WEST VIRGINIA WEATHERIZATION ASSISTANCE PROGRAM

DOE STATE PLAN

July 1, 2016 — June 30, 2017

State of West Virginia
Office of Economic Opportunity
700 Washington Street East, 4th Floor
Charleston, WV 25301
(304) 558-8860

OMB Number: 4040-004
Expiration Date: 08/31/2016

APPLICATION FOR FEDERAL ASSISTANCE SF-424

Version 02

1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

2. Type of Application:
- [ ] New
- [x] Continuation
- [ ] Revision

If Revision, select appropriate letter(s)

Other (specify):

3. Date Received

4. Applicant Identifier:

5a. Fed Entity Identifier:

5b. Federal Award Identifier:
DE-EE0006192

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

a. Legal Name: West Virginia Office of Economic Opportunity

b. Employer/Taxpayer Identification Number (EIN/TIN):
455463036

c. Organizational DUNS:
078501697

d. Address:

Street 1: 700 Washington Street East
Street 2: 4th Floor
City: Charleston
County: KANAWHA County
State: WV
Province:
Country: U.S.A.
Zip / Postal Code: 253010000

e. Organizational Unit:

Department Name:
Department of Commerce

Division Name:
Office of Economic Opportunity

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr
First Name: Mark
Middle Name: Allen
Last Name: Adams
Suffix:

Title: Weatherization Assistance Program Manager

Organizational Affiliation: WV Office of Economic Opportunity

Telephone Number: 3045588860223
Fax Number: 3045584210

Email: mark.a.adams@wv.gov

OMB Number: 4040-004
Expiration Date: 08/31/2016

APPLICATION FOR FEDERAL ASSISTANCE SF-424

Version 02

9. Type of Applicant:

A State Government

10. Name of Federal Agency:

U. S. Department of Energy

11. Catalog of Federal Domestic Assistance Number:

81.042

CFDA Title:

Weatherization Assistance Program

12. Funding Opportunity Number:

DE-WAP-0002016

Title:

2016 Weatherization Assistance Funding Opportunity

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

State of WV - All 55 Counties

15. Descriptive Title of Applicant's Project:

PY 2016 - 2017 Annual Weatherization Assistance Program Grant

OMB Number: 4040-004
Expiration Date: 08/31/2016

APPLICATION FOR FEDERAL ASSISTANCE SF-424

Version 02

16.Congressional District Of:

a. Applicant: West Virginia Congressional District 02

b. Program/Project: WV-Statewide

Attach an additional list of Program/Project Congressional Districts if needed:

17. Proposed Project:

a. Start Date: 07/01/2016

b. End Date: 06/30/2017

18. Estimated Funding ($):

a. Federal	2,977,505.00
b. Applicant	0.00
c. State	0.00
d. Local	0.00
e. Other	0.00
f. Program Income	0.00
g. TOTAL	2,977,505.00

19. Is Application subject to Review By State Under Executive Order 12372 Process?:

[X] a. This application was made available to the State under the Executive Order 12372 Process for review on: 04/04/2016

[ ] b. Program is subject to E.O. 12372 but has not been selected by the State for review.

[ ] c. Program is not covered by E.O. 12372

20. Is the applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation)

No

21. By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code Title 218, Section 1001)**

[X] I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mr

First Name: Mark

Middle Name: Allen

Last Name: Adams

Suffix:

