

Texas Department of Housing and Community Affairs
Weatherization Program
WAP Work Scope Q&As
(Updated October 2024)

The Texas Department of Housing and Community Affairs (The Department) has created the following document to assist its Weatherization funded Subrecipients to answer applicable program questions. The document contains answers to the questions the Department has received that are relevant to the network. In addition to this document, Subrecipients are encouraged to take the following steps to respond to their questions:

- Review your applicable DOE and LIHEAP WAP Contracts
- Reference applicable TAC Rules
- Reference other applicable program rules/guidelines (OMBs, CFRs, TXGMS, WPNs, WAP Memos, etc.)
- Review WAP guidance provided on the TDHCA Website

If after reading and referencing these materials, you still have questions, please contact the training by submitting a program question by completing this form:

- <https://tdhca.wufoo.com/forms/request-for-ca-program-assistance/>

You may click on the hyperlinks below to move to the most appropriate category that applies to your question.

Contents

General.....	2
Policies & Procedures	3
Mandatory/Major Measures	4
Health & Safety	4
Air Infiltration.....	4
Duct Sealing	5
Attic Insulation	5
Sidewall Insulation	6
Floor Insulation	6
Optional/Secondary Measures	7
Low-Cost Measures (Water Savers/Water Heater Tank/Pipe Ins. /Lighting (CFLs, LEDs)	7
Refrigerator Replacement.....	8
Smart Thermostat	8
Solar Screens/Window Film	8
Incidental Repairs.....	9
HVAC/Evaporative Cooler Replacement.....	10
Doors and/or Windows.....	11

Department Q&As available:

- For information regarding income guidelines, please refer to the Department's [Income Guidelines Q&A](#).
- For information regarding Health & Safety topics (CAZ, ASHRAE, LSW, K&T, etc.), please refer to the Department's [H&S Q&A](#).
- For information regarding General WAP topics (T&TA, Bonding, etc.), please refer to the Department's [General Q&A](#).
- For information regarding WAP documentation (client files, Assessments, Final Inspections, Multifamily), please refer to the Department's [Documentation Q&A](#).
- For information regarding energy audit processes, please refer to the Department's [Energy Audit Q&A](#).
- For information regarding WAP Work topics (Priority List, Major/Mandatory/Secondary/Optional measures, etc.), please refer to the Department's [WAP Work Scope Q&A](#).

Best Practice(s) available upon request:

- Client Denials & Referrals
- WAP Client File Checklist
- Whole House Assessment
- Isolating the CAZ
- Mobile Home Work Scope
- Principles of CFM Reduction
- Window & Door Replacement
- Using ASHRAE 62.2-2016 Calculator
- Evaporative Coolers
- Unit Replacement
- Manual J/S
- SEER, EER, HSPF, and AFUE Degradation
- Water Heater
- Final Inspection Process
- Multifamily Weatherization

General

1. Is a whole house assessment required for Priority List (PL) only houses?

Compliance with [TAC §6.416](#) is required. For PL only houses, Subrecipients are expected to draft a work scope that will address all measures identified on the applicable PL(s) in applicable order before proceeding to the next measures, but all potential measures will be determined based on the initial whole house assessment.

2. When leveraging DOE & LIHEAP funds, what do we use to justify the measures installed?

Subrecipients must follow the current approved policies/procedures and utilize either the energy audit or applicable priority lists (PL) to justify installed measures. Utilizing a combination of a priority list and energy audit on one unit is not allowed unless specified within an applicable PL.

3. Is the DOE PL for all DOE units or just the DOE BIL units?

The applicable DOE PL will be eligible for use on all DOE weatherization units that meet each PL's criteria.

4. Is there going to be a unified Priority List form created by TDHCA for Subrecipients, or do Subrecipients create their own?

No. There is a form titled "[NEAT-MHEA Whole House Assessment Form](#)" on the Department website to use for assessments; Subrecipients are welcome to use this document, edit this document to their liking, or utilize a locally developed form.

LIHEAP PL answer: The Department provides an updated Priority List as part of the LIHEAP WX contract each year. Subrecipients can reformat the layout of the Priority List to allow documentation to justify the installation of the measures. Subrecipients must follow the order and guidance for the Priority List that is provided by the Department.

DOE PL answer: The Department will update DOE PLs as applicable and post the most current PL on our website. Subrecipients can reformat the layout of the PL to allow documentation to justify the installation of the measures. Subrecipients must follow the order and guidance for the PL.

