

U.S. Department of Energy
WEATHERIZATION ASSISTANCE PROGRAM (WAP)
STATE PLAN/MASTER FILE WORKSHEET

(Grant Number: EE0007951, State: TN, Program Year: 2019)

This worksheet should be completed as specified in Section III of the Weatherization Assistance Program Application Package.

V.1 Eligibility

V.1.1 Approach to Determining Client Eligibility

Provide a description of the definition of income used to determine eligibility

Low Income will be defined for the Weatherization Program in TN as follows:

Is at or below 200 percent of the poverty level determined in accordance with criteria established by the Director of the Office of Management and Budget, except that the Secretary may establish a higher level if the Secretary, after consulting with the Secretary of Agriculture and the Secretary of Health and Human Services, determines that such a higher level is necessary to carry out the purposes of this part and is consistent with the eligibility criteria established for the weatherization program under Section 222(a)(12) of the Economic Opportunity Act of 1964;

Agencies will take applications for the WAP program using the following rules:

All countable sources of income must be verified for all household members (and illegal aliens who may reside in the home). Acceptable forms of verification include check stubs, employment statements, award letters, tax statements and other documents that verify the gross amount of the income from that particular source. Proof of income eligibility and associated documentation must be included in the client file.

Definition of Income Used to Determine Eligibility Income refers to total annual cash receipts before taxes from all sources, with the exceptions noted below. Income data for part of a year may be annualized in order to determine eligibility.

Countable Income

- Money
- Wages and Salaries before any deductions (exception: earnings for a child under age 18 are not counted)
- Regular payments from Social Security, Railroad Retirement, Unemployment Compensation, Strike Benefits from union funds, Workers Compensation, Veteran's payments, training stipends, alimony, and military family allotments
- Private pensions, government employee pensions (including military retirement pay), and regular insurance or annuity payments
- Dividends and/or interest
- Net rental income and net royalties
- Periodic receipts from estates or trusts
- Net gambling or lottery winnings

The following cash receipts are not considered sources of income for the purposes of determining applicant eligibility:

- Capital gains
- Any assets drawn down as withdrawals from a bank
- Money received from the sale of a property, house, or car
- Onetime payments from a welfare agency to a family or person who is in temporary financial difficulty
- Tax refunds
- Gifts, loans or lumpsum inheritances
- College scholarships
- Onetime insurance payments, or compensation for injury
- Noncash benefits, such as the employerpaid or unionpaid portion of health insurance
- Employee fringe benefits, food or housing received in lieu of wages
- The value of food and fuel produced and consumed on farms
- The imputed value of rent from owneroccupied nonfarm or farm housing
- Depreciation for farm or business assets
- Federal noncash benefit programs such as Medicare, Medicaid, Supplemental Nutrition Aid Program (SNAP, previously known as Food Stamps), school lunches, and housing

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assistance;

- Earned income for a child under the age of 18
- Combat zone pay to the military
- Payments for care of Foster Children
- Reverse Mortgages
- Child Support payments (whether received or paid by the household, further defined in section titled: CHILD SUPPORT)

Child Support

Child Support payments, whether received (payee) by a member of the household or paid (payor) by a member of the household, are not considered sources of income for the purposes of determining applicant eligibility.

- Payee: Where an applicant receives child support from any state program or individual during an applicable tax year, such assistance is not considered income for the purposes of determining eligibility.
- Payor: Where an applicant pays child support through a state program and/or to an individual, such assistance is not considered income for the purposes of determining eligibility (i.e., where an applicant pays Child Support, he or she may not deduct said assistance for the purposes of determining eligibility).

Citizenship

The applicant must be a U.S. citizen or legal alien. Citizenship will only be verified for the applicant if considered questionable. If the applicant is a legal alien, alien status must be verified as a condition of eligibility. Any illegal aliens residing in the home will not be considered when determining the income limits based on household size. However, any income of an illegal alien who is a household member will be counted as available to the home when determining eligibility.

"Tennessee Eligibility for Verification Entitlements Act" –

<https://law.justia.com/codes/tennessee/2018/title-4/chapter-58/section-4-58-103/>

Residency

All applicants must be residents of Tennessee, and all units to be weatherized must be located in Tennessee.

Describe what household eligibility basis will be used in the Program

The total countable income of the household must be equal to or less than 200% of the federal poverty level for the household size. If the income exceeds 200% of poverty, the household not is not eligible to receive services.

Any household that has one or more members who receive or has received LowIncome Home Energy Assistance Program (LIHEAP), Temporary Assistance for Needy Families (TANF – known as *Families First* in Tennessee) or Supplemental Security Income for the Aged, Blind or Disabled (SSI) in the twelve (12) months preceding the application for WAP is considered to meet income limits. Verification of receipt of benefits is required. The household may be the renter or owner of the unit to be weatherized. The unit to be weatherized must meet program guidelines.

Describe the process for ensuring qualified aliens are eligible for weatherization benefits

The applicant must be a U.S. citizen or legal alien. Documentation of citizenship is required for every applicant, without regard to race, religion, gender, ethnicity or national origin, per the Tennessee Eligibility Verification for Entitlements Act <https://law.justia.com/codes/tennessee/2018/title-4/chapter-58/section-4-58-103/>. This applies to any application or recertification application filed October 1, 2012 or later.

If the applicant is a U.S. citizen, acceptable forms of verification are:

- A valid driver license or photo identification license issued by the Tennessee Department of Safety, or;
- A valid driver license or photo identification license issued by another state where the issuance requirements are at least as strict as those in Tennessee, or;
- An official birth certificate issued by a U.S. State, jurisdiction or territory, including Puerto Rico, U.S. Virgin Islands, Northern Mariana Islands, American Samoa, Swains Island, Guam,

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(Exception: Puerto Rican birth certificates issued before 7/1/10 shall not be recognized), or;

- U.S. government issued certified birth certificate, or
- A valid, unexpired U.S. passport, or;
- A U.S. certificate of birth abroad (DS1350 or FS545), or;
- A report of birth abroad of a citizen of the U.S. (FS240), or;
- A certificate of citizenship (N560 or N561), or;
- A certificate of naturalization (N550, N570 or N578), or;
- A U.S. citizen identification card (I197 or I179), or;
- Any successor document of subdivisions ((c) (4) (9), or;
- A social security number that has been verified with the Social Security Administration in accordance with federal law.

If the applicant claims legal alien status, the following documentation is required:

- Two (2) forms of documentation of identity and immigration status, as determined by the United States Department of Homeland Security to be acceptable for verification through the SAVE program.
- If the applicant is unable to provide two (2) forms of acceptable documentation, then the applicant must present at least one (1) document that can then be verified through the SAVE program.

Citizenship status must be declared on the application form for all additional household members, but it does not have to be verified. Any household member who is not a U.S. citizen or legal alien by their own statement will not be included when determining the number of eligible household members in the homes. However, any income they have from countable sources will be considered as available in its entirety to the household when determining household income.

V.1.2 Approach to Determining Building Eligibility

Procedures to determine that units weatherized have eligibility documentation

Procedures to Determine That Units Weatherized Have Eligibility Documentation

Every applicant must complete and sign an application for the Weatherization Assistance program, with a copy of the application retained in the subgrantee's client file. The application must include income and demographic information for all members that reside in the housing unit. Income verification may be provided by the applicant in the form of paycheck stubs, income tax records, bank statements, award letters, dividend or other income distribution receipts, and other methods of documentation. Verification of income that may be obtained for the household from the Family Assistance eligibility system (known as ACCENT) is considered acceptable proof of income. The most recent income verification that is obtained from the ACCENT system that was entered within the last 12 months is considered valid unless the applicant or other documentation is in conflict with the information obtained. Only as a last resort and after all other possible sources of documentation have been exhausted, can the household self-certify their income. Prior to allowing a household to self-certify, the case file must contain evidence of the various attempts made to obtain eligibility documentation. Self-certification must be provided through a signed, notarized statement by the potential applicant that verifies he/she has no other proof of income.

Situations where households report zero income must be carefully explored to determine how the household is surviving on no income. The self-certification of income form will be signed and notarized by the applicant if zero income is reported for the applicant or any household member 18 years old or older.

Documentation may be retained in hard copy or through electronic storage methods. The subgrantee is required to maintain a client file for every applicant. The client file will be retained for 5 years from the date the grant is closed – this includes units where weatherization services been provided, or closed due to subsequent ineligibility or other reason. The subgrantee must maintain an ongoing file of all units that have received weatherization services, including the date the services were provided, in the event of a future reapplication for services.

Multifamily buildings that have been deemed to meet the eligibility guidelines based on a HUD approved property certification or by standard means verifying eligibility will require the building owner or representative to complete a Multifamily Weatherization Assistance Application. The building owner/representative will also be required to furnish all required resident documentation related to individual unit household demographics and income as part of the application process. Income documentation does not need to be retained by the subgrantee if the property meets WAP eligibility as shown through the HUD property certification process.

Calculation of Income

Income eligibility is based on the countable household income for the twelve month period preceding the application, or recertification. Countable income that may have terminated during this timeframe is still countable.

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Income documentation must be obtained for a three (3) month period of time preceding or during the time of application processing. Income that was only received during a portion of the twelve month period may be prorated to reflect actual gross amount received during the timeframe. The income verification will then be converted to an annual income amount. If an individual is ineligible based on three (3) months of income verification that is converted to an annualized amount, the household has the option to provide income documentation for the entire year.

Unemployment income will be prorated to determine the annualized income, based on the expected number of eligible weeks in the twelve month period. The annual income will be based on the weekly benefit amount multiplied by number of weeks in which a benefit was expected.

Multiply the total of the three months' worth of income by four (4) to obtain an annual amount of income. Total all countable income sources to obtain the total annual income for the household.

Households That Include a Member Who Receives Families First and/or SSI

Any household that includes a member who currently receives or has received Families First (Temporary Assistance for Needy Families) or SSI (Supplemental Security Income) in the twelve month period immediately preceding or during the application for benefits, will be deemed as having met the income eligibility guidelines. However, income information must still be obtained for all household members in order to determine priority status.

Recertification

Eligibility will be reviewed on an annual basis for any applicant who has been approved for the program, but who has not had weatherization services initiated. Weatherization services are considered initiated once an energy audit is assigned to a unit. At this point, annual recertification is no longer required. Any applicant that fails to comply with the annual recertification process or who is determined to no longer meet program eligibility guidelines, will have their case terminated, and will be removed from the wait list.

Describe Reweatherization compliance

Reweatherization

Any home or unit that has received services through the Weatherization Assistance Program since September 30, 1994 will not be eligible for reweatherization unless it has been declared a federal or state natural disaster area, the building has been damaged by fire, flood, or act of God, and repair of the damage to the weatherization materials is not paid for by insurance or other funds. The building must also have been deemed salvageable by the local authorities.

Homes that received services under the Weatherization Assistance Program on or prior to September 30, 1994 may be eligible to receive services again. A new energy audit must be conducted, which takes into account the current building status. Reweatherization building units must be tracked by the individual subgrantee and reported separately.

Describe what structures are eligible for weatherization

Building Eligibility

The building to be weatherized must be the primary residence of the applicant. The applicant may own or rent the unit that is to be weatherized. If the applicant is renting the unit, the building owner must agree to have the building weatherized, and must sign a landlord agreement. Ownership of the building or manufactured home must be documented. The property must be located in Tennessee.

The unit may be a stickbuilt or prefabricated building. However, if the unit is a mobile home, it must be stationary. A mobile home trailer that can be moved to multiple locations is not eligible.

