



**Department of Energy**  
Washington, DC 20585

**WEATHERIZATION PROGRAM NOTICE 13-5**  
**EFFECTIVE DATE: September 23, 2013**

**SUBJECT: REVISED ENERGY AUDIT APPROVAL PROCEDURES AND  
OTHER RELATED AUDIT ISSUES**

**PURPOSE:** To establish energy audit approval criteria used by the U.S. Department of Energy (DOE) to determine compliance with rule 10 CFR Part 440; to establish procedures by which Grantees can submit energy audits and lists of general heat waste reduction measures to DOE for approval every five years pursuant to 10 CFR Part 440.21(i), to establish requirements for switching energy audit tools; and to establish requirements for DOE access to web-based energy auditing tools.

**SCOPE:** The provisions of this guidance apply to all Grantees applying for financial assistance under DOE's Weatherization Assistance Program (WAP).

**LEGAL AUTHORITY:** Title IV, Energy Conservation and Production Act, as amended, authorizes DOE to administer the WAP (42 U.S.C. § 6861, *et. seq.*). All grant awards made under this Program shall comply with applicable law and regulations including the WAP regulations contained in 10 CFR Part 440. The final rule, published in Interim Final Rule December 8, 2000, established the minimum criteria for an energy audit used in the Program.

**BACKGROUND:** In Attachment 1 of this Weatherization Program Notice (WPN), DOE describes the information Grantees must submit and establishes the evaluation criteria used to approve energy audit procedures. In Attachment 2 of this WPN, DOE describes what information the Grantee must submit if it chooses to use a priority list, and sets forth the evaluation criteria DOE will use to approve priority lists for the WAP. Attachment 3 provides details of approved audits and shows the building types for which each of the audit tools is currently applicable.

WPN 13-05 supersedes WPN 93-8, WPN 99-5, and WPN 01-4. Additional energy audit topics are also discussed in this notice, including installation of cost-effective measures, fuel switching, electric base load measures, and the use of WAP funds for renewable energy systems.

**PROCEDURES:** Grantees shall submit the required energy audit information and required priority list information to their DOE Project Officer (PO) if the Grantee elects to use priority lists rather than site specific audits for WAP service delivery. The PO will be responsible for reviewing the submittal to ensure that all the information has been submitted prior to extensive review.

DOE will review Grantee audit procedures for compliance with the applicable regulations based on a two-tier approval process.

- The first tier is a fast-track review where the Grantee proposes to use an already-DOE-approved audit tool designed to calculate the required Savings-to-Investment ratios (see below). In the case where the submittal package contains all of the information required and fulfills the review requirements, the application will be processed within 30 days of official acknowledgement of receipt by DOE. Upon approval, the Grantee audit procedures will require no further review for a five-year period unless significant changes are made to the audit protocol by the Grantee.

Special note: If the audit submittal package is lacking sufficient information for an adequate review or the audit procedures are not in compliance with the regulations, or includes use of an audit tool that was not previously approved by WAP, the audit will receive further review under the second tier of the approval process.

- The second-tier review will be handled on a case-by-case basis. DOE will work with Grantees under the second tier review to assist them in gaining approval. DOE assistance will begin with the PO informing the Grantee specifically what is required to gain audit approval. This approach is more time consuming and can delay operations at the Grantee level while the audit is under review.

It is anticipated that many Grantees will want to use one or more of the following audit tools previously approved by DOE as part of its audit procedures. Additional details related to these audits can be found in Attachment 3:

DOE-Sponsored Audit Tools that meet WAP Requirements (*as of May 2013*):

- National Energy Audit (NEAT) – single family, small multifamily (conditional)
- Manufactured Home Energy Audit (MHEA) – manufactured housing

Commercially Available Audit Tools that meet WAP Requirements (*as of May 2013*):

- Energy Audit using the Queens Information Package (EA-QUIP) – small and large multifamily
- REM audit software (single family, manufactured housing, small and large multifamily)

- Targeted Retrofit Energy Analysis Tool (TREAT) – single family, manufactured housing, small and large multi-family
- Hancock Energy Audit Tool (HEAT) – single family
- Quick Energy Simulation Tool (eQUEST) – small and large multifamily (output must be modified to meet DOE and WAP requirements)