5. For a Priority List house, if a client refuses Major/Mandatory Measures, can we address Secondary/Optional Measures?

LIHEAP PL answer: Unlikely, but possible. If the client refuses measures that significantly impact the cumulative pressure (air) or thermal (insulation) barriers, then the client should educate the client on their choice and consider deferring the unit; if the declined measure does not significantly impact the pressure or thermal barriers, then document why the measure is being skipped, and proceed with the remaining WAP work. After review if still in doubt, contact Department training staff to aid in the decision.

DOE PL answer: No, unless the “mandatory measure” is physically impossible to install or determined not applicable after proper assessment. TDHCA WAP DOE - Approved PL Policies and Procedures definition section and guidance state the following:

- Mandatory Measure: Any measure included on the regional priority list that is labeled as “mandatory” and is applicable to the project. These measures must be installed if any DOE funds are to be used on the project.”
- If the DOE-approved PL is applied to a project using any DOE funds, then any measure listed as “mandatory” may only be skipped if it is physically impossible to install or properly assessed and determined to not be applicable, regardless of funding source used for the measure. Additionally, the Subgrantee must ensure photo and client file documentation is retained within the client file to support the Subgrantee’s actions for skipping the mandatory measure.

6. What happens when funding will not allow us to address a specific measure, but we still have enough funds to address other smaller measures within the Priority List?

LIHEAP PL answer: This question presents two (2) scenarios that must be taken into consideration.

- Major Measures have not been completed: Subrecipients would document that funding did not allow them to proceed and conclude work or contact the training Department for a waiver to exceed the CPU to address the major measure prior to issuing a work order.
- Major Measures have been completed: Subrecipients could continue within the Secondary Measures to maximize expenditures.

DOE PL answer: This question presents two (2) scenarios that must be taken into consideration.

- Mandatory Measures have not been completed: Subrecipients would document that funding did not allow them to proceed and conclude work or contact the training Department for a waiver to exceed the CPU to address the major measure prior to issuing a work order.
- Mandatory Measures have been completed: Subrecipients would continue within the Optional Measures to maximize expenditures; once an optional measure is reached and cannot be completed, conclude work.

7. Is there any order you have to address Secondary/Optional Measures?

LIHEAP PL answer: No. Once all Major Measures have been addressed, Optional Measures should be addressed based off what has the best potential energy savings impact for that household.

DOE PL answer: Guidance from WPN 22-8 and its attachments do not specifically clarify the order optional measures are to be installed. As a best practice, the Department strongly recommends that Subrecipients follow the order of the DOE PL for optional measure installation to avoid any potential questioning, as it appears the optional measures are reasonably listed in order of highest to lowest SIR when compared to historical energy audit Recommended Measures Reports.

8. Do we need to document why Secondary/Optional measures are not addressed?

While not a requirement, this practice is strongly encouraged to document the Subrecipients thought process when identifying Secondary/Optional Measures that offer the best potential energy savings for the client.

Policies & Procedures

1. Can only wood frame units utilize the Single-Family Site-Built Homes and Low-Rise Multifamily PL?

LIHEAP PL answer: No. LIHEAP PL can be used on any building type, there is no restrictions for what type of building the PL can be used to weatherize.

DOE PL answer: Yes, that is correct. Units served utilizing the DOE PL must meet all the housing type specific criteria identified within the TDHCA-Approved DOE Priority List Policies and Procedures.

2. Is an energy audit required for Single-Family Site-Built Cinder Block homes?

LIHEAP PL answer: No. LIHEAP PL can be used on any building type, there is no restrictions for what type of building the PL can be used to weatherize.

DOE PL answer: Yes. An energy audit would be required, as the unit would not meet the wood framed requirement of the TDHCA-Approved DOE Priority List Policies and Procedures unless DOE adopts this housing type in future amended PL’s.

3. If a DOE unit requires a measure not listed on the DOE PL, would the Subrecipient be required to run an energy audit?

LIHEAP PL answer: Maybe. If the measure required is on the LIHEAP PL, then you can leverage the DOE PL with the LIHEAP PL to provide the most comprehensive WAP package to that unit. If the measure required is not listed on the LIHEAP PL or the DOE PL, then, yes, and energy audit would be required.

DOE PL answer: As directed within multiple areas of the TDHCA WAP DOE - Approved PL Policies and Procedures, dwelling units that need measure(s) not included within the PL, require a site-specific energy audit (EA) ran in compliance with the most recently DOE-approved energy audit procedures.

Note: Please reach out to the training Department when if such scenario requires additional clarification.