A building unit is not eligible for weatherization services, based on applicant statement or other known information or documentation, if any of the following situations apply:

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- Currently listed for sale, through either a real estate agent or privately
- Condemned or in the process of being condemned
- Unoccupied (other than a temporary absence)
- Secondary or vacation homes
- Designated for acquisition or clearance by a Federal, State or local program
- The resident has been or is in the process of being evicted
- The property has been foreclosed or is in the process of foreclosure
- Applicant is deceased or no longer residing in the home, and a spouse does not currently reside in the unit who is willing to assume applicant status
- Property owner refuses to allow removal of unvented space heater that serves as primary heating source
- Which has been weatherized after September 30, 1994 with WAP funds, and does not meet exceptions that permit it to be reweatherized.

If any of the above circumstances become known to the agency for either a pending or approved applicant, the application will be denied, or the case will be terminated with no further services to be provided. If the home is in the process of having weatherization services installed, each home must be evaluated on a case by case basis to determine the best way to bring closure. Typically, measures that have already been initiated by the weatherization installer will be completed and inspected, along with related health and safety or repair measures.

Tennessee will exercise caution in dealing with nontraditional type dwelling units such as shelters, apartments over businesses, etc. to ensure they meet Program regulations on whether the unit is, in fact, eligible. Consideration on weatherizing these types of units will be discussed with subgrantees and if necessary, approved by the DOE Project Officer prior to weatherization.

Describe how Rental Units/Multifamily Buildings will be addressed

Rental Units – Single Family

If the applicant rents the home to be weatherized, the building owner or his agency must provide written permission before weatherization services can be provided. A landlord agreement that provides this permission and ensures the accrual of benefits to the occupant, must be signed by the landlord or his authorized agent, and a copy maintained for documentation purposes. Separate permission from the renter is also required.

Multifamily Buildings

A building that has multiple (two or more) living units under a single roof is considered a multifamily building, regardless if renter or owner occupied. A single unit within a multifamily building cannot be weatherized as the entire building must be considered when providing weatherization services.

Before services can be provided, the multifamily building must be determined to meet minimum eligibility standards regarding the number of units with eligible applicants. These standards are:

- Multifamily units with four or less units must have a minimum of 50% of all units occupied by an eligible household.
- Multifamily units with five or more units must have a minimum of 66% of all units occupied by an eligible household.

Multifamily building eligibility can be verified using one of two methods – the standard verification process for buildings *not assisted* through HUD or verifying using an expedited process for qualified HUD assisted buildings. The expedited process was created by HUD and is described below..

To ensure that a multifamily building meets the income eligibility requirements set by DOE pursuant to the certification process established by HUD, property owners and managers shall submit two documents to HUD: 1) a **Property Self-Certification** form that specifies that the building in question meets DOE's income eligibility requirements and, 2) a **Property Occupancy Report** from current property records that confirm compliance with DOE's income eligibility requirements. The building is still subject to all other eligibility requirements.

For a building *not included* on one of the DOE published lists, eligibility for residents of the units must be determined to establish if the minimum number of units for the size of the building meet the income guidelines. Unoccupied units at the time of eligibility determination cannot be used to meet the minimum occupancy standards, unless designated as occupied by income eligible tenants in 180 days or less. Unoccupied units are still counted in the total number of units within the building. If the minimum occupancy eligibility standards are not met, then no unit in the building may receive weatherization services under the program.

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The building owner(s), or his authorized agent, must complete and comply with a multifamily building landlord agreement document. The owner of a multifamily building with renter occupied units will not be required to participate financially in the cost of providing the weatherization services under the program. No undue or excessive enhancements shall occur to the value of the building as a result of the weatherization services provided. Once services have been provided, the building owner may not increase the current rent charged per unit within the building for a minimum of three (3) years. The benefits of the weatherization work must accrue to the tenants, as outlined in the multifamily building agreement.

If services are provided, the weatherization of the entire building must be addressed, to include both common areas and residential living space. The maximum amount of DOE funds that can be spent will be \$7,669.00 multiplied by the number of residential units currently occupied by eligible households as established by the subgrantee. If sufficient funds are not available to address the entire building when it is selected, then the building must remain on the wait list until funding is available.

Eligible multifamily buildings consisting of 5 or more units will be sent to the DOE Project Officer to review before the job is to be posted for bids. Multifamily buildings consisting of 4 or less units will need project approval from THDA prior to bid. THDA will review internally or submit project documents to be reviewed by a third party technical partner.

Describe the deferral Process

The decision to defer or terminate weatherization services to an eligible lowincome household is difficult but necessary in some cases. Many problems encountered in lowincome housing are beyond the scope of the weatherization program. When a weatherization project is deferred, work must be postponed until certain problems can be resolved or alternative sources of assistance can be identified and secured. A job that was deferred could be completed at a later date if the deferral conditions identified are remedied. In some circumstances, a home may be beyond repair, or conditions may never be remedied. This home would result in termination of the application. Specific steps must be followed for each situation, as outlined below.

All reasonable precautions against performing work on homes that will subject workers or clients to health and safety risks must be performed. Before beginning work on the residence, the agency must take into consideration the health concerns of each occupant, the condition of the dwelling, and the possible effect of work to be performed on any particular health or medical condition of the occupants. When an occupant's health is fragile and/or the work activities would constitute a health or safety hazard, the occupants at risk will be required to leave the home during these work activities. If the client cannot, or will not, leave the home during the work hours, the job would be deferred. THDA is working with subgrantees and technical partners to implement a more comprehensive pre-screening process to help create a more efficient deferral process.

Deferral:

Existing conditions under which a dwelling unit should be determined as **Deferred** include, but may not be limited to, the following:

- Elevated carbon monoxide levels where abatement is not possible using WAP funds;
- Existing moisture problems that cannot be resolved within program guidelines;
- House with sewage or other sanitary problems that not only endanger the customers but the workers who will perform the Weatherization work;
- Occupant's health condition;
- Building structure or its mechanical systems, including electrical and plumbing, are in such a state of disrepair that failure is imminent and these conditions cannot be resolved in a cost effective manner;
- Mechanical systems that have been "redtagged" and cannot be resolved within the scope and funding restrictions of WAP;
- Any existing condition that could endanger the health and/or safety of the work crew or subcontractor and cannot be safely abated;
- When toxic substances are discovered which cannot be addressed by the WAP, the coordinator should report the problems to the client and indicate that activity must cease until the identified condition has been corrected. This may include the existence of leadbased paint or asbestos containing materials that would have to be disturbed during the installation process.
- Unlawful activities are occurring in the dwelling that could endanger the customers or the crews. **Example:** A home may have housed a methamphetamine lab. For a list of addresses that have been identified by law enforcement for meth activity see the following web address: <https://www.dea.gov/clin-lab?state=TN&date=&page=0>
- When structural, wiring or plumbing problems exist which make the project unfeasible, the client should be notified of the problem(s) and no further Weatherization activities should occur until such time as these conditions have been adequately addressed.
- When a dwelling is infested with insects, rodents, etc., activities should cease until the condition has been remedied.
- Condition of the home, and the contents within, prohibit the ability to weatherize the home.
- Homes using unvented gas heaters as a primary heating source are not eligible for services until suitable measures have been accomplished to minimize the health and safety risks associated with unvented heating systems. If the client/landlord refuses the removal of unvented gas heaters, the job would be terminated without services provided.
- Health and Safety funding has been temporarily exhausted, and weatherization work cannot proceed without addressing the associated health and safety issues that would be necessary in order to effectively perform the work or as a result of the weatherization work to be performed.
- Initiation of eviction or foreclosure proceedings for the property will require deferral of weatherization services. In the event the household is evicted, or foreclosure of the property is completed, the job will be terminated, rather than deferred.

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Termination:

In some situations, the issue cannot be resolved even if the job is deferred. In these situations, the Weatherization case should be terminated. If a case is terminated without weatherization services being provided, the client has the right to reapply in the future. If services were provided prior to termination, any future application would be considered a request for Reweathering of the home.

- The unit is currently listed for sale or under a sale contract, either through an agency or privately.
 - The home is condemned or in the process of being condemned.
 - The property has been foreclosed.
 - The property has been designed for acquisition or clearance by a Federal, State or local program.
 - Customer is uncooperative, abusive, or threatening to contractor, subcontractors, auditors, inspectors, or others who must work on or visit the house.
 - Applicant is deceased, and there is not a spouse remaining in the home who agrees to assume applicant status.
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- Applicant is no longer permanently residing in the home. A temporary absence that can reasonably be expected to last three months or less, and where the applicant expects to return to the home, will not require termination. In the case of an applicant who is no longer residing in the home on a permanent basis, an applicant's spouse who still resides in the home may resign the application and continue to receive services, provided the household continues to meet eligibility requirements.
 - The household has been evicted.
 - The home is currently unoccupied, other than a temporary absence of the only household member.
 - Client/Landlord refuses to allow the removal of the unvented space heater that serves as a primary heating source.
 - There is not a reasonable expectation that the conditions that prevent weatherization activities can be alleviated within a reasonable period of time.

Notification:

When **deferral** of Weatherization services is necessary, the subgrantee must take the following actions:

- A Notice of Deferral must be sent to the client. This notice should clearly state the conditions which must be corrected before weatherization work can proceed, and define a reasonable time period by which the corrections must be completed.
- The deferral notice must contain notification of the right to appeal the decision, and how those rights may be initiated.
- Clients must be informed immediately both verbally and in writing of any imminent health and safety hazards.
- Clients must be informed of any immediate nocost or lowcost measures that should be taken to mitigate the hazard.
- Subgrantees shall work with the client to assist in identifying and accessing available resources that can help to address the situation that required deferral.
- Clients must be notified that they should contact the agency once the existing conditions have been remedied. Upon notification, the agency will return the application status to "active" and place the client back on the list for services. Another energy audit may be necessary before the job can be bid.

When **termination** of Weatherization services is necessary, the subgrantee must take the following actions:

- A termination notice will be sent to the client that gives the reason for the termination.
- The termination notice will contain notification of appeal rights and how those rights may be initiated.
- If the current address of the applicant is unknown, mail the notice to the last known address.
- In the event of death, send the notice to the next of kin if known. Otherwise, mail the notice to the address of the deceased.
 - Document the client file with verification of death

Documentation of Deferral:

Postponement of services does not mean that the case is closed. The deferral of an eligible dwelling unit must be properly documented so that no confusion exists about why WAP services were postponed. At a minimum, the following information related to the deferral must be documented in the client file:

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- Date of deferral
- Clear and concise description of the problems encountered in the home and action required to alleviate the issue before weatherization can proceed
- Documentation of client notification of any condition that could impact the household's health and/or safety. A copy of the notices sent to the applicant should be retained.

The agency must track all deferrals to determine if timely action has been taken to alleviate the circumstances which prevented the weatherization from occurring. If the client is unable or unwilling to make the necessary repairs, or if other resources are unavailable to assist with the repairs within a reasonable timeframe, the agency may opt to terminate the application.

THDA will also track deferrals at the state level. Reporting enhancements are currently in process to mirror some of the DOE recommendations of deferral tracking.