Grantees requesting DOE approval to use tools listed above are not required to submit a description of the energy estimating methodology, measure interaction, or cost-effectiveness requirements listed in Attachment 1. However, DOE reviews not only how the energy audit tool is used to estimate energy use and potential weatherization savings, but also how a Grantee implements their energy audit procedures. Therefore, Grantees requesting approval to use NEAT, MHEA, EA-QUIP, HEAT, REM, TREAT, and eQUEST still must list the measures that are typically enabled and provide the input data, assumptions, and audit results (recommended measures) for at least ten sample dwelling units from a sampling of Subgrantees. These audits must be typical of those weatherized by the Grantee's program representing climate zones throughout the state. All of the information on field procedures and administrative requirements described in Attachment 1 must be provided with these requests.

Some Grantees may want to use internally-developed energy audit tools, tools developed by other Grantees or other commercially available energy audit tools. Grantees are reminded that all audit procedures using tools that have been developed or modified since DOE's last approval of the specific tool, even including the tools listed above, require a full submittal for DOE approval and that this will require a more in-depth second-tier review. As other DOE-sponsored or commercially-available energy audit tools are approved, DOE will issue a list of all approved software that carries the same reduced submittal requirements.

As a reference for Grantees that might be considering development of their own audit tools, Attachment 4 includes the Grantee-developed tools that are currently approved for specific Grantees.

Except for the cost of materials needed to eliminate health and safety hazards existing before or because of the installation of weatherization materials, all weatherization measures must be "cost effective" as defined by DOE. "Cost effective" means that each measure and package of measures installed in a dwelling unit must have a savings-to-investment ratio (SIR) which meets or exceeds 1.0.

While the audit approval by DOE ensures compliance with the regulations, on-going monitoring is required to ensure that the energy audit tools continue to determine cost-effective weatherization measures. This requirement is especially important when Grantees elect to use web-based energy auditing software approved by DOE or when the software is modified without DOE vetting it or its accuracy. DOE will require access to all Grantees' web-based auditing software throughout the duration of the grant. As of April 2013, HEAT and EA-QUIP are the only web-based pieces of software nationally used, but others are anticipated to move to web-based applications in the future.

If a Grantee wants to revise or change their auditing tool during the five-year validity period of the DOE approval, then it must request DOE's approval to do so and provide sufficient information in accordance with Attachment 1. Until the request is approved, the Grantee must continue to use its currently approved audit procedures.

### **OTHER ENERGY AUDIT-RELATED ISSUES:**

**MEASURE SKIPPING:** By rule and policy, energy audits are required to use the interactive procedures to determine the optimum set of cost-effective measures and to prioritize those energy saving measures in order of cost-effectiveness. This guidance is designed to provide Grantees with enough information to develop energy audits that comply with requirements.

Once approved, all of the prioritized weatherization measures from the audit that meet the SIR ratio requirement must be installed in the unit in the order of cost-effectiveness. Deviating from the audit prioritized list of measures would be in conflict with the intent of the rules. Frequently Asked Questions (FAQs) concerning measure skipping will be posted on the WAPTAC and EERE websites.

**PRIORITY LIST:** Priority lists are based on specific parameters and many of these, like energy costs and labor and material costs, change with time. DOE will be reviewing priority lists during the monitoring process to ensure the measures that were prioritized in the approved priority lists continue to be installed in the proper order. Grantees are advised to annually, at a minimum, evaluate energy costs, measure implementation costs, technological advancements and other issues that affect best weatherization practices in order to ensure the approved priority lists remain cost effective and appropriate for the weatherization process. Grantees may submit to DOE a request to alter their priority lists based on adjusted calculations. These requests are generally processed within a week of acknowledgement of receipt, if all required materials are included in the submission. This action does not "restart" the five year cycle, but merely adjusts the priorities.