Mandatory/Major Measures

Health & Safety

1. What is the Department's guidance for the potential H&S issues?

Program guidance for specific H&S topics can be located on the [TDHCA Website](#). Refer to the posted state plans and the Department's [H&S Q&A](#).

Air Infiltration

1. How can we determine if we are using the most current blower door and duct blaster data sheet?

The latest form will be posted on the Department program guidance webpage: (*Pay special attention to revision dates*) [Blower Door and Duct Blaster Data Sheet \(XLXS\)](#)

2. Does TDHCA have a Blower Door and Duct Blaster target policy?

Yes. The policy is located within the Blower Door and Duct Blaster Data Sheet; it is on the second tab.

3. How are Subrecipients meeting or exceeding BD target readings on a consistent basis?

Subrecipients who consistently meet their air sealing targets typically have a thorough initial assessment, effectively utilize diagnostic equipment to identify key leakage points, provide intensive staff training, have incorporated attic/crawl space sealing, and have developed a team approach (assessment, contract, and final inspection staff) within their air sealing process. Additionally, the Subrecipients utilized many of the common practices identified within the SWS and Best Practices.

4. If the initial BD reading is below the BD or DOE PL target, do we still need to air seal?

With regards to pressure barriers, the primary goal is air seal tight and ventilate right!

LIHEAP PL answer: Air sealing would not be required if the unit is below the BD target, however as a best practice, TDHCA would recommend that Subrecipients address any major areas of air leakage noted during the assessment.

DOE PL answer: Air sealing would not be required if the unit is below the DOE PL target, however as a best practice, TDHCA would recommend that Subrecipients address any major areas of air leakage noted during the assessment.

Energy Audit answer: Based on the professional judgement of the assessor(s), the Subrecipient would determine if WAP work would be able to lower the BD reading, and then determine if the energy audit would justify the costs of the air sealing work. As a Best practice, TDHCA would recommend that Subrecipients try to address any major areas of air leakage noted during the assessment.

5. Is there a dollar threshold cap for air infiltration?

LIHEAP & DOE PL answer: No. Due to the importance of air infiltration, there are no air infiltration caps: air seal tight and ventilate right!

6. What happens if Subrecipients are not hitting the required air sealing metrics (LIHEAP: 75% hit or exceed target BD; DOE PL: 1 cfm/sq ft; Energy Audit: hit target)?

LIHEAP PL answer: Subrecipients must track air-sealing performance to ensure the 75% target requirement is achieved for both Subrecipient management and compliance monitoring staff to review. It is strongly recommended to utilize the tracking spreadsheet on the Department website. Should monitoring inspections reveal concerns the monitor at their discretion could (a) review the onsite monitoring inspection results vs. the Subrecipient tracking spreadsheet to determine the accuracy of the tracking spreadsheet AND/OR (b) expand their current monitoring sample (add more units) to ensure compliance of the 75% requirement.

DOE PL answer: Subrecipient would be out of compliance with program requirements and at Compliance's discretion; they will have the ability to address poor air-sealing efforts.

Energy Audit answer: Subrecipient would be out of compliance with program requirements and at Compliance's discretion; they will have the ability to address poor air-sealing efforts.

7. If the glass pane in a window is gone, can this be a repair measure or is it air infiltration?

LIHEAP PL answer: Either, however with air infiltration becoming a Major measure and the expenditure cap being removed it would make sense to address the glass pane utilizing air infiltration funds.

DOE PL answer: Air infiltration.

Energy Audit answer: Either, but either option would have to be justified by the energy audit.

Duct Sealing

1. Is the duct blaster test required?

Yes, units with functioning duct systems, require the duct blaster form to be completed by Subrecipient's contracts and needed for justification of installation/exclusion of duct sealing measure.

2. Is there a reason pressure pan readings are required?

Yes, while duct blasters analyze duct system leakage and help quantify reduction Subrecipients struggled to identify key leakage areas within the duct system. Pressure pans help to analyze leakage within individual runs of duct. As an effort to improve duct sealing and consistently reach/exceed the reduction targets, the use of pressure pans is required.

3. How are Subrecipients meeting or exceeding DB target readings on a consistent basis?

Effective duct sealing is remarkably similar in principle to effective air sealing. Subrecipients who consistently meet their duct sealing targets typically have a thorough initial assessment, effectively utilize diagnostic equipment to identify key leakage points, provide intensive staff training, and have developed a team approach (assessment, contract, and final inspection staff) within their sealing process. Additionally, the Subrecipients utilized many of the common practice identified within the SWS and Best Practices:

4. Is there a dollar threshold cap for duct sealing?

LIHEAP & DOE PL answer: No. Due to the importance of duct sealing, there are no duct sealing caps: duct seal as tight as possible → the goal is 0 cfm!

