texas as defined in the Model Energy Code. In an effort to simplify deemed savings values, available TMY weather data from ten different regions was analyzed. Based on the results, the different weather regions were collapsed down to the following four regions.

- Climate Zone 1: Panhandle Region (Amarillo weather data)
- Climate Zone 2: North Region (Dallas weather data)
- Climate Zone 3: South Region (Houston weather data)
- Climate Zone 4: Valley Region (Corpus Christi weather data)

The model runs calculated energy use for the prototypical home prior to the installation of the ceiling insulation measure. Next, change-case models were run to calculate energy use with the ceiling insulation measure in place.

In order to develop winter peak savings values for all climate zones, a whole home simulation model was developed using EnergyGauge. Prototypical home characteristics (which may diverge from those outlined in **Error! Reference source not found.**) were selected using available data on the construction, occupancy, and equipment characteristics of Texas homes.[1] The predicted annual energy consumption of the model was benchmarked using data from the Energy Information Administration's Residential Energy Consumption Survey (RECS) for homes of similar heating types and floor area. Base and change case models were run using parameters matching the baseline and efficiency conditions of the measure.

II. Duct Efficiency Improvement Measure Overview

Example: *A contractor performs pre and post-installation duct leakage-to-outside tests on a home located in Houston that has central AC and gas heating. The air conditioning unit is a 3-ton, 13 SEER unit and the gas furnace has an AFUE rating of 0.80. The pre-installation leakage rate was measured at 350 CFM_{25} and the post-installation leakage rate was measured at 150 CFM_{25}. The energy and demand savings claimed for this completed measure are 966 kWh and 0.442 kW.*

Measure Description

This measure involves sealing leaks in supply and return ducts of the HVAC distribution systems of homes or converted residences with either central air conditioning or a ducted heating system.

Eligibility Criteria

All residential customers with refrigerated air cooling are eligible for this measure.

Duct leakage should be assessed following Building Performance Institute (BPI) standards through testing. In some limited cases, where testing is not possible or unsafe (e.g. due to potential presence of asbestos), visual assessment may be satisfactory. The duct leakage testing should not be conducted in homes where either evidence of asbestos or mold is present or suspected due to the age of the home.[2]

Duct sealing is a residential retrofit measure.

Baseline Condition

For residential and hard-to-reach standard offer programs, the savings calculation methods for this measure are valid up to a maximum pre-installation leakage rate of 35 percent of total fan flow. For homes with an initial leakage rate greater than 35 percent of total fan flow, savings will be awarded with respect to this cap rather than the initial leakage. Data from nearly 28,000 single-family and mobile home duct blaster tests conducted for duct efficiency improvements in Texas between 2003 and 2006 show that more than 70 percent of all pre-retrofit leakage rates fall below 38 percent total leakage.[4]

Engineering calculations show that the interior temperature in those settings that exceed 38 percent total leakage would be above the thermally acceptable comfort levels published by ASHRAE in its 2009 Fundamentals publication. The proposed pre-installation leakage limits will help ensure that the deemed savings are an accurate reflection of the program's impacts, and that the program focuses its efforts on scenarios where leakage conditions are likely to persist if unaddressed for several years.

Low-income customers[5] are exempt from the cap limiting the maximum pre-installation leakage rate to 35 percent of total fan flow.

homes with an initial leakage rate greater than 35 percent of total fan flow, savings will be awarded with respect to this cap rather than the initial leakage. Data from nearly 28,000 single-family and mobile home duct blaster tests conducted for duct efficiency improvements in Texas between 2003 and 2006 show that more than 70 percent of all pre-retrofit leakage rates fall below 38 percent total leakage.[4]

Engineering calculations show that the interior temperature in those settings that exceed 38 percent total leakage would be above the thermally acceptable comfort levels published by ASHRAE in its 2009 Fundamentals publication. The proposed pre-installation leakage limits will help ensure that the deemed savings are an accurate reflection of the program's impacts, and that the program focuses its efforts on scenarios where leakage conditions are likely to persist if unaddressed for several years.

Low-income customers[5] are exempt from the cap limiting the maximum pre-installation leakage rate to 35 percent of total fan flow.