**FUEL SWITCHING:** WAP does not permit the general practice of non-renewable fuel switching when replacing furnaces/appliances. However, DOE does allow the changing or converting of a furnace/appliance using one fuel source to another on a limited, case-by-case basis. These approvals will only be granted when all related costs demonstrate the effectiveness of the fuel switch over the life of the measure. DOE will not approve priority lists containing this measure. Only a site-specific energy audit meeting the submittal requirements and approved by DOE would be considered allowable to evaluate these measures.

**ELECTRIC BASE LOAD:** Typically, addressing the heating and/or cooling costs of a dwelling unit, accounts for only about half of that home's energy expenditures. DOE allows the addition of cost-effective electric base load measures to give Weatherization Grantees greater flexibility to help low-income households reduce their energy costs and to partner with sources of leveraged funds.

**USE OF WEATHERIZATION FUNDS FOR RENEWABLE ENERGY SYSTEMS:**

Assistance under the WAP may be provided for renewable energy systems. 10 CFR Part 440.18 (Allowable Expenditures) incorporates the renewable energy system provisions and specifies a ceiling of \$3,000, with annual escalations, per dwelling for labor, weatherization materials, and related matters.

10 CFR Part 440.21(c)(1) specifies performance and quality standards criteria for renewable energy systems. Paragraph (c)(2) establishes a procedure for submission and action on petitions by manufacturers requesting the Secretary of Energy to certify a new technology or system as an eligible renewable energy system.

**CONCLUSION:** The WAP continues to make progress in a number of areas and updating our audit processes is just one of the components necessary to ensure quality work is being performed throughout the Program. The Department of Energy appreciates your many contributions that continue to make Weatherization Work!



AnnaMaria Garcia  
Program Director  
Weatherization and Intergovernmental Program  
Energy Efficiency and Renewable Energy

Enc: Attachments



# **ATTACHMENT 1**

## **ENERGY AUDIT SUBMITTAL REQUIREMENTS**

### **OVERVIEW**

The Department of Energy (DOE) is responsible for ensuring that only cost-effective weatherization measures are installed with DOE funds. Each Grantee must use energy audit tools and procedures to ensure cost effectiveness of the Weatherization Assistance Program (WAP) while treating each weatherized building as a whole system.

Energy audit requirements for the WAP are described in the regulations governing the Program (10 CFR Part 440.21). Important details for intent are included in the Preamble to the December 8, 2000, Interim Final Rule. These energy audit requirements can be grouped into three functional categories: analytic methods, field procedures, and administrative requirements.

The term “manufactured housing” is used throughout this guidance, replacing the term “mobile home”. Manufactured housing includes mobile homes and any housing built off-site that includes axles or a frame as a major design consideration for transport on public roads (e.g. light weight).

### **DESCRIPTION OF SUBMITTAL REQUIREMENTS**

The information that Grantees must submit for each energy audit requirement is described below:

#### **Analytic Methods**

*Energy Estimating Methodology:* Describe the methodology used by the energy audit software to estimate annual energy use of the dwelling unit and the potential energy savings from weatherization retrofits. The description must provide sufficient detail for DOE to determine the engineering soundness of the technical approach. The Grantee may provide this description narratively or reference the appropriate sections of a users’ manual for the energy audit software or other technical support documents. Whether described narratively or referenced from another document, the Grantee’s submittal must answer the following questions:

- What energy estimating method is used (e.g., modified degree-day, variable base degree day, ASHRAE bin, ASHRAE modified bin, PRISM)?
- What format of climatic data is used (e.g., degree-day, bin, or hourly data)? If degree-day weather data is used, what base temperature is used and why? Which weather data sites are used by different Subgrantees in the Grantee territory?
- Are existing energy use and energy requirements of the dwelling unit determined from actual energy bills, by generally accepted engineering calculations or, optionally, both?