5. What happens if Subrecipients are not hitting the required duct sealing metrics (LIHEAP: 75% hit or exceed target BD; DOE PL: 1Pa/register; Energy Audit: hit target)?

LIHEAP PL answer: Subrecipients must track duct sealing performance to ensure the 75% target requirement is achieved for both Subrecipient management and compliance monitoring staff to review. It is strongly recommended to utilize the tracking spreadsheet on the Department website. Should monitoring inspections reveal concerns the monitor at their discretion could (a) review the onsite monitoring inspection results vs. the Subrecipient tracking spreadsheet to determine the accuracy of the tracking spreadsheet AND/OR (b) expand their current monitoring sample (add more units) to ensure compliance of the 75% requirement.

DOE PL answer: Subrecipient would be out of compliance with program requirements and at Compliance's discretion; they will have the ability to address poor air-sealing efforts.

Energy Audit answer: Subrecipient would be out of compliance with program requirements and at Compliance's discretion; they will have the ability to address poor air-sealing efforts.

6. Can we replace the entire duct system now since the expenditure caps have been removed?

LIHEAP & DOE PL answer: Yes, if the current duct system is deteriorated and cannot be sealed to meet cfm reduction requirements the Subrecipient would have the option to replace the complete duct system. The goal of duct sealing is to reduce or eliminate duct system leakage. If Subrecipient decides to replace the duct system vs sealing the traditional way, the reasoning & justification needs to be supported by a combination of pictures, diagnostic results etc. when the entirety of the duct system is replaced. Keep in mind if replaced, the supply ducts must be insulated to meet current codes. In theory, replacing the duct system is sometimes more cost-effective long term & will improve the indoor air quality by removing old/deteriorated duct systems that have built up dust particles from years of wear & tear.

Energy Audit answer: Yes, but the cost would have to be justified by the energy audit.

Attic Insulation

1. How do Subrecipients determine if/when to install attic insulation?

LIHEAP PL answer: Follow the guidance in the current PL. The current PL states, "If existing insulation is assessed below local code requirement, must insulate to meet current code or to maximum capacity."

DOE PL answer: Follow the guidance in the current PL. There is specific guidance within each PL that tells you what to do for each building type.

Energy audit answer: Input the existing attic insulation and if/when the audit ranks a certain type of insulation to install, follow the audit recommendation.

2. What are we supposed to do regarding the insulation of attic hatches?

LIHEAP/DOE PL & Energy audit answer: The attic hatch must be insulated to the same level as the attic. SWS guidance specifically describes this requirement. If the hatch isn't insulated to the same level as the attic, the uninsulated area creates a significant negative affect on the overall working attic R-value. If space is a concern, contact Department training staff to discuss potential solutions.

3. In reference to mobile home roof insulation, standard practice is to fill the cavity. Is this the desired method? Is the cost to open and close the roof be included in the cost of insulation?

LIHEAP/DOE PL answer: Yes, installation practices have not changed. Yes, the cost to open and close the roof for installation of attic insulation should be included in the cost of the attic insulation measure.

Energy audit answer: Yes, installation practices have not changed. Input the existing attic insulation and all other applicable information needed for the audit, and if/when the audit ranks a certain type of insulation to install, follow the audit recommendation; if you can get the cost to open and close the roof to rank within the ECM, even better!

4. Attic insulation is understandable and relatively easy to assess and install. Wall and floor insulation are more difficult to assess, determine work scope, and properly install. Any advice or help you can give?

Creating a good thermal barrier requires adequate or good insulation on all sides of the building. Insulation is what establishes the thermal barrier, so without good insulation, your finished total product will not be nearly as efficient; insulation is a major measure for a reason. Take your time to properly assess wall insulation, using IR cameras or drilling pilot holes, at all areas: above and below windows and doors, walls next to unconditioned garages, etc. Use the IR camera while the blower door is running to help exaggerate potential areas of temperature differential. Floor insulation should be relatively easy to assess as well, as long as it is accessible according to OSHA standards. When accessible, doing air sealing underneath the home (sealing around plumbing penetrations, etc.) to first improve the pressure barrier is ideal, then getting proper insulation installed, and secured within the floor joists, according to SWS standards, could result in a noticeable improvement for energy efficiency.

Sidewall Insulation

1. If Asbestos siding prevents wall insulation from being installed from the exterior and the client refuses installation from the interior, can we document the refusal and proceed down the PL?