Documentation of Termination:

A job that is terminated will be closed and the client will not be placed on a deferral list. The termination of an eligible dwelling unit must be properly documented so that no confusion exists about why WAP services were terminated. At a minimum, the following information must be documented in the client file:

- Date of the decision to terminate the case
- Clear and concise description of the reason for termination
- Documentation of notification to Client

Additional Resources:

All agencies should aggressively pursue alternative funding to reduce the occurrences of deferral. Agencies should establish open lines of communication with as many other funding sources as possible so that referrals can occur in an efficient manner. The following is a list of potential funding sources to help remedy situations in the home:

- U.S. Department of Housing and Urban Development (HUD) HOME Program
- HUD – Community Development Block Grant
- U.S. Department of Health and Human Services – Community Services Block Grant
- U.S. Department of Agriculture Rural Economic Community Development
- Statefunded housing and rehabilitation programs
- Lowincome program funds provided by local utilities
- Cityfunded housing and rehabilitation programs
- Donations or financial participation from landlords
- Donations from local churches or community groups
- Donations from local businesses, nonprofit organizations, or local associations

V.1.3 Definition of Children

Definition of children (below age): 6

V.1.4 Approach to Tribal Organizations

☐ Recommend tribal organization(s) be treated as local applicant?

If YES, Recommendation. If NO, Statement that assistance to low-income tribe members and other low-income persons is equal.

Tennessee does not have any federally or state recognized tribes.

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Any applicant that is a member of a tribal organization will be treated the same as any other lowincome applicant. Such applicants will need to apply through the subgrantee agency that serves their county of residence.

V.2 Selection of Areas to Be Served

Where possible, it is Tennessee's intent that every county within the state will be served. Funding allocations will be provided based on the percentage of the State's lowincome population that resides within a county. Each county will have a single subgrantee to administer the DOE Weatherization Assistance Program on behalf of the Grantee. Each subgrantee will have a defined service area that will consist of one or more counties. Funding will be provided to the subgrantee based on the county allocation(s) for their service area. Approved applicants will be served in order of priority, based on funding availability. If remaining funds are insufficient to serve the next applicant on the priority list for the service area, that subgrantee will go to the next person who can be served within the funding limitations.

Subgrantees have the option to shift funds from one county to another as necessary based on applicant need, with approval from their Board and the State. When a subgrantee determines they have a sufficient number of approved applicants on the wait list for a particular county compared to the amount of funding available, they have the option to temporarily suspend accepting new applications. When additional funds become available, or when the wait list has decreased to a number that can be expected to be served within a reasonable period of time, the subgrantee will again accept applications. The State is to be notified by the subgrantee whenever they suspend or reopen the application acceptance process. A subgrantee may also petition the state for approval to eliminate some or all of the existing wait list at the beginning of a contract period. If the wait list is cleared, all applicants currently on the wait list must be notified, and provided an opportunity to reapply at the next open application period.

THDA reserves the right to reallocate funds amongst subgrantees based on performance and need throughout the year.

In the event that an entity fails to enter into an agreement to serve as a subgrantee, THDA will work to identify another organization to serve in this subgrantee role. In the event that no organization can be identified to serve the noncovered area, the funds allocated to the noncovered area will be reallocated to subgrantees covering the remaining counties in Tennessee.

V.3 Priorities

Priority will be given to those households with a vulnerable household member. A vulnerable household member is someone who is elderly or disabled, or is a child less than 6 years of age. In addition, those households that have a high energy burden, based on the percentage of their countable income that is used for home energy costs, or that are considered a high residential energy user, will be given priority in receiving weatherization services. A high energy user is a household whose annual energy costs exceed the average energy costs for lowincome households in the East South Central Region according to the Residential Energy Consumption Survey conducted by the Energy Information Administration.

Priority wait lists will be maintained on a county level, and updated at annual recertification. An approved household may have a maximum of 100 points. Exception to the maximum may occur after additional points are given due to disaster related damage. Priority points will be assigned as follows:

Vulnerable Household Members (50 Points Maximum)

Household Includes a Member with	Points
Following Characteristic	
Elderly (age 75+)	20
Elderly (age 60-74)	15
Disabled	15
Child under age 6 years of age	15

If multiple elderly members reside in the household, use the age of the oldest member to determine countable points. A household may be awarded points once per category based on current household composition. For example, if two household members are disabled, only 15 points can be awarded.

Energy Burden (15 Points Maximum)

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% of Income Used for Home Energy Costs*	Points
19.01% or higher	15
15.01-19%	10
8.01-15%	5
8% or less	0

*Calculated by dividing the annual energy costs by the total countable annualized income for household.

High Residential Energy User* (10 Points Maximum)

Household Annual Energy Costs**	Points
\$3000 or more	10
\$1900 or more	5
\$1899 or less	0

*Average annual energy costs for a lowincome household in the east south central region is \$1,907.00 (2015 Residential Energy Consumption Survey conducted by the US Energy Information Administration)

** If energy costs are included in the rent, determine the annual energy costs by dividing the total energy cost for the building by the total number of building units.

Priority points for a multi-family building will be calculated as follows:

- Determine the number of points for each unit occupied by an eligible household
- Divide that number by the total number of units in the multi-family building
- The result is the number of priority points for that building

<https://www.eia.gov/consumption/residential/data/2015/c&e/pdf/ce1.4.pdf>

V.4 Climatic Conditions

Tennessee has a generally temperate climate, with warm summers and mild winters. However, the state's varied topography leads to a wide range of climatic conditions. The westernmost part of the state, between the Mississippi and Tennessee Rivers, is a region of gently rolling plains. The Central Basin makes up middle Tennessee, and lies between the Tennessee River to the west, the hilly Highland Rim to the north and the Cumberland Plateau to the east. The Cumberland Plateau, with an average elevation of 2,000 feet, extends northeast to southwest across the State in a belt 30 to 50 miles wide, overlooking the Great Valley of East Tennessee. The Great Valley, which runs parallel to the Cumberland Plateau on the west and the Great Smokey Mountains on the east, is a funnel shaped valley varying in width from 30 to 90 miles. The Great Smokey Mountains lie along the Tennessee-North Carolina border, with peaks ranging from 4,000 to 6,000 feet.

Tennessee's topography contributes to the variance of temperature, with an average of three degrees Fahrenheit decrease per 1,000 feet increase in elevation. As a result, higher portions of the State, such as the Cumberland Plateau and the mountains in the eastern portion of the state, have lower average temperatures than those found in other parts of the state. Across the state the average annual temperature ranges from 62 degrees in extreme southwest portion to 45 degrees at the top of the highest peaks in the east.^[1] Statewide, the average annual temperature is 58 degrees, with a winter average of 39 degrees and a summer average of 76 degrees. Average annual precipitation in Tennessee is 53 inches^[2], with the greatest rainfall occurring in the winter and early spring. Snowfall varies and is more prevalent in the eastern portion of the state.

[1] <http://climate.tennessee.edu/Climate%20of%20TN.pdf>

[2] <https://www1.ncdc.noaa.gov/pub/orders/CDODiv9157188185678.txt>

The data is pasted below:

Heating Degree Days

Month starting	HDD
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1/1/2019	794
2/1/2019	518
3/1/2019	562
4/1/2019	191
5/1/2019	29
6/1/2019	3
7/1/2019	0
8/1/2019	0
9/1/2019	0
10/1/2019	155
11/1/2019	624
12/1/2019	620
Total	3,496

Cooling Degree Days

Month starting	CDD
1/1/2019	0
2/1/2019	4
3/1/2019	4
4/1/2019	19
5/1/2019	186
6/1/2019	255
7/1/2019	393
8/1/2019	370
9/1/2019	345
10/1/2019	52
11/1/2019	0
12/1/2019	2
Total	1,630

V.5 Type of Weatherization Work to Be Done

V.5.1 Technical Guides and Materials

All work done is consistent with its DOE approved energy audit and Appendix A. All energy conservation measures (ECM) and related incidental repairs for a specific unit will be established through the use of the Weatherization Assistance audit tool (NEATMHEA) with the exception of the measures that have been identified as lowcost or no-cost. Health and Safety measures are not required to be cost justified. All measures and incidental repairs performed on client homes must meet the specifications, objectives and desired outcomes outlined in the Standard Work

Technical Guides and Materials

Specifications for Home Energy Upgrades, State and THDA policies and procedures. As needed, updates may be provided in the form of technical assistance memorandums, technical assistance contractors, or through reference to DOE established guidance. The measures identified are the more common measures. This list is not meant to be all inclusive. The national Standard Work Specifications can be found at <https://sws.nrel.gov/> the Tennessee Specific Standard Work Specifications will be available online and in digital format at: http://wxfieldguide.com/tn/TNWxFieldGuide_2018_SWS.pdf.

THDA contracted with Saturn Resource Management in PY18 to create a Tennessee specific field guide. Tennessee's current SWS Field Guide is DOE approved through October 3, 2021.

Program Year 2020 will allow ample planning time to compile the necessary changes, program updates, inclusions, and omissions to Tennessee's next release of the SWS Field Guide. The following timeline illustrates steps towards the next approval round of the Tennessee Standard Work Specification Field Guide.

Compile all edits, inclusions, omissions to field guide standards	January 7, 2021
Initiate revision conversations to current field guide	January 29, 2021
Complete contract agreement between THDA and field guide author	March 1, 2021
Finalize field guide edits and SWS variance requests	April 30, 2021

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Submit to DOE

May 1, 2021

THDA is currently seeking approval from DOE for additional materials such as LEDs, water heaters, and refrigerators 10 CFR 440.

which are not currently listed within Appendix A of

Ensuring Quality Work from Quality Control Inspectors, Energy Auditors and Contractors

All units must receive a final inspection by a THDA approved Quality Control Inspector. A THDA approved QCI must have a current QCI certification from the Building Performance Institute and must meet all other DOE and THDA requirements.

QCIs are required to ensure WAP work has been completed and meets the current technical guidance and SWS. QCIs must attend all mandatory WAP trainings. QCIs must retake any classes or trainings that are missed within 6 months of the original training date. If a QCI does not retake the course within 6 months they are no longer eligible to conduct QCI visits until they take the course. A QCI's performance is monitored by THDA or THDA's T&TA provider.

If there are repeat findings from a QCI, additional training will be required. If after successfully passing additional training the QCI continues to have repeat findings, THDA will not accept any final inspections signed by the QCI and the QCI is required to complete the following steps:

Step 1: Counseling THDA will set up a counseling sessions with the QCI, THDA staff and our T&TA provider.

Step 2: Additional training As a result of counseling, the QCI must attend and pass mandatory additional training.

Step 3: Removal from the program If the QCI is unable or unwilling to perform to the standard set by THDA and DOE they will be removed from WAP and no longer able to work in the program for a minimum of two program years. After the completion of the two year period an energy auditor may request to be reinstated into the program. The request to be reinstated must include the corrective action steps that were taken and justification. The request will be approved or denied by THDA.

THDA reserves the right to reject work from a poor performing QCI, Energy Auditor or contractor.

Subgrantees, contractors, auditors and the entire network are able to view and download the TN WAP Technical SWS from the link below:

http://wxfieldguide.com/tn/TNWxFieldGuide_2018_SWS.pdf

By signing the WAP Contract and the "Weatherization Services Contract" the agency and contractor verifies that all WAP work including audits/testing, installation of energy conservation measures, health and safety measures, incidental repair measures, and final inspections will be performed in compliance to the THDA WAP Manual, Tennessee WeatherizationField Guide, National Standard Work Specifications, and State and Federal requirements.

The WAP Weatherization Services Contract states:

"The contract between the parties consists of the following "Contract Documents" all of which constitute one instrument:

1. The terms and conditions of this Contract document
2. The Contractor's Proposal as specified in the Work Order Bid Form that is affixed to Attachment
3. The standards of the Tennessee Weatherization Standard Work Specifications Field Guide
4. Department of Energy Weatherization Materials Standards
5. Construction Changes as specified in an amended Work Order"

"The Contractor agrees to obtain all required certifications, for self and/or employees on this project, in accordance with program policies and procedures. All work must comply State and Federal WAP requirements and the THDA Standard Work Specifications found at the site: http://wxfieldguide.com/tn/TNWxFieldGuide_2018_SWS.pdf

If a contractor repeatedly fails to meet program expectations they will be be subject to the following corrective action:

Step 1: Counseling The subgrantee will set up a counseling session with the contractor, local agency staff and THDA T&TA provider.