- Does the energy audit address all significant heating and cooling needs?
- How are conductive, convective, and radiative heat losses (or gains) estimated?
- How does the energy estimating method treat sensible and latent heat gains from internal sources?
- How is the energy consumption of heating and cooling equipment estimated (e.g., steady-state efficiency, part-load curve) during the audit for pre- and post-weatherization?
- How are blower door readings and the results of other tests (e.g., duct leakage) used by the energy estimating method?
- Does the energy audit software address domestic hot water and/or household appliance measures? If so, how is the energy estimated for these end uses?
- Are estimated fuel/energy cost savings discounted to net present value?
- For multifamily audits what internal verification feature, such as trueing-up the model with actual energy consumption, does the audit use to validate each audit, or how does the Grantee otherwise ensure that the building is properly modeled?

*As discussed previously, Grantees requesting DOE approval to use NEAT, MHEA, EA-QUIP, HEAT, REM, TREAT and eQUEST are not required to describe the energy estimating methodology.*

*Measure Interaction:* Grantees must provide the following information to satisfy this requirement:

- Describe how the energy audit tool accounts for the interaction between architectural (e.g., insulation, air sealing) and mechanical (e.g., furnace replacement, programmable thermostat) measures.
- Provide audit results of a sample dwelling unit to document that, when moving from an architectural to a mechanical measure (or vice versa), the energy audit tool adjusts the estimated fuel cost savings of measures with lower, non-interacted savings-to-investment ratios (SIRs). The sample audit results must show the interacted and non-interacted energy savings and SIR for at least one architectural or mechanical measure. This will require a recommended measures list that includes at least one architectural and one mechanical measure. Provide a statement that the energy audit procedures will eliminate from consideration for installation any measure that has an interaction-adjusted SIR of less than one.

*As discussed previously, Grantees requesting DOE approval to use NEAT, MHEA, EA-QUIP, HEAT, REM, TREAT and eQUEST audit tools are not required to describe how the audit accounts for the interaction between measures.*

*Cost-effectiveness Requirements:* Describe how SIRs are calculated for all individual weatherization measures and for the overall package of measures installed in a dwelling unit. Include a description of how user defined measures will be allowed, including who will be allowed to develop, procedures, and Grantee monitoring of the cost effective use of user defined weatherization measures. List the costs included in



the denominator of individual and overall SIR calculations, including at minimum the cost of materials, labor and on-site supervision.

Explain how the cost of air sealing, as an energy saving measure, is included in the SIR for the package of weatherization measures. Air sealing (i.e., the air sealing measure that uses materials referenced in the Appendix A air sealing category) is the exclusive energy conservation measure that is not required to show a post-weatherization individual SIR of 1.0 or greater. The package of weatherization measures, including costs and projected savings for air sealing, must have a post-weatherization SIR of 1.0 or greater.

Describe how all incidental repair costs are included in the cost of the overall package of weatherization measures and the overall SIR (See WPN 12-9 for more details).

*As discussed previously, Grantees requesting DOE approval to use NEAT, MHEA, EA-QUIP, HEAT, REM and TREAT are not required to show how individual and overall SIRs are calculated. However, Grantees requesting approval of eQUEST are required to show how individual and overall SIRs are calculated because that function is not built into the standard eQUEST software. As other energy audit tools are approved, a list of audits that have reduced submittal requirements will be periodically issued by DOE.*

**Measures Considered:** Provide a list of the weatherization measures that the Grantee typically "enables" for the energy audit tool to evaluate. Include material and labor costs for these measures from a Subgrantee considered to be representative of statewide conditions. Provide the expected lifetime of each measure that is used in the SIR calculation.

**Sample Audits:** Provide all input data, assumptions, and audit results (recommended measures) for ten sample dwelling units of each major type of structure (e.g., single family, manufactured housing and multifamily building) typical of those weatherized by the Grantee's program. Completed field data collection forms, including any auditor notes, must be provided for the sample dwelling units, as well as printouts of the data entered into the energy audit software. The recommended measures reports from the audit tool must show the measure cost, first-year savings, SIR for each measure, as well as total job cost and overall SIR. The report must also include a line item for incidental repair costs per WPN 12-9 Incidental Repair Measures Guidance.