High-Efficiency Condition

Materials used should be long-lasting materials, such as mastics, UL 181A or UL 181B approved foil tape, or aerosol-based sealants. Fabric-based duct tape is not allowed.

The selected methodology for estimating duct sealing energy savings requires duct leakage-to-outside testing using a combination duct pressurization and house pressurization.

Duct Leakage Testing

Measurements to determine pre-installation and post-installation leakage rates must be performed in accordance with utility-approved procedures. For this measure, leakage-to-outside must be directly measured. The Project Sponsor shall use the Combination Duct Blaster™ (or equivalent) and Blower Door method. Prior to beginning any installations, the Project Sponsor must submit the intended method(s) and may be required to provide the utility with evidence of competency, such as Home Energy Rating System (HERS) or North American Technician Excellence (NATE) certification. Leakage rates must be measured and reported at the average air distribution system operating pressure (25 Pa).[6]

III. Air Infiltration Measure Overview

Example: *A contractor performs pre and post-installation blower door tests on a single story, normally shielded, 2000 square foot home located in Houston that has central ac and gas heating. The pre-installation leakage rate was measured at 5500 CFM_{50} and the post-installation leakage rate was measured at 3700 CFM_{50}. The energy and demand savings claimed for this completed measure are 485 kWh and 0.468 kW.*

Measure Description

This measure reduces air infiltration into the residence, using pre- and post-treatment blower door air pressure readings to confirm air leakage reduction. Homes treated for air infiltration reduction must have electric air conditioning to qualify for these deemed savings values.

Eligibility Criteria

There is an upper limit of 4.00 CFM_{50} per square foot of house floor area for the pre-retrofit infiltration rate on eligible projects. At their utility's discretion, this cap may not apply to homes implementing the measure under low-income programs.[24]

Only structures with electric refrigerated air conditioning systems are eligible.

Baseline Condition

For residential dwellings, the winter/summer air change per hour (ACH) differential was derived from ESPRE model weather data for the Panhandle (Amarillo weather), North (Dallas weather), South (Houston weather), and Valley (Corpus Christi weather) climate zones. Electric air conditioning was assumed for all homes, with gas, electric, or heat pump heating.

[24] Low-income customers are income-eligible customers served through a targeted low-income energy efficiency program as described in 25.181(r). This may also apply to income-eligible customers served through a hard-to-reach program that is also delivered following the guidelines in 25.181(r).

High-Efficiency Condition

To qualify for an incentive, a minimum air leakage reduction of 10 percent of the pre-installation reading is required. Utilities may require competency testing of personnel who will perform the blower door tests.

Blower door air pressure measurements will also be used to ensure that air infiltration in a residence shall not be less than the standards set forth in the following table:

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. 80 percent to 90 percent of houses fall in 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.

As an example, the minimum post-installation air exchange rate for an 1800 square foot, one-story home with normal shielding is 1782 CFM_{50} (1800 x 0.99). In order to qualify for the air infiltration control deemed savings, there must be a minimum 10 percent reduction between the pre- and post-installation ventilation rate. Therefore, the pre-installation ventilation rate must be at least 1960 CFM_{50} (1782 x 110%) in order to be considered for air infiltration control measures.

Energy and Demand Savings Methodology

Savings Algorithms and Input Variables

For climate zones 1 through 4, building load simulation software that calculates hourly load data was used to create energy and summer peak demand savings for a series of models. The software used was ESPRE 2.1 (EPRI Simplified Program for Residential Energy.) The base model of the prototype home wasa model that was calibrated to residential load data by Planergy, Inc. The load data used for calibration was based on the South Texas End-Use Study, 1990 by Central Power and Light.

Building shell measures are sensitive to weather, and Texas is somewhat unique because there is a great difference in weather patterns between Amarillo in the northern panhandle and Corpus Christi in south Texas. A series of models were created to determine the difference in weather data throughout the eight weather regions in Texas as defined in the Model Energy Code. In an effort to simplify deemed savings values, available TMY weather data from ten different regions was analyzed. Based on the results, the different weather regions were collapsed down to the following four regions.