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Step 2: Additional training As a result of counseling, the contractor must attend and pass mandatory additional training.

Step 3: Removal from the program If the contractor is unable or unwilling to perform to the standard set by THDA and DoE they will be removed from WAP and no longer able to work in the program for a minimum of two program years. After the completion of the two year period a contractor may request to be reinstated into the program. The request to be reinstated must include the corrective action steps that were taken and justification. The request will be approved or denied by THDA.

Air Sealing

Air sealing work will be guided by the use of a blower door and digital manometer. The most effective infiltration reduction efforts typically involve sealing leaks between the conditioned space and the unconditioned areas found in the attic or crawl space. The contractor performing the weatherization work will be required to perform necessary air infiltration measures until the unit is properly air sealed established using a CFM50 target based approach. The energy auditor may highlight recommended areas to focus air sealing efforts and list them on the work order. While it is a best practice and encouraged that contractors utilize blower door readings to identify air sealing opportunities, the subgrantee has the flexibility to determine how they will specify it on the work order. The work order shall specify air sealing measures and hold the contractor responsible to conduct air sealing that will achieve a significant CFM reduction. With increased training for auditors and crews on air sealing techniques and CFM reduction, auditors and crews are better prepared to recognize areas to reduce air infiltration. We will continue to highlight air sealing in our training sessions during Program Year 2020.

WPN 13-05 states, "Air Sealing ... is the exclusive energy conservation measure that is not required to show a postweatherization individual SIR of

1.0 or greater. The package of weatherization measures, including costs and projected savings for air sealing, must have a postweatherization SIR of 1.0 or greater."

Infiltration Reduction/Air Sealing measure is not required to meet an individual 1.0 SIR as long as the cumulative SIR is 1.0 or higher for the entire project. All other Energy Conservation Measures must provide an individual SIR of 1.0 or higher and the cumulative SIR must be 1.0 or higher. If the contractor's bid amount for Infiltration Reduction/Air Sealing makes the cumulative SIR fall below 1.0 SIR, then the cost for the measure must be negotiated until the cumulative SIR is 1.0 or higher.

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) Ventilation Standards 62.2-2016 will be followed when performing air sealing to the greatest extent possible. ASHRAE Ventilation standards are included in auditor training, the Tennessee Weatherization Field Guide and National Standard Work Specifications. ASHRAE 62.2 worksheet calculations are required to be included in the client's file.

If the structural integrity of the unit prohibits the use of the blower door, it may be that the unit is deferred. Living conditions that prohibit the use of the blower door may require deferral until such conditions can be remedied.

Attic Insulation

Attic bypasses shall be sealed prior to the installation of attic insulation. The amount of attic insulation that can be cost effectively added depends on the level of existing insulation and type of space heating fuel. The final R Value that can be cost-effectively added will be determined by the energy audit tool and shall comply with Tennessee state standards and codes. Attics with structural issues that are beyond the scope of the Weatherization Assistance Program may not be able to be insulated in full or at all. In these cases, the unit may need to be deferred.

The Tennessee Weatherization Field Guide and Standard Work Specifications contains information regarding the proper procedures to follow for attic preparation and installation standards.

Floor Insulation

The Weatherization Assistant audit tool determines the appropriate R value and need for insulation for a specific unit. The Tennessee Weatherization Field Guide and National Standard Work Specifications define standards and procedures for floor insulation.

The amount of floor insulation that can be cost effectively added varies with existing levels of insulation, space heating fuel, and foundation type.

Plastic sheeting may be installed as ground vapor barrier, following the guidance provided in the Tennessee Weatherization Field Guide and National Standard Work Specifications. The installation of the plastic vapor barrier will preserve the integrity of the floor insulation by reducing the amount of moisture evaporating from the ground.

Wall Insulation

Walls shall be insulated if the cost to insulate is justified. Walls that are already fully insulated or solid masonry, concrete, concrete block or wood will

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not be insulated.

Exceptions: If any of the following conditions exist, then the wall cavity shall not be insulated:

- Active knob and tube wiring is present in the wall cavity
- Wall cavity contains HVAC duct, wall furnace or heater
- Wall cavity is next to a fireplace or chimney without sufficient clearance
- Wall cavity space is connected to an unprotected pocket door cavity
- Wall repairs are needed and not able to be performed as part of the weatherization package
- Other situations that may result in a hazardous situation or where the wall cannot be properly prepared due to unique structure of the home.

Other Insulation

Insulation of water heaters, water pipes, and HVAC ductwork are allowable weatherization measures.

Domestic Hot Water (DHW)

Replacement of the water heater is permitted, provided the replacement of the existing unit meets minimum SIR value of 1.0 or meet the definition for health and safety replacement.

The replacement water heater shall be:

- Either a standard tank or tankless (on-demand) water heater.
- All replacement units must be similarly sized as the original unit that is being replaced. Justification must be submitted to THDA if the size varies significantly compared to what was existing.
- All gas and electric DHW replacements shall be Energy Star rated. However certain instances may occur where Energy Star water heaters cannot be installed due to space restrictions, etc. Any installation of a non – Energy Star water heater must be approved by THDA.

Solar water heaters are not approved as replacement units in Tennessee at this time.

Heating System Maintenance, Repair and Replacement

As part of the energy audit, all heating systems will be evaluated, including any ductwork present. A heating system may be solid fuel (wood or pellet stove heaters), electric or combustible fuel, such as natural gas, propane or kerosene. If the heating source is wood or pellet, the related chimney must also be evaluated. Heating system maintenance, limited repairs or replacement is allowed, provided the SIR value is equal to or greater than 1.0. Replacement or repair may occur outside the SIR requirements provided the necessary replacement meets the definition of a health and safety measure as detailed in the Tennessee health and safety plan and DOE's WPN 17-7. Maintenance and repair will always be preferable to replacement of an existing unit, whenever possible.

All heating system replacements shall meet the current Energy Star specifications or equivalent.

Cooling System Maintenance, Repair and Replacement

Tennessee's hot, humid climate makes the use of air conditioning vital for many of our clients. All cooling systems will be evaluated, including any ductwork present. Maintenance and repair will always be preferable to replacement of an existing unit, whenever possible.

Cooling system maintenance, limited repairs or replacement is allowed, provided the SIR value is equal to or greater than 1.0. Replacement or repair may occur outside the SIR requirements provided the necessary replacement meets the definition of a health and safety measure as detailed in the Tennessee health and safety plan and DOE's WPN 17-7.

If the cooling system is replaced, the original unit must be removed from the home, and refrigerants disposed in accordance with standard policies and procedures.

All cooling system replacements shall meet the current Energy Starspecifications or equivalent.

Unvented Space Heaters

If the unit targeted for weatherization services has an unvented gas or liquid fuel space heater that serves as the primary heat source for the home, this unit must be replaced as part of the weatherization services provided. The home cannot be weatherized under the Weatherization Assistance Program if the client refuses the removal of the primary unvented space heating source or if funding is not available to remove and replace the unit. The unit is to be

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replaced with a vented, codecompliant heating system that is appropriately sized for the home.

If the unvented gas or liquid fueled space heater is a secondary heat source, it may remain in the home provided it complies with the International Residential Code (IRC) and the International Fuel Gas Code (IFGC). Removal is required, except as secondary heat, unless the unit conforms to ANSI Z21.11.2. Units that do not meet ANSI Z21.11.2 must be removed prior to weatherization, but may remain until a replacement heating system is in place. DOE funds may not be used to replace any unvented space heater that serve as a secondary heat source.

Electric Baseload/Lighting

Refrigerator replacements are allowable as an ECM with a SIR of 1.0 or greater. Replacement refrigerators must be Energy Star Rated or equivalent. The existing refrigerator must be removed from the unit and disposed of properly as stated in the Health and Safety Plan. Lighting upgrades are included with the TVA Energy Saver Kits which are not funded by DOE, but are provided to all WAP Clients.

Door and Window

All doors and windows will be evaluated as part of the energy audit. Only those doors and windows that are part of the building envelope can be repaired or replaced, provided the individual unit meets the necessary cost saving factor to support the decision. Replacement of doors and windows must be cost justified through the energy audit tool. In rare instances, doors and windows may be replaced as incidental repairs if associated with an energy conservation measure and meets the definition of an incidental repair. These circumstances must be well documented in the client file utilizing both written and photo explanation.

General Heat Waste Measures

The Tennessee Weatherization Assistance Program will allow the installation of the following measures that are typically acknowledged to be cost effective.

- Water Flow Controllers, including lowflow shower heads
- Furnace or Cooling Filters, up to a oneyear supply
- Weather stripping, caulking, plugging, glass patching and other similar measures primarily used to address air infiltration

General Heat Waste measures are limited to \$50 of material cost per unit. Such measures may be installed by the energy auditor or the contractor. It is not necessary to have these measures recommended by the Weatherization Assistant audit tool, nor is a SIR of 1.0 or more required.

Fuel Switching

The same non-renewable fuel (electric, natural gas, propane) shall be used when replacing heating or cooling systems and water heaters. On a limited basis, the changing or converting from one primary fuel source to another is only allowed on a case by case situation. Fuel switch requests will be delivered to THDA's DOE Project Officer for approval prior to the work order going to bid. THDA has created a fuel switch checklist to aid energy auditors and subgrantees in their submittal process.

Incidental Repairs

The Weatherization Assistance Program is not a home rehabilitation program. Only limited incidental repairs will be permitted. **An incidental repair is a repair that is necessary for the effective performance or preservation of weatherization materials.** Such repairs include, but are not limited to: minimal roof repair or mobile home roof membranes, minimal floor and wall repair, attic access and stairs, mobile home skirting, limited electrical repair, leaking pipes, etc. These repairs must be necessary to preserve the integrity of the weatherization materials. All incidental repairs must be included in the cost savings calculation of the Weatherization Assistant, with a final cumulative SIR value of 1.0 or greater for the unit.

Certain measures may meet the definition of an incidental repair OR the DOE WAP health and safety definition. Subgrantees shall refer to the state's WAP Manual and Health and Safety Plan for guidance in defining the measure. The DOE WAP incidental repair / health and safety measure flow chart is also a valuable tool. The chart can be found THDA's Health and Safety Plan.

Items such as porch steps, landings, decks, handrails, ramps or any other repair item that are not associated with the effective performance or preservation of the weatherization materials are not allowable costs under the Weatherization Assistance Program.

Permits and Code Compliance

It is the responsibility of the subgrantee to ensure the contractor obtains all necessary permits and is in compliance with code for the area in which the work is being performed. Copies of permits will be included in the client file.

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Bulk Purchases

THDA will consider subgrantee request for the bulk purchase of WAP related materials and equipment. This consideration will serve in part to expedite completion of weatherization work which could otherwise experience a lag due to supply chain issues when ordering materials and equipment. It doubly serves to help control rising costs due to the state of the building industry in Tennessee. Purchasing in bulk should reduce per unit pricing.

Subgrantees are required to follow their internal, state, and federal 2 CFR 200.317-326 procurement policies. Examples of considerations such as the type of material or equipment request, subgrantee/state average cost per unit, past and current subgrantee performance, and local supply chain issues will be taken to ultimately approve or deny the purchase request.

Bulk equipment and material purchases will be funded through the appropriate budget category - like program operations or health and safety.