## **Field Procedures**

**Audit Procedures and Field Protocols:** Describe in detail the energy audit procedures used by the Grantee. A copy of the auditor's or field operations manual, field guide, technical standards, Standard Work Specifications for Home Energy Upgrades, installation guidelines, and/or monitoring protocols may be provided to satisfy this requirement. Procedures required for each major building type served must be provided. The information provided must be sufficient to answer the following questions:

- How do different audit findings affect the auditor's actions and recommendations?
- What advanced diagnostic and assessment techniques are routinely used by the auditor and/or crew?
- What client education is routinely provided by the auditor? By the installation crew?
- Are the audit and installation procedures specifically tailored for the building type being investigated in light of the varying energy audit requirements of single-family dwellings, multifamily buildings, and manufactured housing?

*Weatherization Materials Installed:* Provide a statement acknowledging that only weatherization materials that meet or exceed the standards listed in Appendix A will be installed in eligible dwelling units. This statement must be provided for each major building type (e.g., single family, manufactured housing, and multifamily). Include any weatherization materials not in Appendix A that have been approved for use by the Grantee per 10 CFR 440.21(b).

Ancillary materials, incidental repair materials, as well as health and safety materials, as defined in WPN 12-9 are not “weatherization materials”, therefore are not required to be listed in Appendix A.

*General Heat Waste Reduction Lists:* Grantees may install general heat waste (GHW) reduction weatherization materials in eligible dwellings that DOE has determined to be generally cost effective, without the need for justification in a site-specific energy audit. GHW reduction materials are intended to be relatively low-cost items that can be quickly and easily installed. Total GHW measure costs (including labor) must not exceed \$250. These DOE-approved, presumptively cost-effective weatherization materials include:

- Water heater wrap (i.e., insulating blanket);
- Water heater pipe insulation (on first six feet of hot water pipe exiting water heater);
- Faucet aerators;
- Low-flow showerheads;
- Limited weatherstripping and caulking to increase comfort (does not include major air sealing work, which should be guided by blower door testing); and
- Furnace or air conditioner filters.

Grantees are required to establish procedures to guide the installation of GHW materials and make crews aware of the circumstances that can reduce the cost-effectiveness of these measures. A recommended limit on the estimated installed costs for a GHW material may be useful as a guide to cost-effectiveness.

Grantees may request approval to use GHW materials not listed above by providing documentation of their cost-effectiveness from a representative number of site-specific energy audits or sample energy calculations. DOE will also accept reputable analytic reports or published articles that are generally accepted by the weatherization community to document the cost-effectiveness of potential GHW materials. A GHW material

approval request may be submitted at any time but may not be within the State Plan, Annual Application submittal. Previously approved Grantee specific GHW materials must be listed in the Audit Approval request.

*Health and Safety:* During the audit approval process, DOE will review the health and safety plan located in the master file of a Grantee's application. The Grantee must provide a description of how the health and safety plan is implemented in the field. The Grantee may reference the appropriate section(s) of the auditor's or field operations manual, field guide, technical standards, Standard Work Specifications for Home Energy Upgrades, installation guidelines, and/or monitoring protocols to satisfy this requirement. Each major dwelling type must be addressed as applicable.

### **Administrative Requirements**

*Energy Audit Procedures Required for Each Building Type Served:* 10 CFR Part 440.21(f)(7) requires the Grantee to use DOE-approved energy audit procedures that are specifically tailored to each major dwelling type that represents a significant portion of the Grantee's weatherization program.

This requirement recognizes the varying energy audit requirements of different dwelling types including single-family dwellings, multifamily buildings, and manufactured housing. DOE requires energy audit procedures to be approved specifically for use on single-family dwellings and manufactured housing. For multifamily buildings, DOE defines "a significant portion of the Grantee's weatherization program" as 20 percent or more of the total units weatherized in the state each year. For Grantees that fall below the 20 percent threshold, individual buildings may be weatherized even if a Grantee chooses not to obtain a Grantee-specific approved audit for multifamily buildings. However, the audit and assessment procedures must be appropriate to the dwelling type, and each audit and all supporting documentation must be submitted to the DOE Project Officer for pre-approval. A DOE-approved audit tool for multifamily buildings must be used to calculate cost effectiveness.