See the guidance from earlier in this document about clients declining major/mandatory measures. Wall insulation is a major measure and ample time should be taken to explain the whole house weatherization approach and potential energy savings. If a client refuses wall insulation, and there are significant insulation voids throughout the unit, this choice would voluntarily compromise the thermal barrier for the house. Subrecipients should educate the client on this choice, and if the client still refuses, the unit should be deferred. Should questions remain please contact Department Training staff to aid with the determination.

2. The wall insulation portion of the DOE Single-Family Site-Built PL lists an option to insulate a partially insulated exterior wall. Can you give any guidance/recommendations for partially insulated cavities?

LIHEAP PL answer: Subrecipient staff will thoroughly assess the existing wall insulation and then use their professional judgement to determine whether or not to add wall insulation to those areas.

DOE PL answer: Please note this measure is optional and at the discretion of the Subrecipient. With that clarified, the SWS does not give specific guidance for this scenario, however it does state in the Dense Pack subsection 4.0202.1f Installation to "Fill 100% of each cavity with insulation to the correct density that prevents air movement." If the installation cannot be completed to meet all SWS requirements, Subrecipients should not consider the optional measure.

Energy audit answer: Input the accurate data for the existing wall insulation, and as long as the measure is justified in the energy audit, it is allowed.

Floor Insulation

1. Are vapor barriers required?

Yes always. Guidance can be located within the SWS under the Health & Safety Moisture section Subtopic 2.0202 Ground Vapor Retarders.

2. What about the possibility of insulating behind the existing skirting on mobile home?

LIHEAP PL answer: If done properly, with proper moisture barrier and installation, this would be included in the floor insulation measure because you are re-defining the building envelope. Should questions remain, please contact Department Training staff to aid with the determination.

DOE PL answer: Not an option.

Energy audit answer: Not an option.

3. The DOE Single-Family Site-Built PL - Hot Climate Zone measure # 8 (Floor Insulation) states “Mandatory only for propane or oil-fired primary heat.” Are there any options to install floor insulation for housing heated by electricity or natural gas?

LIHEAP PL answer: Yes, floor insulation is an option for all housing stock, if/when applicable and accessible.

DOE PL answer: As directed within multiple areas of the TDHCA WAP DOE - Approved PL Policies and Procedures, dwelling units that need measure(s) not included within the PL, require a site-specific energy audit (EA) ran in compliance with the most recently DOE-approved energy audit procedures.

Energy audit answer: Yes, as long as the measure is justified in the energy audit.

Optional/Secondary Measures

Low-Cost Measures (Water Savers/Water Heater Tank/Pipe Ins. /Lighting (CFLs, LEDs))

1. What is the value of these low-cost measures? Should we even bother installing these items?

Although low-cost items are listed as Secondary/Optional Measures, they often have a huge energy savings when analyzing their cost to savings ratio and are still highly recommended by the Department.

2. What guidance is there regarding where to install LED bulbs?

LIHEAP/DOE PL answer: Replace all screw-based incandescent, halogen, or CFL bulbs that are used for a minimum of 1 hour per day.

Energy audit answer: Install them as long as the measure is justified in the energy audit.

3. Subrecipients want to avoid damage to existing plumbing fixtures; can we not address water saving devices?

No, the goal is to do what is in the best interest to save energy for the client. Subrecipients should use caution and make a reasonable attempt to address aerators/showerheads. If efforts are unsuccessful and/or present a liability that the plumbing fixture could be damaged, the Subrecipient should document the installation effort.

LIHEAP/DOE PL answer: Install aerators at or below 2.2 GPM; install showerheads at or below 2.5GPM.

Energy audit answer: Install them as long as the measure is justified in the energy audit.

4. What if the water heater pipes are in poor condition and we are worried about the installation of pipe insulation causing a leak?

Clear documentation that could be verified by all parties would serve as ample justification when not addressing WH pipe insulation in this scenario.

5. Should we insulate all hot water heaters regardless of location?

Standby loss is a huge energy use for storage water heaters. Generally, you should consider insulating all storage type water heaters older than 2015 regardless of location and consider insulating all water heaters located in unconditioned spaces.

LIHEAP/DOE PL answer: Install tank insulation, R10 minimum, when applicable.

Energy audit answer: Install it as long as the measure is justified in the energy audit.

6. It appears that all low-cost baseload measures such as faucet aerators, showerheads, and DWH tank/pipe insulation have a limit of \$250. Is the \$250 limit for all items or each item?

LIHEAP PL answer: There is no cap for these low-cost measures.