Field guide types approval dates

Single-Family: 10/3/2018

Manufactured Housing: 10/3/2018

Multi-Family: 10/3/2018

V.5.2 Energy Audit Procedures

Audit Procedures and Dates Most Recently Approved by DOE

Audit Procedure: Single-Family

Audit Name: Other (specify)

Tennessee is approved to use the Weatherization Assistant (NEAT/MHEA) audit tool by DOE. Approval dates are July 5, 2016 through July 5, 2021.

Approval Date: 7/5/2016

Audit Procedure: Manufactured Housing

Audit Name: Other (specify)

Tennessee is approved to use the Weatherization Assistant (NEAT/MHEA) audit tool by DOE on mobile homes. Approval dates are July 5, 2016 through July 5, 2021.

Approval Date: 7/5/2016

Audit Procedure: Multi-Family

Audit Name: Other (specify)

All Multi-Family audits containing 5 or more units will be sent to DOE for approval prior to bidding. Tennessee will use Weatherization Assistant (NEAT) audit tool for use on multi-family buildings that contain up to 25 individually heated/cooled units.

Approval Date:

Comments

Audit Tool Approval

THDA received audit tool approval on July 5, 2016. THDA received verification from DOE on 3/20/2018 to use WAPez developed by TVA which is integrated with NEAT/MHEA for energy audits.

The following is the contract clause to ensure the Tennessee Weatherization Field Guide is used:

The Grantee shall perform all WAP activities and carry out all fiscal responsibilities in accordance with THDA WAP policies and procedures; the Standard Work Specifications and THDA SWS Field Guide and subsequent technical guidance; all applicable U.S. Department of Energy regulations and policies, and all applicable Office of Management and Budget (OMB) circulars (collectively, the "Program Requirements").

Energy Audit Re-Approval Process

THDA will be undergoing its energy audit reapproval process this program year. Planning has begun to outline important deadlines and tasks necessary prior to submitting the energy audit package to DOE by December 31, 2020.

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Below is a list of the anticipated schedule of tasks based on WPN 19-4 and organized by most recent date of completion.

Fuel cost for all fuel types considered by the audit	5/25/2020
c. Statement of compliance with 10-CFR 440 Appendix A	6/1/2020
A list of items to be installed as General Heat Waste (GHW) measures (if any)	6/1/2020
A complete list of measures considered by the audit for installation as (ECMs) including:	6/15/2020
a. Lifespan of installed measure	6/15/2020
b. Accurate material and labor costs	6/15/2020
a. Field data collection forms and combustion safety protocols	9/15/2020
b. Written guidance for field data collection, audit software data entry, measure installations.	10/15/2020
Sample audits (10 for each housing stock), including:	11/1/2020
Grantee specific Audit Procedures and Field Protocols for data collection and audit tool entry including:	11/1/2020
A formal request letter from the Grantee to DOE for approval of the specific audit tool for use in the WAP program.	12/1/2020

Energy Auditors

Energy audits will only be conducted by energy auditors that meet minimum qualification standards as defined by THDA. An energy auditor may be a subgrantee employee or a contractor of the subgrantee. Tennessee requires every home to have an energy audit performed prior to weatherization services being provided in order to determine the appropriate measures for that specific unit. Subgrantees are encouraged to hire Energy Auditors that already have completed BPI Certification. It is required for an Energy Auditor to be BPI Energy Auditor Certified within 6 months of employment. All Energy Auditors must have a BPI Energy Auditor Certification and meet the other requirements of DOE and THDA WAP. All Quality Control Inspectors must have a BPI QCI Certification. Any individual hired by a subgrantee as a QCI must be certified within one year of employment. All final energy audits/ QCI inspections must be conducted by a QCI certified auditor that meets all other DOE and THDA WAP requirements.

Single Family

The audit tool approved by DOE for use on single family units in Tennessee is the Weatherization Assistant (NEAT/MHEA). DOE approval of the tool was obtained July 5, 2016. Each Energy Conservation Measure (ECM), except air sealing (WPN 13-05), must have a Savings-to-Investment Ratio (SIR) value of 1.0 or greater in order to be cost justified. Additional diagnostic tests will be conducted as necessary for the specific unit.

The energy audit recommended measures are used to build the work order for the unit. Based on DOE WPN 19-4, if *minor* measures must be removed from the work order due to costs exceeding the cap per unit, those measures with the lowest SIR value will be removed first (with the exception of infiltration reduction measures), along with any incidental repair that is tied to the deleted ECM from the work order. It is to be known, DOE WPN 19-4 defines *major* measures as: air / duct sealing (outside the thermal boundary) and wall / attic / floor insulation. These major measures *cannot* be removed from a work order *if* they are determined cost-effective as defined by the audit tool. Whenever measures are added or removed, the SIR value must be recalculated to ensure both individual ECM and cumulative SIR values meet minimum standards. The actual cost of the measure as bid must also be compared to insure that SIR requirements continue to be met.

Manufactured Homes

The audit tool approved by DOE for use on mobile home units in Tennessee is the Weatherization Assistant (NEAT/MHEA). The audit tool approved by DOE for use on single family units in Tennessee is the Weatherization Assistant (NEAT/MHEA). DOE approval of the tool was obtained July 5, 2016.

Multifamily Buildings

Any multifamily building containing 5 or more units will be sent to the DOE PO before the work order is sent for bid. The Weatherization Assistant audit tool will be used for any multifamily building with less than 25 units that are individually heated and cooled. The entire building will be considered when conducting the energy audit, and recommended cost effective measures for the entire building will be identified.

All multifamily units that do not meet the approved criteria must be submitted separately for approval prior to commencing work. If the multifamily building contains units that are not individually heated and/or cooled, or if there are 25 or more living units within the building, the job will be submitted to the Project Officer for review and approval prior to commencement of weatherization work.

The multifamily building (to include all living units and common spaces) will have the weatherization work awarded following the single bid process, with the job to be awarded to the lowest, qualified bid submitted.

Weatherization Contractors

Weatherization work will be performed through a combination of contract or crew based workers. Most Tennessee subgrantees contract weatherization

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work on a per job basis. As of the writing of this state plan, at least one subgrantee has hired a small weatherization crew while other agencies are contemplating the option as well.

All contractors and subgrantee crews must meet the training and certification requirements listed in the THDA WAP Manual. All contractors and crews must be approved by THDA. Only contractors with a current Tennessee General Contractor or Home Improvement Contractor license and who meet the current requirements listed in the WAP Manual may be allowed to bid. Licensed contractors who have three or more years of experience in weatherization work may be exempt from training course, at the option of the subgrantee, provided the contractor submit documentation of their experience. Contractors must ensure employees are also in compliance with federal and state requirements, as applicable. All contractors must carry an active liability policy in an amount as approved by the subgrantee. Any contractor currently on the federal Excluded Parties List System of suspended and debarred contractors may not participate. Subgrantees have the option to impose additional contractor qualifications.

If the building to be weatherized includes five or more family units, or if the building exceeds three stories, only those contractors with an active Tennessee Commercial Contractor's license may qualify to perform the work. All other contractor requirements still apply.

Provided the contractor meets the above qualification, the subgrantee has the authority to determine those contractors they wish to approve to bid on the weatherization work awarded through their agency. The subgrantee must ensure they have a sufficient number of approved contractors to ensure competition.

Contractors must sign the "Contract to Provide Services Under the Weatherization Assistance Program." This agreement is provided by the grantee to the subgrantee as a contract for the contractor on each WAP job. By signing the "Contract to Provide Services Under the Weatherization Assistance Program" the contractor performing the work is ensuring quality work and that all terms of the contract will be followed.

Weatherization Work Job Awards

Subgrantees using weatherization contractors will follow a THDA approved bid process, with the job being awarded to an agency approved contractor. All awards must comply with Federal and State procurement requirements. Subgrantees have the option to negotiate the costs or work to be performed when the bid exceeds the maximum amount permitted under the program, following the priority list (Recommended Measures Report) and procedures for removal of measures. The job is not considered to be "awarded" until there is a fully executed contract that includes the scope of the work to be performed for that specific unit.

In the event the qualified contractor withdraws their bid, the subgrantee may award the contract to the next contractor, with the same policies and procedures to be applied as described above. If the contractor defaults on the contract and fails to perform the work – either all or in part – the agency will have to reevaluate the work that remains to be performed and rebid the job.

Contractors who make an error in the submission of their bid have the option to honor the price as quoted, or to withdraw their bid. Under no circumstances will the bid error be corrected and the cost of the work to be performed increased as a result of the contractor's error when preparing their submitted bid.

Change Orders

Occasionally, there may be additional weatherization work identified as needed after the initial audit or after the work has been awarded to a contractor. Change orders for additional work that is not charged to health and safety must also meet minimum SIR values. Change orders must be approved by the subgrantee prior to the additional work being performed by the contractor.

V.5.3 Final Inspection

Tennessee currently has 11 certified Quality Control Inspectors. There is a mix of staff and contracted QCIs in Tennessee. Some agencies do not have the capability to have multiple QCI inspectors/auditors on staff. Agencies that use the same auditor for their audits and inspections will have monitoring increased to at least 10% of units. Tennessee allows subgrantees to use QCI certified inspectors on a contract basis.

Once the contractor has notified the subgrantee that all work on a unit has been completed, the subgrantee will assign a qualified Quality Control Inspector to perform an inspection. Every WAP unit must receive a final inspection by a certified QCI ensuring that all work meets the minimum specifications outlined in state and national standard work specifications and in accordance with 10 CFR 440. The purpose of the inspection is to ensure that all required measures (ECMs, incidental repairs, health and safety items) were installed in the building in accordance with program guidelines. The quality control inspection is driven by the initial energy audit, work order, the awarded contract that specifies the work to be performed, and any change orders that have been approved for the job.

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If the QCI determines that all required work has not been installed, or has not been installed in accordance with program standards, the contractor will be notified of the necessary corrections to be made. The contractor will not be paid additional funds for correcting the original work and bringing it up to program standards. Once corrected, another inspection will be conducted. All completed work must be inspected by a BPI certified, and agency approved, QCI and passed before the job can be considered completed.

Contractors will not be paid until work has passed inspection.

Every client file must have a final QCI inspection form that certifies that the unit had a final inspection and that all work met the required standards. The form must be signed by the client and the certified QCI. If a unit has received both a final inspection and has also been monitored by THDA, two certification forms will be available in the client file one for each inspection.

Subgrantees have the option to incorporate contractor penalties related to failed inspections or a contractor's failure to complete the work by the timeframe outlined in the contract. If a penalty is applied, the payment made to the contractor will be reduced by that amount. The reduced cost for the weatherization work will be invoiced to THDA, with the amount of the applied penalty defined.

If the final inspection cannot be performed due to the client's unwillingness to allow the auditor access to the home, or other circumstances beyond the agency's control, the job can be closed after sufficient effort has been made to conduct a final inspection. In this situation, the contractor may be paid, but the job cannot be counted as a completed unit for purposes of meeting production goals.

V.6 Weatherization Analysis of Effectiveness

Every unit will have an energy audit performed utilizing the WAPez software which runs the Weatherization Assistant (NEAT/MHEA) tool to identify the most effective measures for that particular home. In addition, Tennessee plans to continue the partnership with the Tennessee Valley Authority to evaluate the impact the weatherization work had on the energy costs for the home. This partnership will require THDA to provide TVA with pre and post weatherization data for the unit and TVA provides energy saving kits to all WAP clients. TVA will evaluate the measures installed and the pre weatherization energy costs and the postweatherization energy costs. There will be no cost to the program for this evaluation. Please see attached document to the SFR 424 titled WAP TVA Energy Kit Effectiveness.