For energy audit purposes, DOE considers multifamily buildings to be those containing five dwelling units or more. Several single-family energy audits can be used in buildings with one to four dwelling units as well as in small multifamily buildings with 25 dwellings or fewer per building when the dwelling units are individually heated and/or cooled. However, single family approval of a tool does *NOT* constitute approval to use this tool in small multifamily buildings. Grantees must go through the approval process demonstrating how the tool is being used and the procedures the Grantee requires Subgrantees to follow prior to using an approved single family tool for small multifamily buildings.

*Re-Approval Every Five Years:* Grantees must submit their energy audit procedures to DOE for re-approval every five years. Grantees must also submit to DOE for re-approval every five years those GHW materials that are in addition to the pre-approved GHW materials listed above, if applicable.

Grantees are reminded that Subgrantees should update annually (or more often) the measure costs and fuel prices that the energy audit software or manual methods use to estimate cost-effectiveness. This annual update does not require the audit or priority list(s) to be re-approved more often than every five years. However, significant changes in measure costs or fuel prices affect the selection and order of measures. As part of its monitoring responsibilities, DOE may request, from a Grantee or a Subgrantee, its current measure costs and fuel prices in order to compare them to the measure costs and fuel prices in the Grantee's approved audit submittal.

*Other Administrative Requirements:* If a Grantee adopts an updated version of DOE-approved single-family, multifamily, or manufactured housing energy audit software, the Grantee must submit to DOE the name and version of the updated software. DOE will contact the software developer to determine what changes have been made. If the energy estimating methods remain essentially unchanged (or have been improved) and the software still complies with program regulations, DOE will approve its use.

## **ATTACHMENT 2 PRIORITY LIST SUBMITTAL REQUIREMENTS**

### **OVERVIEW**

The Department of Energy (DOE) is responsible for ensuring that only cost-effective weatherization measures are installed with DOE funds. Each Grantee must use advanced energy audit procedures to ensure cost effectiveness of the Weatherization Assistance Program (WAP) while treating each weatherized building as a whole system.

Energy audit requirements for the WAP are described in the regulations governing the Program (10 CFR Part 440.21). Priority List(s) are secondary to a Grantees' Energy Audit Submittal. Submittal requirements for priority lists cannot be approved until Energy Audit Submittal Requirements are satisfied (for the particular housing type and audit tool). For example, if a Grantee wishes to use a priority list(s) for single-family homes and is approved to utilize NEAT, the priority list(s) for single-family homes must be developed through currently approved NEAT-generated audits (See Attachment 1 for Energy Audit Submittal Requirements).

Grantees must describe how each priority list was developed, the housing characteristics of the dwellings that each priority list applies to, how the subset of similar homes was determined, and the circumstances that will require site-specific audits rather than the use of the priority lists.

### **DESCRIPTION OF SUBMITTAL REQUIREMENTS**

The information that Grantees must submit for each priority list is described below:

*Priority List Development:* Provide all input data, assumptions, and audit results (recommended measures) for dwelling units. Completed field data collection forms, including any auditor notes, must be provided for the sample dwelling units, as well as printouts of the data entered into the energy audit tool. The recommended measures reports from the audit tool must show the measure cost, first-year savings, and SIR for each measure, as well as total job cost and overall SIR.

Provide a list of the weatherization measures that the Grantee enables for the energy audit tool to evaluate. Include material and labor costs for these measures and provide the expected lifetime of each measure that is used in the SIR calculation.

Provide fuel prices used in developing the priority lists. Evaluate historical fuel prices to determine what minimum fuel price should be used to ensure that weatherization measures are always cost-effective. Describe the circumstances to DOE when fuel price changes invalidate the submitted priority list.

*Subset of Similar Homes:* Grantees that want to use a priority list must review eligible housing stock to determine which building characteristics dictate the selection and order of recommended weatherization measures. As a result of this review, Grantees may find for example that the list of recommended measures for a typical one-story ranch is different than the list for a one-and-a-half-story Cape Cod house.

The number of sample audits required to support the proposed priority lists depends on how clearly the Grantee defines the set of similar dwelling units for the priority list(s). For example, if the Grantee intends to use one priority list for single-family dwellings where there is significant difference in housing stock, climatic conditions, fuel choices, heating/cooling equipment choices, or measure costs, substantial audits are required to ensure measures are properly ranked.