Climate Zone 1: Panhandle Region (Amarillo weather data)
Climate Zone 2: North Region (Dallas weather data)
Climate Zone 3: South Region (Houston weather data)
Climate Zone 4: Valley Region (Corpus Christi weather data)

The model runs calculated energy use for the prototypical home prior to the air infiltration reduction. Next, change-case models were run to calculate energy use after steps had been taken to reduce air infiltration in the home.

In order to develop winter peak savings values for all climate zones, a whole home simulation model was developed using EnergyGauge. Prototypical home characteristics were selected using available data on the construction, occupancy, and equipment characteristics of Texas homes.[25] The predicted annual energy consumption of the model was benchmarked using data from the Energy Information Administration's Residential Energy Consumption Survey (RECS) for homes of similar heating types and floor area. Base and change case models were run using parameters matching the baseline and efficiency conditions of the measure. From the hourly output for each run, a winter peak load factor representing the relationship between energy savings and winter peak savings was calculated as follows:

Measure Description

Residential replacement of an existing central air conditioning system with a new central air conditioning system in an existing building, or the installation of a new central air conditioning system in a new residential construction. A new central air conditioning system includes an entire packaged unit, or a split system consisting of an indoor unit with a matching remote condensing unit.

Eligibility Criteria

The minimum required SEER is 15 SEER

Newly installed units must have a cooling capacity of less than 65,000 Btu/hour (5.4 tons) to be eligible for these deemed savings.

Air conditioning equipment shall be properly sized to dwelling based on ASHRAE or ACCA Manual J standards.

Manufacturer data sheets on installed air conditioning equipment or AHRI reference numbers must be provided.

Only participants of low-income programs are eligible for early retirement deemed savings associated with installation of a new central air conditioning system. In order to receive early retirement savings, the unit to be replaced must be functioning at the time of removal. A photo of the nameplate and amp reading showing that the system is still functioning is required for the early retirement of a central air conditioning system other than through a low-income program; replace-on-burnout savings may be awarded.

Baseline Condition

New construction baseline efficiency values for air conditioners are compliant with the current federal minimum standard[26], effective January 1, 2018.

For replace-on-burnout (ROB) projects, the cooling baseline is 13.08 SEER. This value incorporates an adjustment to the baseline SEER value to reflect the percentage of current replacements that do not include the installation of an AHRI-matched system.[27]

For early retirement (ER) projects, the cooling baseline is 12.44 SEER.

Table 13: Central Air Conditioner Baseline Efficiencies

Project Type	Cooling Mode[28]
New Construction	14 SEER
Replace-on-Burnout	13.08 SEER
Early Retirement	12.44 SEER

High-Efficiency Condition

Table 14 displays the Consortium for Energy Efficiency (CEE) requirements for eligible Tier 1 air conditioners as of January 1, 2009. Energy efficiency service providers are expected to comply with the latest CEE Tier 1 requirements.

Table 14: Central Air Conditioner CEE Tier 1 Requirements

SEER	EER
14.5	12.0

V. ENERGY STAR® Windows Measure Overview

Example: *A contractor replaces 100 square feet of windows in a gas heated, centrally cooled Houston home. The energy and demand savings claimed for this completed measure are 381 kWh and 0.24*

Measure Description

ENERGY STAR® windows savings are calculated on per square foot of window basis, inclusive of frame and sash. To qualify for these deemed savings values, ENERGY STAR windows may be installed only for customers with electric air conditioning in their homes, or for customers who have evaporative cooling systems and who participate in hard-to-reach (HTR) programs.

Eligibility Criteria

This measure applies to customers with electric air conditioning in their homes, or to customers who have evaporative cooling systems and who participate in hard-to-reach (HTR) programs.

Baseline

The baseline is a double-glazed (i.e., double-pane), clear window with an aluminum frame, with a U-factor of 0.87, a solar heat gain coefficient (SHGC) of 0.66, and air infiltration of 1 CFM/sq. ft.

High-Efficiency Condition

For a window to qualify for these deemed savings, it must meet the relevant ENERGY STAR® criteria anywhere in the state.