THDA will also conduct a cost analysis across the state in order to provide updates to our measure cost library. The analysis will include obtaining contractors actual cost and averaging them for the state. The cost averages will be compared to market costs and adjusted as needed.

The results of the Quality Assurance Reviews are incorporated into training plans that are to be provided both statewide and on an agency basis. Continued monitoring of progress and work performed will inform the next steps in development of training. A copy of the THDA

WAP monitoring tools are attached to the SF424.

V.7 Health and Safety

Tennessee will track and report health and safety expenditures separately, and these funds will not be considered in the average cost of the unit. Subgrantees will be provided a specific dollar amount equal to 14.81% of their Program Operation funding that may be used to address health and safety issues as permitted in Tennessee's health and safety plan. Funds may only be spent in homes where weatherization work is being performed, although there is not a limit per home. Only those health and safety items that are necessary in order to effectively perform or as a result of weatherization work will be permitted. The Health and Safety Plan template is attached to SF424. Subgrantees are also instructed to review policy in the WAP Manual and DOE WPN 19-5 which includes a flow chart to help determine funding category of a measure, namely health and safety or incidental repair.

V.8 Program Management

V.8.1 Overview and Organization

The Tennessee Housing Development Agency (THDA) has been designated by the Governor as the State's administering agency for the Weatherization Assistance Program (WAP), effective with PY2012. Local agencies, including community action agencies, human resource agencies, not-for-profits, and other public entities, will contract with THDA to provide weatherization assistance in each of Tennessee's ninetyfive counties. THDA's intent is to provide weatherization services statewide but funding limitations may prevent weatherization work from occurring in each county every program year.

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The Weatherization Assistance Program (WAP) was established under Title IV of the Energy Conservation and Production Act and amended by the National Energy Conservation Policy Act, the Energy Security Act, the Human Services Reauthorization Act of 1984, and the State Energy Efficiency Programs Improvement Act of 1990. The program is administered and funded at the federal level by the U.S. Department of Energy (DOE). This program is designed to assist lowincome households in reducing their fuel costs and to contribute to national energy conservation through increased energy efficiency and client education. Weatherization measures provided by this program will reduce heat loss and energy costs by improving the thermal efficiency of dwelling units occupied by lowincome households.

All allocations to local agencies are subject to Congressional appropriation (and/or Federal Court orders) and subsequent allocations to the State by the DOE. In the event anticipated Federal funds are not obtained and continued at the levels indicated in this Plan, the Department reserves the right to reduce all agency allocations accordingly. In no event shall funds be provided for reimbursement of WAP agencies where federal funds are not available for such purposes. Tennessee has allocated 10% of LIHEAP funds to operate a LIHEAP based weatherization program. LIHEAPWx will be subject to some DOE rules.

Funding allocations to subgrantees will be provided based on the percentage of lowincome population within a county. This percentage will be determined using a three year rolling average of the Census data (Small Area and Income Poverty Estimates). This funding formula will be updated annually, using the most recent three years' worth of data available at the time. THDA will monitor expenditures during the fiscal year. Subgrantees who are not on track to fully expend their allocated funds within the fiscal year may have their funds returned to the State for reallocation. Any funds that are unspent at the end of the fiscal year will be recaptured by the State, and reallocated at the THDA's discretion.

Subgrantees are expected to meet performance and quality standards, as defined by the State. Failure to meet these standards can result in termination of the subgrantee.

Subgrantees may request advance payment to THDA in writing to meet the immediate cash needs of the program and requirements of 2 CFR 200.305. Subgrantee risk will be evaluated by THDA using an assessment tool. The advance amount requested by the subgrantee will be as close to the minimum amount needed and partly based on historical payments from previous program years.

All funds available to Tennessee's WAP will be administered in accordance with DOE rules and regulations and State policies and procedures. Local agencies will be required to adhere to these and other applicable federal regulations, including the Accounting Manual for Recipients of Grant Funds in Tennessee, published by the State of Tennessee's Comptroller of the Treasury; and the Tennessee Weatherization Assistance Program policies and procedures.

Pollution Occurrence Insurance (POI)

Tennessee does not require subgrantees to purchase Pollution Occurrence Insurance (POI). However, it is an allowable expense if a subgrantee opts to purchase this insurance.

Caps on Expenditures

Each single family home will be limited to \$7,669.00 in DOE funding to perform weatherization services (ECMs, Incidental Repairs, Health & Safety) on a single family home. Expenditures for a multifamily building are limited to the number of units occupied by an eligible household multiplied by \$7,669.00. The Grantee reserves the right to provide approval to exceed these caps on a case by case basis. The State average per unit will not exceed the maximum permitted by DOE.

Client Education

Client education will be provided to clients by the subgrantees, auditors and contractors. The state will provide a basic client education review sheet that is to be covered with all clients that will address their specific lifestyle and provide an opportunity to discuss specific issues noted during the client interview and home inspection. As standard health and safety issues are covered during the initial inspection by the subgrantee, information will be provided on the measures that are scheduled to be installed. Clients will be asked to notify the subgrantee or energy auditor of any known or suspected health and safety concerns on the Tennessee WAP Client Education Checklist. The Tennessee WAP Client Education Checklist must be retained by the subgrantee in the client's file. If there are health and safety concerns, or other concerns, noted by the client during the client education process, those concerns will be brought back to the subgrantee's program manager. The subgrantee will notify THDA if the client's concerns cannot be answered. THDA will seek guidance from the DOE Project Officer if the client's concerns cannot be answered at the Grantee level.

The Tennessee Housing Development Agency partners with the TVA (Tennessee Valley Authority) to obtain client education kits that support energy conservation practices. This will be provided at no cost to the client. Additionally, no DOE funds will be used. This kit will contain products and materials that inform clients of basic energy conservation practices to help them further reduce their energy costs. All subgrantees will participate in client education activities.

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THDA will also continue to explore best practices throughout the state, and nationally, on effective ways to deliver client education related to the WAP. There is growing interest in third party, regional energy efficiency advocacy groups that can provide a means to organize and deliver education to WAP clients. This type of “client training” on the responsible use of energy and healthy home habits would be an allowable use of state T&TA Funds.

As stated in the previous deferral section, THDA is working towards implementing a more comprehensive pre-screening process that will lend towards “house as a system” education and identifying common H&S hazards. This form of client education may in turn lead to more efficient deferral determinations.

Policy Advisory Committee

The Policy Advisory Committee (PAC) serves to advise THDA not only on issues specifically related to the Weatherization Assistance Program but will also provide guidance to THDA on how it can be more effective through the promotion and modeling of energy conservation practices as they do business. The PAC consists of members named by THDA, each of whom will serve time in limited terms. The Policy Advisory Committee (known as The Energy Efficiency and Weatherization Advisory Board) consists of individuals who have been involved in the program in some capacity, in a technical or operational capacity, energy provider representatives, individuals involved in property development, and individuals who represent the low-income and elderly population served. A representative from THDA is a non-voting member.

V.8.2 Administrative Expenditure Limits

Subgrantees are authorized to budget up to 6% of their total fiscal year allocation for administrative costs subject to approval by THDA. A sub-grantee with an annual allocation less than \$350,000 may be permitted to allocate an additional 5% of their funds for administrative costs, subject to approval by THDA.

The Tennessee Housing Development Agency will retain 4% of the federal funding allocation for its own administrative costs.

V.8.3 Monitoring Activities

The Community Programs Division of THDA is responsible for the administration of the WAP in Tennessee. Currently, the Community Programs Division has a Program Monitor responsible for monitoring WAP. Technical Monitoring is conducted by Community Housing Partners and a THDA Housing Program Coordinator. THDA's Internal Audit Division will conduct the Fiscal Monitoring of the WAP. Housing Program Coordinators will monitor WAP invoices.

An estimated amount of 5% of the grantee admin funds are used for program monitoring, and about 40% of the T&TA funds are used for technical monitoring. THDA will monitor in accordance with the approach outlined in WPN 204 which includes, but is not limited to, the lists in the sections below.

Monitoring is conducted through a combination of desk and on-site monitoring. Client cases selected for quality assurance inspections and file review may be selected by THDA or the subgrantee. THDA will determine which process is best for a specific program year. Subgrantees will be informed of the QA inspection selection process and the method will be applied uniformly across the state. The same clients selected for QA will also include file review of eligibility, procurement, etc. THDA employs a “start to finish” client file monitoring approach.

Programmatic and Management Monitoring

Each subgrantee weatherization program will be monitored annually and in accordance with 10 CFR 440.23 and DOE WPN 20-4. Subgrantees will be monitored for compliance with federal and state policies and procedures, and where applicable, compliance with the subgrantee's approved operational plan. A random or selected sample of closed case files will be reviewed. Through the use of THDA's WAP reporting platform, WAPez, subgrantees upload required case documentation to the cloud based server where THDA can review in real time. The desk review typically consists of client intake evaluation as well as review of audit and inspection related documents such as QCI forms, photos, and ASHRAE 62.2 calculations. Any questions related to the review or documents missing from the file upload may be requested during an onsite visit to the agency. THDA will also request upload of missing or additional documents to WAPez, as necessary. Areas of monitoring include, but not limited to:

- Correct determination of eligibility and notification provided, including the annual recertification where applicable
- Case documentation
- Identification of re-weatherized units, and agency method for tracking homes that have been weatherized
- Compliance with rental property requirements and eligibility
- Compliance with multifamily building policies
- Compliance with Historic Preservation guidelines
- Correct calculation of priority and priority standards followed

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- Energy audit and appropriate identification of measures in accordance with program policies, utilizing the state approved audit tool and review of the generated work order to ensure quality and detail provided
- Procurement of work
- Quality Control Inspection process
- Measures invoiced in correct budget category (ECM, Incidental Repairs, H&S)
- Client Education
- Timeliness
- Database accuracy and timeliness of data entry
- Compliance with program policies and procedures
- Use of standard, mandatory templates
- Customer satisfaction

In addition to the review of case files, the following information will also be reviewed:

- Conduct inventory of any equipment (original purchase price of \$5000 or more) purchased with DOE funds.
- Review staff and contractor qualifications and contracts, if applicable, to determine compliance with program requirements and subgrantee's operational plan
- Review subgrantee's process of tracking and addressing quality and workmanship concerns and findings for staff, auditors and contractors.
- Review process for contract payment
- Review the agency procedures for identification of staff performance and subsequent corrective action to address any deficiencies
- Using the the Weatherization Manual / Operational Plan that each subgrantee must sign and submit to the Grantee on an annual basis for review and approval, monitor for compliance with the Plan.
- The subgrantee's most recent annual audit
- Review findings from Grantee's technical inspections and corrective action plans that have been implemented to address any concerns
- Procurement process complies with federal and state requirements, and follows procedures outlined in the subgrantee's operational plan
- Budget management of funds
- Compliance with production goals
- Contract compliance
- Timely and accurate submission of reports and invoices
- Identification of Training and Technical Assistance needs

This list is not meant to be allinclusive, and may be expanded as necessary to ensure compliance with both federal and state program guidelines.

Financial Monitoring

In addition to an annual financial monitoring visit to each subgrantee, all invoices submitted for payment will undergo a fiscal desk review prior to any payment being authorized. This desk review will include subgrantee invoices and the documentation that supports the amount invoiced. The invoice and supporting documentation will be reviewed and approved by multiple staff persons prior to submission to THDA's fiscal department for payment. Invoices reviewed that lack sufficient backup documentation will not be paid until documentation is provided that justifies the amount invoiced. Additionally, any invoiced expense that is not an allowable expense will be disallowed, and deducted from the amount to be paid.