Measures in each sample audit must be prioritized from the highest to lowest measure SIR, and the overall SIR must be at least 1.0. The variability between buildings in a similar set tends to decrease as the set of dwellings is more and more clearly defined (and the number of sets increases).

*Circumstances where the priority list does not apply and when a site-specific audit is required:* If an auditor determines by inspection that a measure should be considered for a dwelling, and that measure is not on the approved priority list for that building type, the appropriate, approved, site-specific energy audit must be conducted.

*Incidental Repair Costs:* A cost limit for incidental repairs (WPN 12-9) must be established for each priority list. This cost limit must be developed during priority list development and must be consistent with the total job, including all incidental repairs, having an SIR of at least 1.0. The sample audits required to support the proposed priority list(s) must include costs for typically anticipated Incidental Repair Measures (IRM) in order to justify a maximum per unit cost limit for IRM for each priority list.

If an auditor determines by inspection that incidental repair measures should be considered for a dwelling that have a cost greater than the limit for the priority list, the appropriate approved computerized site-specific energy audit must be conducted.

**ATTACHMENT 3 NATIONALLY-APPROVED ENERGY AUDITS  
FOR WAP**

	<b>Single Family (1-4 units)</b>	<b>Small Multifamily (5-25 units, each unit separately heated/cooled)</b>	<b>Large Multifamily (26+ units)</b>	<b>Manufactured Housing</b>
<b>REM</b>	Developer: Architectural Energy Corporation, Boulder, CO			
	YES	YES	YES	YES
<b>Weatherization Assistant (NEAT and MHEA)</b>	Developer: Oak Ridge National Laboratory (ORNL), Oak Ridge, TN			
	NEAT approved	NEAT approved only for buildings with individually heated and cooled dwelling units	NO	MHEA approved
<b>TREAT</b>	Developer: Performance Systems Development (PSD), Ithaca, NY			
	YES	YES	YES	YES
<b>EA-QUIP</b>	Developer: Association for Energy Affordability, New York, NY			
	YES	YES	YES	NO
<b>HEAT</b>	Developer: Hancock Software, Inc., Framingham, MA			
	YES	NO	NO	NO
<b>eQUEST</b>	Developer: Lawrence Berkeley National Laboratory, Berkeley, CA			
	NO	YES	YES	NO

**ATTACHMENT 4**  
**GRANTEE-DEVELOPED ENERGY AUDITS FOR WAP**

	<b>Single Family (1-4 units)</b>	<b>Small Multifamily (5-25 units, each unit separately heated/cooled)</b>	<b>Large Multifamily (26+ units)</b>	<b>Manufactured Housing</b>
<b>AKWarm</b>	Approved by DOE for use in Alaska			
	YES	YES	YES	YES
<b>RealHomeAnalyzer (HomeCheck)</b>	Developed by CSG, approved by DOE for use in Connecticut and Montana			
	YES	YES	NO	YES
<b>EA-5</b>	Approved by DOE for use in Idaho			
	YES	YES	NO	YES
<b>WeatherWorks</b>	Approved by DOE for use in Illinois			
	YES	YES	NO	YES
<b>Energy Conservation Online System (ECOS)</b>	Approved by DOE for use in Maine			
	YES	YES	NO	YES
<b>Targeted Investment Protocol System (TIPS)</b>	Approved by DOE for use in New York			
	YES	YES	NO	YES
<b>WxEOR</b>	Approved by DOE for use in North Dakota			
	YES	NO	NO	YES
<b>Puerto Rico Energy Audit Tool (PREAT)</b>	Approved by DOE for use in Puerto Rico			
	YES	NO	NO	NO

**Version changes to state-developed audits require DOE approval prior to implementation.**



## Measure Skipping Frequently Asked Questions

### To be posted on WAPTAC and EERE Websites

#### Supplement to WPN 13-5 Energy Audit Submittal Procedures

**1. What is the procedure to follow if a building owner or occupant declines a measure listed in the audit?**

- A. The prioritizing of energy saving measures must be accomplished using generally accepted engineering methods. Those methods must be approved by DOE. Allowing the refusal of a measure by a building owner or occupant would not comply with these basic rules. If a measure is declined, appropriate client education techniques will often eliminate the client's concern.