DOE PL answer: As specified in the PL, this is a \$250 total per dwelling unit DOE WAP fund cap to address all low-cost baseload measures and not for each item.

Energy audit answer: There is no cap for an energy audit unit, install it as long as the measure is justified in the energy audit.

Refrigerator Replacement

1. Where can the refrigerator replacement tool be found?

TDHCA has posted an Excel [Refrigerator Replacement Calculator](#) on the Departments website, which can be utilized to determine if usage would warrant refrigerator replacement.

2. So, refrigerators can only be replaced if price is \$850 or less?

LIHEAP PL answer: No, there is no measure cap for refrigerator replacement with LIHEAP. If the calculator justifies replacement, replace the refrigerator.

DOE PL answer: Yes, DOE will only allow \$850 or less to be charged for the replacement refrigerator.

Energy audit answer: There is no measure cap in the energy audit, the measure just has to be justified by the energy audit.

3. Are we allowed to replace more than one (1) refrigerator?

LIHEAP PL answer: No, as of PY25, the PL states that refrigerator that is being evaluated must be located within the primary living condition space meaning the auditor must evaluate the refrigerator typically found in the kitchen area of the conditioned space.

DOE PL answer: No, the PL states that you may replace up to (1) refrigerator per home, this too, the auditor needs to be evaluated the refrigerator within the condition space.

Energy audit answer: No, WaWeb Version 10 does not allow the auditor to input more than (1) refrigerator in the audit.

Smart Thermostat

1. If client does not understand the use of a smart thermostat, can Subrecipients go to the next measure/item?

LIHEAP PL answer: Yes, it is recommended Subrecipients document the reason for any measures being installed, or any measures that are not being installed. If a household would not benefit from a smart thermostat (client always home; client unwilling to use properly), then document accordingly and move down the list.

DOE PL answer: Replacement of the thermostat alone is not an option. If the client is getting a complete unit replacement via the DOE PL, installation of a programmable thermostats is required.

Energy audit answer: If the energy audit justifies it, but the client would not like utilize it, document it, do not install it, and move on.

Solar Screens/Window Film

1. Is there a requirement or shading guidance that can be utilized when replacing solar screens?

LIHEAP PL answer: If the windows are shaded by porches, awnings, garages, or other permanent structures, which prevent direct sunlight from reaching the window, then solar screens/window film cannot be installed on that window.

DOE PL answer: Not an option.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

2. What does the Department consider to be a permanent structure?

Since solar screens and window film are considered secondary measures, the Department relies on Subrecipient staff to use their professional judgment when assessing the potential energy savings these measures might offer. Detailed assessment notes are crucial when evaluating whether a permanent shading structure significantly reduces solar heat gain through radiation. Although the 18-inch overhang rule was removed years ago, fixed structures like overhangs or awnings greater than 36 inches can generally be considered to provide sufficient shading, potentially making solar screens unnecessary. As a general rule, if a fixed or immovable structure provides limited sun exposure, it's best not to install screens on that window.

3. When evaluating windows for solar screens or window film, the auditor believes the existing windows are Low-E windows, should we still consider adding screens?

The decision to install solar screens will remain a local one, based on whether they would benefit the characteristics of the specific windows. Typically, this information can be found on the window's manufacturer label, or it can be determined using tools like a Low-E detector, flame test, etc. Before proceeding, the Subrecipient must assess whether any permanent structures would prevent installation and consider whether other secondary measures might be more beneficial or cost-effective. Factors such as the direction the windows face, the climate

zone, the compatibility with the glass type (since solar screens or film could void the warranty or cause damage) should all be considered as they can impact the decision or justify not installing.

4. How do Subrecipients justify installing solar screens on the north side of a unit?

LIHEAP PL answer: It is common that the orientation of a house makes it difficult to identify a true wall facing the North. The inclusion of the north side of the house for solar screen installation is simply to allow Subrecipients to have the option for screen installation should the windows on the North wall have the potential to receive direct sunlight; it does not make it a requirement to install solar screens on the north side of the house. If Subrecipients believe that it would be in the best interest of the client to omit solar screens on the north side of the home, then they should document accordingly and proceed to the next Secondary Measure item that would benefit the client on the Priority List.

DOE PL answer: Not an option.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

Incidental Repairs

LIHEAP PL defines Contributory Items and Incidental Repairs within the PL in your contract.

DOE defines incidental repairs within [WPN 19-5](#).

1. Are all repairs capped at \$500 or can Subrecipients do repairs tied to other measures and increase the amount allowed for repairs?