Every subgrantee will have an annual onsite financial compliance review conducted by THDA Internal Audit staff. At minimum, this monitoring visit will review the following items:

- Financial Management and Accounting Systems and Operations
- A review of the most recent annual audit conducted for the subgrantee. Any additional audits related to WAP that have been conducted within the last twelve (12) months will also be reviewed
- Payroll and personnel
- Equipment and/or vehicles defined as any item with an initial cost of \$5000 or more that were purchased with at least a percentage of DOE WAP funds.
- Procurement
- Invoicing (supported by fiscal desk reviews mentioned earlier)

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- Record Retention
- Contract compliance
- Followup on issues from prior monitoring visits, reports, desk reviews and other sources

Technical Monitoring

THDA will conduct quality assurance inspections of at least five percent (5%) or more of all completed units per subgrantee during the fiscal year. Subgrantees that do not have an independent QCI to conduct the final inspection will increase monitoring to ten percent (10%) of completed units. THDA may increase the percentage of units being monitored for subgrantees with significant deficiencies based on previous monitoring, in progress monitoring, desk reviews, multiple dwelling unit types, analysis of risk assessment and various other observations. Inspections will be performed by a certified Quality Control Inspector and performed by a THDA employee or a contractor acting on behalf of the Grantee. Weatherization activities will be monitored to ensure compliance with the guidelines provided in the Standard Work Specifications and the Tennessee Weatherization Field Guide, the Health and Safety Plan, technical assistance memorandums and the WAP Policies and Procedures Manual.

Technical monitoring consists of desk review using WAPez as well as site visits to verify quality work practices and validity of the energy audit and inspection.

Quality assurance inspections will also serve as an opportunity to provide technical assistance as appropriate. THDA compensates contract workers who attend at a flat rate of \$100/inspection using T&TA funds. The compensation encourages contractors to attend hands-on training while being removed from other paid work for the day. Additional description to this is found in the T&TA section of the plan.

Subgrantees whose completed units require re-works or other corrective action cannot use DOE funds for the correction process. Findings related to technical assistance visits will be tracked on a subgrantee, auditor and contractor level to help identify exceptional, as well as, poor performance and workmanship issues. These results will be used to identify training and technical assistance needs for our continuous quality improvement process. Technical monitoring will review the work of the auditor, contractors, and the QCI. If there are repeat findings from the same QCI the local agency will be notified and the QCI will be placed on a corrective action plan including increased training.

THDA will monitor for the training and certifications requirements of WAP contractors and auditors during the technical monitoring visit. This is a shared responsibility with the subgrantee.

Monitoring Reports and Corrective Action Plans

Within thirty (30) days following every onsite program or financial monitoring visit, a report that details the findings of the visit, including any identified best practices will be provided to the subgrantee agency. Should there be a significant delay to the thirty days, THDA will notify the subgrantee with brief description and an alternate timeframe when the report will be delivered. The subgrantee will be required to provide a written Corrective Action Plan (CAP) that addresses all identified findings and concerns. The CAP must provide the actions the local agency has taken or plans to take, along with a timeline for implementation, to address and alleviate the concerns. If the subgrantee disagrees with any findings in the monitoring report, they may provide rebuttal as part of their CAP. The CAP is not final until it has been reviewed and all corrective action plans and/or rebuttals accepted by the Grantee. If there are questioned costs identified as part of the monitoring visit, and these costs are not successfully resolved during the CAP process, these costs will be recovered from the next invoice. If they cannot be recovered from a subsequent invoice, the subgrantee will be required to make payment arrangements with THDA for the questioned costs.

Compliance with Corrective Action Plans will be monitored through desk reviews, communication with the subgrantee, and subsequent monitoring visits. Subgrantees with significant deficiencies identified may receive additional monitoring visits as necessary. Subgrantees who continue to have substandard performance that is not successfully addressed by corrective action may have funding reduced, be placed on probation or face termination and no longer be allowed to participate in the program.

Reporting

Within thirty (30) days from the end of the program year, THDA will create a report that provides a summary of each subgrantee's financial reviews, program monitoring reports and any outstanding issues. This report will provide an overview of each subgrantee's needs, strengths and weakness. This report will be utilized as a planning document, and will be made available to DOE upon request.

As mandated by federal guidance, THDA will also provide to DOE a report that includes successes and significant problems identified through monitoring. This narrative report will be incorporated within the mandated *T&TA, Monitoring and Leveraging Report*. This annual report will be submitted within thirty (30) days from the end of the reporting period.

In addition to DOE reporting requirements related to monitoring, State Policy 22 requires an annual report of Subrecipient Monitoring. THDA will provide a summary of all subgrantee monitoring, including findings and recommendations to the Tennessee Department of Finance and

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Administration.

Technical and Programmatic Monitoring Schedule

Once production is underway, we plan on visiting 2 subgrantees per month for programmatic and technical monitoring. Throughout the year we will monitor each subgrantee at least once. Based on monitoring findings and outcomes THDA will conduct additional visits as needed. Based on production we will conduct annual fiscal monitoring visits for subgrantees. Fiscal Monitoring is conducted by the THDA Internal Audit division and averages 12 subgrantee visits per month. The THDA WAP monitoring tools can be found attached to the SF424. The THDA WAP Monitoring and Corrective Action procedures can also be found attached to the SF424.

First Quarter

None

Second Quarter

MCCAA, CMCCAA, DHRA,
UETHDA

Third Quarter

UCHRA, ETHRA, MHCD,
SWHRA, MDHA

Fourth Quarter

SETHRA, KKCCAC, SCHRA

V.8.4 Training and Technical Assistance Approach and Activities

Tennessee Housing Development Agency's training plan will follow the Comprehensive (Tier 1) and Specific (Tier 2) training categories as outlined in the WPN 1504 "Quality Work Plan", Section 4 and as required, will meet the National Renewable Energy Laboratory (NREL) Job Task Analysis (JTA) for which the worker is employed. Following is a description of the planned trainings to be provided in program year 2020.

Subgrantees are encouraged to recertify their weatherization workers in accordance with this training plan, as needed, and at least 6 months prior to the expiration of the individuals' certification date to ensure an adequate supply of QCIs as well as all other occupational specialties requiring certification.

The major objective of Training and Technical Assistance is to provide subgrantees with the information and training required to administer and operate in compliance with DOE and State WAP rules and regulations. Subgrantees are strongly encouraged to have at least one QCI person on staff but some may contract with an independent QCI contractor and still others may use shared QCI resources from adjacent/network agencies. THDA is working with agencies on an individual basis to help in their process to fulfill necessary technical positions.

THDA has recognized and evaluated training needs based on monitoring reports and requirements. THDA has reviewed all subgrantee monitoring reports with our T&TA provider and trainings are developed based on the needs of the subgrantee and/or individuals. There has been a general Health and Safety Training created due to the needs assessment of the WAP subgrantee and monitoring visits.

THDA's T & TA contract was procured in 2017 through an RFP process. THDA is using Community Housing Partners as our primary IREC-accredited Comprehensive (Tier 1) and Specific (Tier 2) training provider.

THDA and CHP review the subgrantee's energy audits to check for consistency across subgrantees. If an agency's average recommended measures produced limited ECMs compared to the average, inconsistent or incorrect audit inputs, etc., THDA will address this issue with increased training on the audit tool. THDA will discuss the importance of consistent and accurate energy audits.

The program is also due for energy audit re-approval at the end of the program year. THDA will use the first half of PY20 to review and improve upon all field procedures. Subgrantees, contract auditors, and T&TA provider will participate in crafting the energy audit submission package in partnership with THDA. Use of T&TA funds for specific activities related to the development and enhancement of THDA energy audit policies and procedures are allowable, at the discretion of THDA. The state will define upfront to subgrantees, contract EAs/QCIs, 3rd party technical providers, if certain activities related to the statement above may be funded using T&TA. Other efforts which are less involved may be on a volunteer basis.

Comprehensive Training must be completed at least every 2 years

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Quality Control Inspector

Training for the Quality Control Inspector Job Task will take place Fall 2020 Spring 2021.

Continual QCI training will be conducted annually or, as needed, for new QCIs and for continuing education credits. QCI training is currently formatted as field mentoring. QCIs are shadowed by an inspector from our T&TA provider. Areas to be shadowed include inspections, energy audits, and work scope review.

Energy Auditor

Training for the Energy Auditor Job Task will take place Fall 2020 Spring 2021. Energy Auditor training may be conducted in a classroom, as part of field mentoring, or a combination of both for current energy auditors and other qualified individuals within the THDA WAP network. Typical training duration for Energy Auditor certification is similar to QCI field mentoring as outlined in the previous section.

Mandatory Training for all WAP Energy Auditors and Quality Control Inspectors:

- BPI EA and QCI certifications
- EPA Renovate, Repair, Painting – Certified Renovator
- OSHA 10
- Comprehensive Weatherization Assistant training

EA / QCI Training & Testing

Certification training typically consists of weeklong review consisting of a combination classroom and field exercises to include all associated travel costs, regular staff wages during the training, books/materials etc. Costs also include all training and written/field exam fees for new auditors and auditors that are seeking certification. If subgrantee staff is unable to pass the exam on the first attempt, the subgrantee can request that the grantee pay for the second attempt. Permission to take the exam a second time will be granted after a satisfactory request is submitted. Subgrantees can also request for staff to attend additional training. If the auditor is unable to pass the exam after the additional training, the individual will be responsible to pay for the exam using other funding sources.

Retrofit Installer Technician Field Mentoring

Comprehensive RIT Training will continue to canvass across the state for all WAP approved contractors. THDA currently offers a modified version of Retrofit Installer Technician, labeled RIT Field Mentoring. Field mentoring is a weeklong training. The first day covers building science fundamentals, work scope interpretation and prep, material lists, etc. The remaining days are spent in the field at two actual client houses, preferably a site built and manufactured home. The training will include regional contractors from multiple companies hosted by a single agency within the training territory. The unit serving as the training house will be an actual weatherization client and the job will be awarded to a single contractor, as normal. THDA and the subgrantee will receive a list of those contractors in attendance and use it as a reference when tracking future comprehensive trainings.

The RIT statewide training will be planned this upcoming program year for those contractors not receiving field mentoring in the past two program years. Subgrantees, or THDA, may request additional mentoring for a contractor on an as-needed basis.

As stated in the previous Technical Monitoring section, THDA compensates contract workers who attend at a flat rate of \$100/inspection using T&TA funds. The compensation encourages contractors to attend hands-on training while being removed from other paid work for the day. This specific training may be used to address specific needs in certain and included as part of a contractor's comprehensive training requirement.

THDA is also experimenting on the use of the DOE adapted RIT Badges Passport system. We currently have asked one crew based subgrantee to experiment with the system and offer their feedback on how to implement the system statewide. The system can serve as a condensed supplement to the Tennessee Weatherization Field Guide or as a component within the RIT comprehensive training curriculum.

Diagnostic training for contractors is also being developed in partnership with Tennessee subgrantees and our T&TA provider, Community Housing Partners. The need for diagnostic training is heavily focused on our EAs and QCIs but often overlooked are the weatherization contractors who are a vital, indispensable piece of the weatherization program. Diagnostic training may consist of on-site, classroom (training house), or webinar training through our T&TA provider, subgrantee QCIs, state QCIs, and/or various diagnostic supply houses.

Specific diagnostic trainings to be planned for the upcoming program year include blower door diagnostic setup and results analysis, duct leakage analysis, tool calibration requirements, and combustion safety instruction and diagnostic testing, to name a few.