If after explanation and discussion with the building owner or occupant, they still decline the measure and the *auditor deems the reason for declining the measures as legitimate*, the auditor should complete all other weatherization measures and include in the client file a comprehensive explanation of the rationale for skipping the specific measure.

*(See following FAQs providing information on reasons that are NOT considered legitimate reasons for declining a measure.)*

If the auditor *deems this is not a legitimate reason for declining the measure*, the situation must be fully documented in the client file. The work would be completed with installation of only measures having a SIR higher than the declined measure. The client must be informed (documented) that the home cannot receive further work after the completion.

**2. Subgrantees at times are not adequately trained to perform certain measures. Can those weatherization measures be skipped for that reason?**

- A. No, lack of training is not a legitimate reason to skip a measure. It is expected that Grantees will provide adequate training for Subgrantees on audit procedures and measure installation methods. Ideally this training should be provided prior to the implementation of the approved audit. Staff and contractors do move on, so there may be brief times that a lack of expertise exists. Standard procedure should be to postpone a job(s) requiring priority measures that cannot be installed due to lack of trained staff until adequate

training is acquired. Training for measure installation is typically available within a reasonable time.

**3. What happens if a client objects to a certain material, as explained by the auditor *prior to work beginning*, because they perceive it may do harm to themselves or their home?**

A. If the client objects to a measure prior to work beginning, alternate materials should be researched as appropriate to ensure the safety of the proposed measure. Client education should be the first procedure. If that fails it may be possible to re-run the audit with a different but acceptable material to determine if the substitute material is cost effective. If no cost effective option for the material can be identified, the job must be deferred due to client refusal unless the measure has the lowest SIR.

**4. *After a job has begun* and due to scheduling, measures are installed with a low priority and during the process of installation, the client declines a higher priority measure. What can be done at that point?**

A. The job would be complete at the time of the client declining the higher priority measure. Only measures having a SIR higher than the declined measure may be installed unless a lower priority measure has already been installed. This should be clearly explained in client file documentation. Some agencies include a statement for client signature that states the client is aware and accepts all WAP rules, including the specific services and measures determined by an energy audit.

**5. Can a measure, categorized in the Grantee's approved audit as a General Heat Waste (GHW) measure be skipped because the client just doesn't want it installed.**

A. By definition, GHW measures are not prioritized by the audit tool. This is for GHW measures that the Grantee clearly designates as such and are approved by DOE as GHW measures in the audit procedures approval. If a Grantee chose to include measures that could have been approved as GHW in the SIR calculations and measure priorities in the audit tool, the prioritized measure must be treated as other prioritized measures and not skipped. While approved priority lists may list GHW measures at the top of the list, there is no strict prohibition from skipping an individual GHW measure for any documented

reason (including declined by client), if the measure is a specifically approved GHW measure, not prioritized by SIR from the approved audit tool.

**6. One clause in WPN 11-6 under “Grantee Health and Safety Plan Updates” (page 10) can be perceived to imply that measure skipping, resulting in partial weatherization of the unit, may take place in some situations to avoid installing a measure that may exacerbate a H&S hazard. Can a measure be skipped in this case?**

- A. The intent of this section of WPN 11-6 is for a Grantee to explain how a variety of situations will be treated. A prioritized Energy Saving Measure (ECM) and any Health & Safety hazard may not be ignored. This is required by 10 CFR Part 440. The situation must be fully explained to the client verbally and in writing and an appeal process must be in place. Whether or not the problem is pre-existing or will be created by a weatherization measure, deferral of the job must be a consideration until other funding is available for correction (if out of the scope of the WAP). The weatherization measure may not be skipped in an attempt to avoid the health & safety issue. The only possible exception is if the ECM will cause the health & safety issue and the ECM has the lowest SIR on the prioritized list. A full explanation must be documented in the client file.