Keep in mind weatherization focus is to increase energy efficiency and not be a rehabilitation program. Repairs should be limited whenever possible. Repairs meeting the definition of Contributory Items which are needed for proper installation can be included in the associated measure costs and not be counted into the expenditure cap otherwise the repair would be subject to the \$500 expenditure cap.

Example: Minor roof repair needed for the installation of the attic insulation. If it were documented that the roof repair meets the definition of a contributory item, the cost could be included in the attic insulation otherwise would be counted as an incidental repair and be subject to the expenditure cap.

LIHEAP PL answer: If it is a repair, the budget cap is \$500.

DOE PL answer: If it is a repair, as defined in WPN 19-5, the budget cap \$500.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

2. Can incidental repairs be performed if we do not reach the Secondary/Optional Measures portion of the Priority List?

LIHEAP PL answer: No. Contributory items can be installed along with the Primary Measure as you work down the Priority List, but the Subrecipient must reach the Secondary Measures before the incidental repairs will be allowed.

DOE PL answer: Yes, but the installed IRMs must meet all WPN 19-5, Standard Work Specifications (SWS) and International Residential Code (IRC) requirements.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

3. What is the difference between repair and replacement of mobile home skirting?

LIHEAP PL answer: Mobile home skirting is an allowable expenditure under the Secondary Measure Incidental Repairs on the Priority List, as it can protect the integrity of the building: plumbing, duct system, and floor insulation (if applicable).

DOE PL answer: Not an option.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

4. If a Subrecipient has other non-federal repair funds available, can the PL \$500 incidental repair measure (IRM) threshold for Single-Family Site Built and Manufactured Homes be exceeded during the weatherization process?

LIHEAP PL answer: Yes, however the additional repair cost must be clearly invoiced to the non-federal funding source *and* the installed IRMs must meet the PL definition, Standard Work Specifications (SWS) and International Residential Code (IRC) requirements.

DOE PL answer: Yes, however the additional repair cost must be clearly invoiced to the non-federal funding source *and* the installed IRMs must meet all WPN 19-5, Standard Work Specifications (SWS) and International Residential Code (IRC) requirements.

Energy audit answer: There is no cap on repair costs within the energy audit. As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

5. **The DOE Low-Rise Multifamily PL requires incidental repair measures (IRM) to not exceed 10% of the project's total Energy Conservation Measures (ECM) package. Is this capped % per unit, building, or complex?**

LIHEAP PL answer: Not applicable.

DOE PL answer: Per Unit. The key factor that must be taken into consideration is the P&P states "as defined in WPN 19-5". WPN 19-5 clarifies that IRM cost are specific to each unit within the *Package of Weatherization Measures* definition. The definition states, "The cost of all ECMs and their associated IRMs included in an audit or priority list and/or installed in a home."

Energy audit answer: Not applicable.

HVAC/Evaporative Cooler Replacement

1. **Can we have a professional perform the HVAC assessment and if so, how can we charge the service? If the assessment does not trigger any further work, is it still allowable?**

LIHEAP/DOE answer: Yes, and yes, HVAC assessments can be performed by an industry professional, and the cost would be an allowable program support charge.

2. **Do Subrecipients have to supply both Manual J and Manual S in client files to justify sizing?**

LIHEAP/DOE answer: Yes. According to the LIHEAP/DOE contracts, an accurate Manual J and Manual S must be in the client file to justify sizing and equipment selection for all Furnace/AC/HVAC replacements.

3. **What is required to justify replacement of an existing HVAC system?**

There must be proper documentation showing that all Major/Mandatory Measures on the PL were either already sufficient at time of assessment or have been addressed prior to reaching Secondary/Optional Measures on the PL. Proper documentation to justify the replacement vary per fuel source and PL or energy audit. Reminder, examples of *unacceptable* assessment documentation for replacement include, but are not limited to: old – needs replacement; bad – needs replacement; doesn't work – needs replacement.

LIHEAP PL answer: Subrecipients need to have documentation in the client file to justify the replacement of system/unit. Assessment justification must identify why the replacement is necessary and what process was used to make that determination. For central HVAC systems, Subrecipients must use the [Degradation Calculator](#) on the Department's website to calculate the degraded AFUE/SEER of the existing unit to determine if it can be considered for replacement, according to the current PL standards.

DOE PL Answer: There is specific guidance, per PL, to follow to justify HVAC system replacement.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

4. **If Subrecipients repair/replace a central system, do Subrecipients have to remove and dispose of existing window units?**

LIHEAP/DOE answer: This situation would need to be determined on a case-by-case basis and require the Subrecipient to determine if leaving the unit could have a negative impact to the overall energy savings of the house. Things to consider:

- If the existing RACs are operable and sufficient, why is the central system being repaired or replaced?
- Is the RAC being left energy efficient or will using the RAC have a negative impact on the structure's energy savings?