Appendix B
Measure Eligibility and Installation Standards

HARD TO REACH STANDARD OFFER PROGRAM
ELIGIBLE MEASURES AND INSTALLATION CRITERIA

CONTROL ENVELOPE ENERGY WASTE

MEASURE	MATERIAL	MINIMUM CRITERIA FOR INSTALLATION
Infiltration **Must include the following:** • **Weather strip all outside doors** • **Seal all penetration** • **Foam gaskets on all outside walls** • **Attic access**	Acrylic Latex plus Silicone Sealing Compounds Caulk Polyurethane Foam Elastomeric Sealant (including polysulfide, polyurethane and silicone) caulk	• Conforms to ASTM C834-95 with silicone • Conforms to ASTM C920-98 • Conforms to ASTM C920-98 • All visible caulk should be clear • A minimum 10 year life expectancy for ALL materials used.
Weather-stripping Weather-stripping refusal		• Must be adjustable and attached permanently.

forms will not be permitted.	Rigid Gaskets	• Gaskets must be attached to an aluminum carrier. • A minimum 10 year life expectancy for ALL materials used.
MEASURE	**MATERIAL**	**MINIMUM CRITERIA FOR INSTALLATION**
Insulation **•Total # of inches pre-retrofit** **•Type of insulation pre-retrofit** • **Condition of insulation pre-retrofit**	Mineral Fiber Blanket Mineral Fiber Loose Fill Cellulose Vermiculite (loose fill) Perlite (loose fill) R-Value	• Conforms to ASTM C665-98 • Conforms to ASTM C764-98 • Conforms to ASTM C739-97 • Conforms to ASTM C1149-97 • Conforms to ASTM C516-80 • Conforms to ASTM C549-81 • Existing ceiling insulation level of R-22 is in compliance with program. • For existing ceiling insulation below R-22, added insulation must be installed to R-30 in compliance with the deemed savings standards.
Insulating R-values	Walls Knee wall Floor (Pier & Beam)	• Install to R-13 • Install to R-19 • Install to R-15

<table>
<tr><th>MEASURE</th><th>MATERIAL</th><th>MINIMUM CRITERIA FOR INSTALLATION</th></tr>
<tr><td>Duct Sealing: Leakage to Outside Testing Method

If the building is eligible for duct sealing, the sealing measures can be conducted only in unconditioned space. A return located in conditioned space cannot be sealed to achieve duct efficiency improvement using the leakage to outside testing method.

Return air in conditioned space may be sealed to achieve air infiltration improvement, but all duct leakage testing must be conducted after treating the return air.</td><td>Fiber Backed Mastic Compound

Replacement Duct</td><td>• Apply to the duct joint

• A minimum 10 year life expectancy for ALL materials used.
• If return air is found sealed in a building where a sponsor has conducted duct efficiency improvement, but no air infiltration control measures, the duct installation will not be eligible for incentive.
• A certified HERS Rater must be on site for all duct efficiency testing.

AIR FLOW REQUIREMENTS FOR DUCT EFFICIENCY MEASURE
<table><tr><th>AC SIZE (TONS)</th><th>MINIMUM PRE-INSTALLATION LEAKAGE RATE (CFM)</th><th>MAXIMUM POST-INSTALLATION LEAKAGE RATE (CFM)</th></tr><tr><td>1.5</td><td>120</td><td>60</td></tr><tr><td>2.0</td><td>160</td><td>80</td></tr><tr><td>2.5</td><td>200</td><td>100</td></tr><tr><td>3.0</td><td>240</td><td>120</td></tr><tr><td>3.5</td><td>280</td><td>140</td></tr><tr><td>4.0</td><td>320</td><td>160</td></tr><tr><td>4.5</td><td>360</td><td>180</td></tr><tr><td>5.0</td><td>400</td><td>200</td></tr></table></td></tr>
</table>

Failure to complete the prescriptive requirements will result in a total measure failure regardless if the post-treatment CFM leakage reading meets the requirement

CONTROL INTERIOR ENERGY USAGE

MEASURE	MATERIAL	MINIMUM CRITERIA FOR INSTALLATION
Lighting Maximum of 15 CFL's may be installed in each home.	Compact Fluorescent Lighting	• All CFLs to have a minimum 10,000 hour lifetime burn. • 82 CRI (color rendition index). • 2700 Kelvin (color temperature) • A minimum 7 year life expectancy for all CFLs • "Hollywood" style or other vanity bathroom fixtures with four or more lamps per fixture must be replaced with a fluorescent lamp and ballast fixture meeting the standards described in the deemed savings tables • Use of a disk device which prevents screw-in CFLs from being replaced with an incandescent bulb is not eligible • A major measure must be installed and pass inspection for CFLs to be eligible for incentive.