T&TA funds can be used to compensate contractors during WAP training activities in the form of a stipend established in cooperation with the state and subgrantee and as long as a current contractor retention agreement is in place. This must be requested by the subgrantee and approved by THDA prior to compensation being made.

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Specific Training

Single-issue, short-term, training to address acute deficiencies in the field such as dense packing, crawlspace, ASHRAE 62.2016, etc. Conference trainings are included in this category. Specific training is also implemented based on issues found during monitoring visits. Classes will be labeled as mandatory if there are multiple repeat findings due to lack of experience or training.

In addition to IREC accredited training providers, several non-IREC accredited training providers are located throughout the state/country (i.e. State, regional and/or nation meetings/conferences; Technical Colleges; other for/nonprofit organizations; etc). Specific training courses are provided throughout the year and dependent upon the individual Training Providers' schedule. Subgrantees are reminded that any out of state training activities must be approved in advance by Tennessee Housing Development Agency.

The following organizations, agencies, and companies offer Specific training:

- Statewide WAP Meetings/Conferences
- Home Performance Conference
- Energy OutWest Conference
- CHP Energy Solutions Research and Training Center
- Southface Energy Institute
- Everblue Energy Inc.
- Other forprofit and nonprofit Organizations Specific Training Courses including but not limited to:
- ASHRAE 62.2 (2016) Residential Ventilation
- Audit Assessment
- Blower Door & Duct Testing
- Building Science
- CAZ Zone Pressure Diagnostics
- Client Education
- CPR & Standard First Aid
- Crew Leader
- Dense Pack Walls
- Diagnostics Energy Auditor Testing Equipment
- HVAC Fundamentals
- Infrared Thermography
- LeadSafe Weatherization
- Manufactured Housing Fundamentals
- NEAT/MHEA
- OSHA 10 Construction
- EPA Certified Renovator Initial Course
- Retrofit Installer Technician - Online
- Weatherization Management

Specific Training that may be incorporated as part of a larger comprehensive training plan includes technical assistance provided to EAs, QCIs, and contractors while on-site during quality assurance inspections. THDA allows for subgrantee staff salary to be funded through T&TA while attending specific and comprehensive WAP related trainings.

The contracted T & TA provider will assist in the following: Implementation of a Quality Work Plan, assessment of readiness for QCI examination, and the development of training plan, including but not limited to training outlined above, as well as Comprehensive and Specific training.

The T & TA provider will perform the primary role of "Independent QCI" for monitoring program year 2020 with the intent to have this function assisted by THDA QCIs during program year 2020.

Marketing and Training of New Technical Workers

Tennessee's weatherization program has experienced challenges of replenishing its technical worker base over the past two program years. Recognizing this challenge and knowledge gap, THDA has created a Technical Advisory Group of voluntary program members to provide insight and suggestions to help devise planning and program solutions towards the issue of technical staff capacity.

Based on these quarterly group discussions, THDA has outlined a skeleton draft of steps for new auditors, inspectors, and weatherization workers to begin

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working in the weatherization program. We understand the required certification process is the first step and a "soft release" into conducting fieldwork is necessary to build worker confidence and technical knowledge. The drafted outline consists of a balanced approach of check and balances. First being, the new technical worker may participate in shadowing a more experienced WAP energy auditor or QCI. The individual will also receive access to a practice version of WAPez where they can become familiar with the system and how NEAT/MHEA inputs interact with one another. Assessments will be conducted along the way to determine proficiency and from there, the worker may begin solo fieldwork.

Marketing to weatherization contractors, or those interested in weatherization work, is another challenge. This is an issue raised within the advisory group, as well as at national conferences. THDA is building upon these conversations in hopes of developing a marketing toolkit. Subgrantees will use the provided content, such as branding, one-sheets, program statistics, to garner local industry interest to potentially bring on as approved weatherization contractors, crews, energy auditors, and or inspectors.

Client Education

Energy efficiency education occurs throughout weatherization services as described in previous sections. Energy auditors distribute Tennessee Valley Authority funded energy kits to client which include LED bulbs, outlet gaskets, and energy saving tips. Clients also receive an assortment of healthy home brochures included EPA's Mold & Moisture in Your Home, Renovate Right: Lead Based Paint Activities, and the Citizen's Guide to Radon.

THDA also created a Client Education Checklist for the auditor and client to work through step by step prior to the audit as well as during the quality control inspection.

Additional description of client education is found in the previous section V.8.1.

Energy Savings Comparison Analysis of Subgrantees

Analysis of energy savings is currently conducted by THDA on multiple levels. Through THDA's partnership with the Tennessee Valley Authority, an estimation of energy savings report is compiled by TVA at the close of each federal fiscal year. The report details estimates of energy savings organized by commonly installed weatherization measures such as attic insulation and air sealing, as well as equipment such as HVAC systems and water heaters. THDA can use this information as a foundation when comparing energy savings of individual units to the report averages during on-site and desktop monitoring.

The program's reporting platform, WAPez, has also added greater accessibility to estimated energy savings pulled from the Recommended Measures report within the Weatherization Assistant. Information gathered at this level will easily allow THDA to conduct timely comparisons of energy savings across subgrantees and to national averages.

A number of variables influence energy savings from unit to unit, agency to agency. Considering size and dwelling type, auditor experience and accuracy, effectiveness of client education, among other things all contribute to both the estimated and actual energy savings. Using the aforementioned comparison analysis of energy savings will help highlight training needs across the network.

Obtaining actual energy savings of all fuel types is still in process at THDA. We have approached our utility partners on best practices towards producing such information. This will continue in the upcoming program year with

Percent of overall trainings

Comprehensive Trainings:	50.0
Specific Trainings:	50.0

Breakdown of T&TA training budget

Percent of budget allocated to Auditor/QCI trainings:	40.0
Percent of budget allocated to Crew/Installer trainings:	55.0
Percent of budget allocated to Management/Financial trainings:	5.0

V.9 Energy Crisis and Disaster Plan

THDA WAP is in compliance with WPN 12-07 in the event of a natural disaster that impacts the operations of the Weatherization Assistance Program, the following disaster plan will be enacted. The following plan will be executed upon a federal or state declaration of disaster for a specific area within the state.

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- Identify those current clients who reside in a disaster area. A current client is one who has applied for and been determined eligible for the Weatherization Assistance Program.
- If the client resides in a disaster area, the WAP agency must contact the client to determine if the home has sustained any damage. If the client states the home was not damaged in the disaster, document the case file to reflect their statement, along with the date of the contact and the name of the agency representative who spoke to the client. No further action is required, and standard WAP procedures will be followed.
- If the client states damage occurred, document the contact in the client file, and follow the disaster plan guidance based on the current job status for the home.

Job Not Yet Begun – Home Still on Wait List

The job is not considered to have begun if the applicant has been approved for the WAP, but is still on the wait list pending selection for service. Contact the applicant to determine if damage has occurred to the home. If there is no damage, document the case file, and no further action is required. If the home is destroyed or condemned, or if the applicant has moved without intending to return once repaired, terminate the WAP case.

If the home is damaged and requires repair, the home remains on the wait list. Determine if the home is eligible for extra priority points as a result of the disaster and adjust accordingly. Document the client file with relevant information and action taken.

Jobs in Process

Identify those current clients who have a WAP job in process. A job is considered to be in process if any of the following actions have taken place:

- A. An energy audit has been completed;
- B. The job has been awarded to a contractor;
- C. Installation of weatherization measures has begun

However, there has not been a completed and passed QCI performed by the subgrantee for these jobs, nor has the job been closed or marked as completed.

Home Damaged; Job Not Yet Awarded or Begun

If the home had an energy audit performed, but the job has not yet been awarded, do not award the job. If it is determined that the home was destroyed or condemned, or if the client is no longer residing in the home and does not intend to return once repaired, close the case and document the file.

If the home was not destroyed, conduct another energy audit to determine if the condition of the home permits the weatherization work to

continue, and the weatherization measures to be installed. If home repairs are necessary due to damage, these repairs are to be completed utilizing funds other than DOE (insurance, disaster relief funds, personal funds or loans, funds from other programs, etc.) prior to the energy audit being performed.

The weatherization measures work may be deferred pending repair. Upon repair, the home may be audited, and the weatherization work may proceed based on the current audit recommendations, and following current WAP guidelines and policies.

Home Damaged: Job Had Been Awarded, But Not Yet Completed with Final Inspection

If the installation of weatherization measures was in process (work had begun, but the quality control inspection had not been completed), and the contractor had not yet completed the work, determine if home was destroyed. If destroyed, the contractor is to invoice the agency for only those measures installed in the home at the time of the disaster. No post inspection is required, but the agency must confirm the home was destroyed and an audit is not possible due to damage. This home cannot be counted as a completed unit; however DOE Weatherization funds may be used to pay for audit and contractor costs.

If the home was not destroyed, and repairs are necessary due to damage, these repairs are to be completed utilizing other funding sources. Another energy audit will be required once repaired to establish the current status of the home, and the appropriate energy measures based on that status.

The job may need to be deferred until necessary renovations are completed prior to weatherization taking place. The contractor may be paid for all measures installed at the point of the disaster, with a QCI to be conducted on the measures if possible. It may be necessary to rebid the job if the work to be performed changes significantly or there is a long delay before the job can be finished while waiting on repairs. Do not close the job until all weatherization work is completed. Depending on the amount of work to be performed following the disaster, the job may need to be rebid.

Items that had been installed, but were subsequently destroyed due to the natural disaster and not covered by the homeowner's insurance or other funding sources, including disaster relief benefits, may be included in the subsequent audit and work order. The change order process must be followed

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to accommodate the newly defined measures. Please note: Throughout this process, DOE funds may only be used for those energy related incidental repairs. WAP is not designed to be a renovation program.

Home Damaged: ReWeatherization of Previously Completed Units

A home that has been weatherized prior to the disaster, but which was damaged by a federal or state declared disaster, may reapply for re weatherization services without regard to the date previously weatherized. A new energy audit is required. All other eligibility conditions will apply, and the job must be reported as a reweatherization.

Additional Priority Provided

Current clients in a disaster area may be provided priority services, with 15 additional points provided to disaster victims. These points are added to the points already provided to vulnerable household members as part of the priority point system. Additional priority points will only be provided upon verification of a FEMA assigned number for that client/residence for the specific disaster.

New applications for WAP following a disaster may also receive an additional 15 priority points as a disaster victim provided:

- The existing structure was damaged (not destroyed or condemned) in the disaster, and;
- The application is received within four (4) months from the date the disaster occurred, and;
- The applicant provided verification of an assigned FEMA number for the specific disaster.

Points to Remember

- If a weatherization job that was in process or completed was damaged in the natural disaster, the subgrantee must determine if the homeowner has insurance or other funds available to cover the costs of repairs. Weatherization funds may not be used if the damage was covered by insurance or other funding sources. Weatherization funds may only be used to address eligible weatherization activities, as currently allowed in Tennessee's policies and procedures.
- If possible, local agencies will coordinate the weatherization work efforts for the home to gain efficiencies. This does not negate the requirement to perform an energy audit based on current unit circumstances.
- Personnel that are paid from DOE funds are not allowed to perform disaster relief work in the community. They are permitted to perform work related to protecting the DOE investment, such as securing and protecting weatherization materials and equipment and agency program files and records when the disaster initially occurs.
- The maximum amount of funds that may be spent per unit is capped at \$7,669.00. This includes both predisaster and postdisaster work with the exception of jobs that are considered re-weatherization. This cap may only be exceeded with prior approval from the State.