If leaving the existing RACs in place would not affect the overall energy savings then RACs would not need to be removed from the household, but the client should definitely be educated on operating the air conditioning systems in the house in the most efficient manner.

LIHEAP PL answer: Reminder: Yes, if replaced along with effective duct sealing, if applicable, the window units would need to be removed and as a reminder per PL, "No replacement of window air-conditioners if a central system is replaced or repaired to working order" is clearly stated within the PL.

5. **A working HVAC unit in very poor condition that does not meet the degradation for replacement, but the HVAC contractors' guidance is to not "repair/clean and tune" the system because of the system condition. All other Major/Mandatory measures have been completed; can it be acceptable leave this measure unaddressed?**

LIHEAP/DOE PL answer: Potentially yes. HVAC work is secondary/optional on both PLs, so it is not required to address. If the HVAC contractor can show that the HVAC unit was assessed and according to his/her professional opinion, they don't believe it is in the best long-term decision of the HVAC unit to do a repair/tune-up for realistic reasons, then not touching the unit, with appropriate support documentation could be acceptable. Robust client file documentation should be retained for future reference should monitoring question the situation.

Energy audit answer: As long as the energy audit is run accurately, follow what the energy audit recommends.

6. What is required to justify replacement of an existing room/window air conditioner?

There must be proper documentation showing that all Major/Mandatory Measures on the PL were either already sufficient at time of assessment or have been addressed prior to reaching Secondary/Optional Measures on the PL. Proper documentation to justify the replacement vary per funding source and PL or energy audit.

LIHEAP PL answer: Subrecipients need to have documentation in the client file to justify the replacement of the unit. Assessment justification must identify why the replacement is necessary and what process was used to make that determination. For Room Air Conditioners, Subrecipients must use the [AC Replacement Calculator](#) on the Department's website, or can replace units eight (8) years old or more.

DOE PL Answer: For RACs, you can replace units made in 2014 or before, but must replace with 12 CEER unit or higher, of the same or lesser capacity.

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.

7. Are room air conditioners required to be sized and if so, how do we size them?

LIHEAP PL answer: For room air conditioners, manufacturers provide a sizing chart based off square footage in the window unit's specifications that can be utilized to ensure the unit is properly sized. Subrecipients should require their contractor to provide the sizing chart as part of their material specifications manual.

DOE PL answer: Due to the PL criteria, window A/C replacements are limited to the same size or smaller. With that clarified, factoring the room size into the equation is the right move; however, the replacement costs for units that need a BTU increase would need to be covered by another funding source.

- Note – a potential work around would be to address and install the needed measure to meet DOE requirements by leveraging the unit with the LIHEAP PL, utility funding, or other local funding source.

Energy audit answer: As long as the energy audit is run accurately, follow what the energy audit recommends.

8. Do Heat/Cool Window Units have an energy star rating?

Window units with resistance heat will not be energy star rated. Heat pump window units (reverse cycle) can have an energy star rating. Details on requirement and available products can be located at the following:

- https://www.energystar.gov/products/heating_cooling/air_conditioning_room/key_product_criteria
- <https://www.energystar.gov/productfinder/product/certified-room-air-conditioners/results>

9. Are there any limits on the number of window A/C units that can be replaced?

LIHEAP/DOE PL answer: No. Neither PL criteria list a maximum number of window A/C units that can be replaced.

Energy audit answer: As long as the energy audit is run accurately, follow what the energy audit recommends.

Doors and/or Windows

1. What are the requirements to replace a door or window?

LIHEAP PL answer: The PL states: "Doors or windows that are structurally unsound or unable to be repaired may be replaced. Prior to replacement, Subrecipient must receive written Dept. approval. If prior approval is not received, costs are disallowed." There must be proper documentation showing the Major items on the PL were either already sufficient at time of assessment or have been addressed prior to reaching this item on the PL. Make sure the replacement doors and windows meet/exceed the material specifications requirement.

DOE PL answer: Doors are not an option. For single family and LRMF PL, not an option. For the manufactured homes with who heat with propane or oil-fired primary heat depending on the region of the PL states: "Replace all single-paned metal-framed windows with Low-E double-paned windows having a U-value of 0.33 or less. Single pane windows with storm windows are not eligible for replacement using DOE funds."

Energy audit answer: As long as the energy audit is run accurately, if the energy audit justifies it, it is allowed.