MEASURE	MATERIAL	MINIMUM CRITERIA FOR INSTALLATION
Water Savers	Kitchen Aerators Bath Aerators Showerhead	• 1.5 gallons per minute maximum • 1.5 gallons per minute maximum • 2.0 gallons per minute maximum • Only models which cannot be easily modified to increased flow rate may be used. Proposed showerheads and aerator replacement models must be submitted for approval prior to installations. • A major measure must be installed and pass inspection for CFLs to be eligible for incentive.
Refrigerators	Two Door/High Efficiency	• 14,16 & 18 cubic feet offered • Maximum size 18 cubic feet • When the refrigerator model alone is not an adequate indicator of energy savings, the EESP has the option of metering and documenting the energy usage of the old unit.

CONTROL HVAC EFFICIENCY

MEASURE	MATERIAL	MINIMUM CRITERIA FOR INSTALLATION
Heating, Ventilation and Air Conditioning (HVAC)	Window Unit	• Must comply with deemed savings values and installation standards

	Packaged Units Split System	• Must comply with deemed savings values and installation standards • Must comply with deemed savings values and installation standards
DIAGNOSTIC MEASURE	**MATERIAL**	**MINIMUM CRITERIA**
Health & Safety	CO Testing Device	• Test every housing unit that has combustion equipment. • Ambient air CO levels must not exceed 9 parts per million at project completion.
Air Infiltration/Indoor Air Quality	Blower Door Testing A certified HERS Rater must be on site for all infiltration testing.	The final air exchange rate of a household treated with infiltration measures shall not be less than the standards set forth in the following table: **Minimum Final Exchange Rate*** **Shielding — Single Story — Two-story — 3> Stories** **Well Shielded** 1.18 — 0.95 — 0.83 **Normal** 0.99 — 0.79 — 0.69 **Exposed** 0.89 — 0.71 — 0.62 *Measured in cubic feet per minute at 50 Pascal per square foot of conditioned area.

- **Well shielded** is defined as urban areas with high buildings or sheltered areas or buildings 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 (90-90% of houses fall in this category)
- **Exposed** is defined as an open setting with few surrounding buildings or trees

Appendix C
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 prior to the installation of air infiltration control measures, duct sealing, or wall insulation. When conducting CO testing, the furnace must be operating. If more than 9 ppm CO is detected, these 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 which 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.

Appendix D
Insurance Requirements

INSURANCE REQUIREMENTS

Worker's Compensation and Employer's Liability -Project Sponsor and subcontractors of any tier retained by and through Project Sponsor shall purchase Workers Compensation insurance, and shall comply with all requirements of Workers Compensation laws of the state in which such work is being performed. Project Sponsor shall in addition carry Employer's Liability Insurance covering all operations and work hereunder in any amount not less than $500,000 per person. (Likewise, coverage for U.S. Longshoreman's and Harbor Worker's Act, and the Jones Act shall be included with appropriate limits where required.)

General Liability and Automobile Insurance - Project Sponsor agrees to carry at its sole expense, General Liability Insurance, including Broad Form Contractual Liability, Products/Completed Operations, Broad Form Property Damage covering all operations and work hereunder for all liability arising out of injury to or death of one or more persons and injury to or destruction of property in amounts not less than:

General Aggregate	$2,000,000
Products - Comp/Ops Aggregate	$1,000,000
Personal & Advertising Injury	$1,000,000
Each Occurrence	$1,000,000
Fire Damage (any one fire)	$ 50,000
Medical Expense (any one person)	$ 5,000

(An "aggregate" is the most the policy will pay out regardless of the number of claims; "each occurrence" is the maximum the policy will pay on each individual claim.)

SUCH INSURANCE SHALL SPECIFICALLY REFER TO THIS *CONTRACT* AND SHALL SPECIFICALLY COVER THE LIABILITY ASSUMED BY *PROJECT SPONSOR* AS STATED WITHIN THE INDEMNITY PROVISIONS OF THE *CONTRACT*.

Project Sponsor agrees to carry, at its sole expense, Automobile Liability Insurance on all automobiles owned and hired, as well as automobile non-ownership liability insurance in the amounts of not less than $1,000,000 for all liability arising out of injury to or death of one or more persons in any one occurrence, and not less than $1,000,000 for all liability arising out of injury or destruction of property in any one occurrence.

The insurance required by Paragraph 17.2 above shall include CenterPoint Energy as an Additional Insured with respect to all operations and work hereunder and shall provide that such insurance applies separately to each insured against whom claim is made or suit is brought. This insurance afforded to Additional Insured is to be primary of any other valid and collectible insurance.

The insurance required by above Paragraphs shall include a Waiver of Subrogation in favor of CenterPoint Energy.

Prior to commencing the Work, Project Sponsor shall furnish CenterPoint Energy certificates of the insurance required in the above sections, which shall be in companies and in form satisfactory to CenterPoint Energy. Such certificates shall provide that thirty (30) days written notice shall be given to CenterPoint Energy prior to cancellation of or material change in the coverage. Subject certificates shall reflect a Waiver of Subrogation in favor of CenterPoint Energy, and CenterPoint Energy as an Additional Insured, as appropriate. In addition, Project Sponsor shall obtain Insurance Certificates from any and all subs at every tier, and insure that subcontractor's coverages meet the requirements of this Contract, prior to the subcontractors beginning Work. Copies of first tier subcontractors' insurance certificates shall subsequently be furnished to CenterPoint Energy by Project Sponsor.

All such insurance required above shall provide insurance for occurrences during the performance of services by Project Sponsor and all subcontractors pursuant to this contract and for a period of two (2) years after completion of the contract. In the event that any insurance as required herein is available only on a "claims-made" basis, such insurance shall provide for a retroactive date not later than the commencement of work or delivery to CenterPoint Energy of products under this contract and such insurance shall be maintained by Project Sponsor with a retroactive date not later than the retroactive date required above. If the date purchase of an "optional extension period," "optional claims reporting period" or other similarly titled clause is necessary to maintain coverage as required hereunder, such clause shall provide insurance for all occurrences as required herein, aggregate limits of such insurance shall be reinstated to the full extent permitted by such insurance policy and shall provide insurance for all claims made after completion of the work under this contract by Project Sponsor. The limits of liability of such insurance as required herein shall remain unimpaired to the full extent permitted by such insurance policy and Project Sponsor shall execute all procedures necessary to remove any such impairment.

FAILURE OF THE *PROJECT SPONSOR* TO PROVIDE INSURANCE AS HEREIN REQUIRED OR FAILURE OF *OWNER* TO REQUIRE EVIDENCE OF INSURANCE OR TO NOTIFY *PROJECT SPONSOR* OF ANY BREACH BY *PROJECT SPONSOR* OF THE REQUIREMENTS OF THIS PARAGRAPH SHALL NOT BE DEEMED TO BE A WAIVER BY *CENTERPOINT ENERGY* OF ANY OF THE TERMS AND CONDITIONS

OF THIS *CONTRACT*, NOR SHALL THEY BE DEEMED TO BE A WAIVER OF THE OBLIGATIONS OF THE *PROJECT SPONSOR* TO DEFEND, INDEMNIFY, AND HOLD HARMLESS *CENTERPOINT ENERGY* AS REQUIRED HEREIN.

All insurance as required herein shall be primary to any other insurance coverage purchased and shall be issued by an insurer licensed to do business in the state of Texas having a Best's Rating of not less than "A" and a net surplus of not less than $25,000,000. The Project Sponsor's obligation to provide for the continuation of such insurance shall survive completion of performance by the Project Sponsor under this Contract.

The above insurance requirements are minimum requirements and shall not limit Project Sponsor's liability to CenterPoint Energy in any manner.

Glossary

- A -

Affiliate: For purposes of the CNP Standard Offer Program, 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 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 reflect 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.

- **Budget Reservation:** The amount of incentive funds CNP sets aside during the project implementation phase for a given Project Sponsor who has submitted a successful application prior to CNP's complete commitment of funds through Budget Reservations to other Project Sponsors.

- C -

Contracted Capacity Savings: As defined in an SOP Agreement, the amount by which a project is expected to reduce peak demand consumption (measured in kW) at the host customer's site(s).

Contracted Energy Savings: As defined in an SOP Agreement, the amount by which a project is expected to reduce energy consumption (measured in kWh) at the host customer's site(s).

- D -

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

Demand Savings: The maximum average load reduction occurring during any one-hour period between 1 PM and 7 PM CDT weekdays, from May 1 through September 30 (holidays excluded). The demand savings are measured against a predetermined baseline for deemed savings measures.

- 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 kWs, or both.

Energy Efficiency Project: An energy efficiency measure or combination of measures installed under a standard offer contract 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. An energy efficiency service provider may be a retail electric provider or a customer, if the person has executed a SOP Agreement.

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-

efficient equipment. Energy savings are determined by comparing the efficiency of the installed equipment to that of new standard-efficiency equipment—*not* to that of the customer's existing equipment (except in cases where no standards currently exist).

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

- H -

Hard-To-Reach Customers: Customers 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.

Host Customer or Customer: A residential distribution customer of CNP that owns or leases facilities at a Project Site or Sites and that has entered into a Host Customer Agreement with Project Sponsor, or is a customer acting as its own Project Sponsor, for the installation of Measures as a part of Project. "Host Customer" excludes all Project Sites that are new construction or major rehabilitation projects.

- I-

Implementation Payment: The first of two incentive payments made to a Project Sponsor. The implementation payment is for 40% of the total estimated incentive amount as specified in the SOP Agreement. **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 Commission 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 -

Measurement and Verification Plan: The Project Sponsor's specific plan for verifying measured savings estimates. The measurement and verification (M&V) plan should be consistent with the International Performance Measurement and Verification Protocol.

Measured Capacity Savings: The maximum average load reduction occurring during any one-hour period between 1 PM and 7 PM CDT weekdays, from May 1 through September 30 (holidays excluded), as determined in accordance with the Measurement and Verification Plan set forth in Exhibit C of the SOP Agreement.

Measured Energy Savings: The Energy Savings derived during a single year, from the Measures installed at the Project Site as determined in accordance with the Measurement and Verification Plan set forth in Exhibit C of the SOP Agreement.

- P-

Peak Demand Savings: For purposes of the CNP Standard Offer Program, Peak Demand Savings is the maximum average load reduction occurring during any one-hour period between1 PM and 7 PM CDT weekdays, from May 1 through September 30 (holidays excluded).

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 May 1 through September 30 (holidays excluded).

Performance Period: The one-year period following the approval of a Project Sponsor's Project Implementation Report (PIR) during which measurement and verification are to take place. Peak demand and energy savings measured over this period form the basis of the performance payment made to the Project Sponsor at the end of the year.

Performance Payment: The second of two incentive payments made to a Project Sponsor under the terms of an SOP Agreement. The performance payment is based on the one-year measured energy savings documented in CNP's M&V Report and may be up to 60% of the total estimated incentive included in the SOP Agreement.

Post-Installation Inspection: An inspection of a project site or sites conducted by CNP after a Project Sponsor has submitted a Project Implementation Report (PIR). The purpose of the inspection is to verify that the energy-efficiency equipment specified in the SOP Agreement has been installed properly and is capable of performing its intended function. CNP's approval of the PIR is contingent upon the results of the post-installation inspection.

Program Manual: The complete set of CNP Residential SOP materials, including the program description, procedures and forms.

Project: All the energy-efficient measures and any associated equipment and/or improvements that are installed, maintained and/or operated by the Project Sponsor to achieve the energy savings claimed for the project. A project may, in some instances, consist of more than one project site.

Project Application: The Project Application, comprising a set of standard forms, is submitted by an organization wanting to participate in the SOP Program as a Project Sponsor. On the Project Application, the Project Sponsor provides information about itself, the site at which the proposed project will be installed, and a general description of the proposed project.

Project Site: One or more adjacent buildings on a single meter owned or operated by a single CNP customer.

Project Sponsor: Any organization, group, or individual who contracts with CNP to provide energy savings under the SOP Program.

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 CNP following the approval of the Project Sponsor's project application (PA) and CNP's design of a project-specific measurement and verification (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.