Title: Weatherization Assistance Program Manager

Telephone Number: 3045588860223

Fax Number: 3045584210

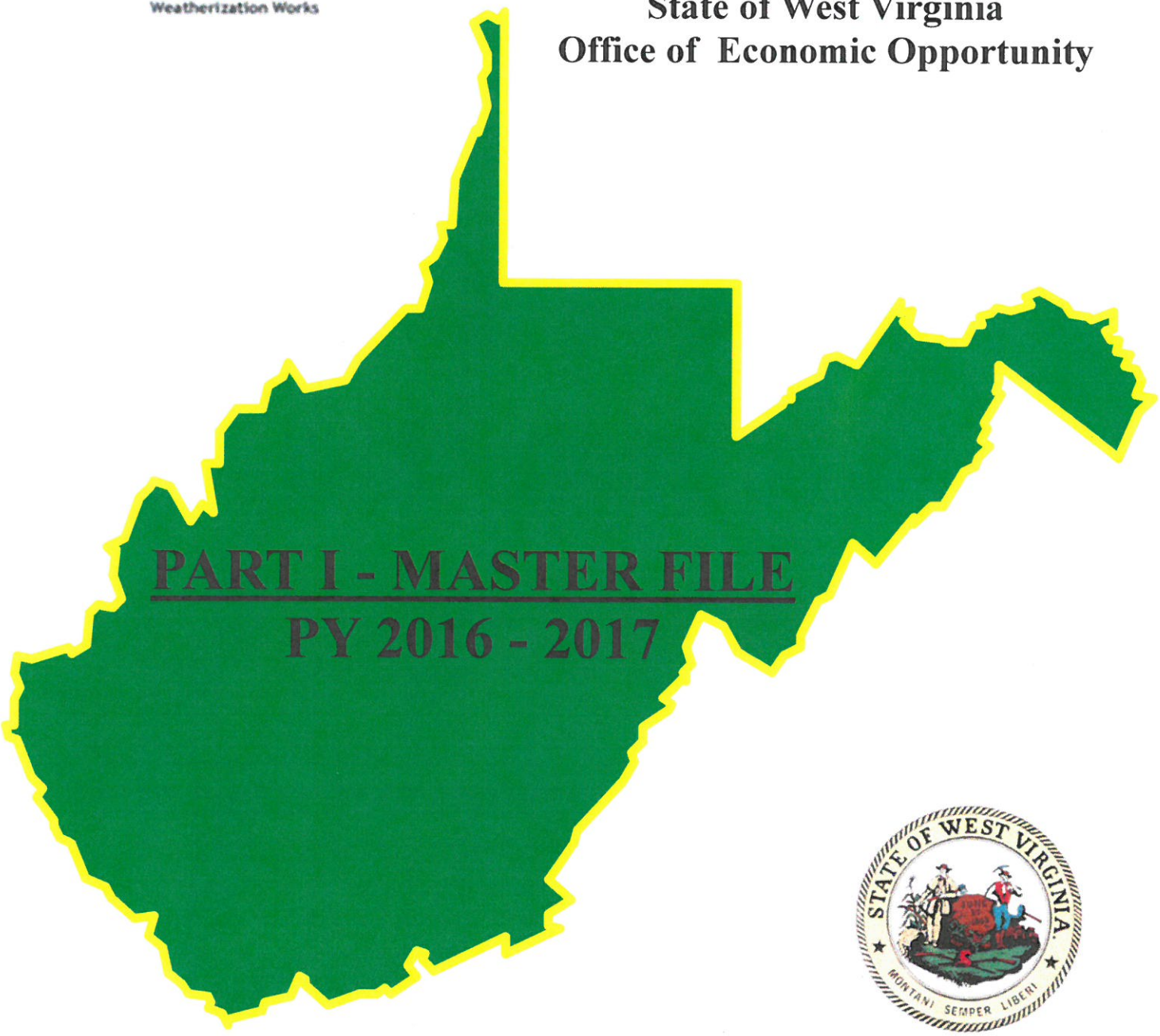
Email: mark.a.adams@wv.gov

Signature of Authorized Representative: Signed Electronically

Date Signed: 04/28/2016

West Virginia Weatherization Assistance Program

State of West Virginia
Office of Economic Opportunity



PART I - MASTER FILE
PY 2016 - 2017

State of West Virginia
Office of Economic Opportunity

U.S. Department of Energy
Program Year: 2016-2017
State Plan Master File

V. MASTER FILE

V.1. Eligibility

The West Virginia Weatherization Assistance Program (WV WAP) will ensure that every dwelling weatherized meets both client eligibility and building eligibility requirements as detailed in *Sections V.1.1* and *V.1.2.*

V.1.1 Approach to Determining Client Eligibility

Definition of Income Used to Determine Eligibility:

The WV WAP will determine eligibility of a dwelling unit based on the amount of household income and the conformity of that income to criteria established by the Low-Income Home Energy Assistance Act of 1981, 42 U.S.C. 8621. All subrecipients in the WV WAP will use 200% of the Office of Management and Budget (OMB) poverty guidelines for determining income eligibility as per the Department of Energy (DOE) WPN 16-3 Poverty Income Guidelines and Definition of Income. The WV WAP data management system calculates a twelve (12) month income period needed to create an annualized income equivalent for comparison to the Poverty Income Guidelines. Annualized income may be calculated using less than twelve (12) months of income information. At least one (1) month of recent income is necessary for the database management system to calculate the annualized income for eligibility determination. In addition, family units that have received cash assistance payments under Title IV or XVI of the Social Security Act, or applicable State or local law paid during the twelve-month period preceding application, will be eligible for weatherization pursuant to 10 CFR Part 440.22.

Eligibility Procedures:

The State of West Virginia Office of Economic Opportunity (WVOEO) has established an extensive intake/application process involving obtaining information from prospective program

participants before a decision can be made on their eligibility for weatherization assistance. Each applicant must provide all of the items outlined as "mandatory data fields" in the application process/form. All prospective applicants will be required to identify and provide verification of the amount and source of all their income for their household in compliance with DOE WPN 16-3 Poverty Income Guidelines and Definition of Income regarding definitions of income, cash receipts, exclusions, proving eligibility, and considering child support. Additional data fields included in the state data management system require the collection and reporting of household demographic and residence specific information including whether the applicant rents or owns his/her home, among other information. All applicants are required to sign their application and certify to the validity of the information provided. Falsification of an application is subject to ineligibility.

WVOEO has developed specific and detailed guidance in a policy *(WAP Application and Review Queue Management Policy)* on how the subrecipients are to utilize the various functions of the database management system to ensure there is consistency among the WV WAP Network on how a client proceeds through the various stages of the weatherization process, including the intake process. This policy will remain in effect for PY 2016 – 2017.

Income Verification Procedures:

The eligibility documentation is maintained in the database management system and may be supplemented with a physical client file. All eligibility documentation is to be reviewed for compliance by the subrecipient prior to weatherization services being provided, and then entered into the database management system for eligibility calculation. In the event that six (6) months or more has lapsed between the date of application and the date weatherization services is scheduled to begin on a particular job, the income of that client must be re-verified as per WV WAP requirements. WVOEO provides a secondary review of eligibility documentation and process by selecting a sample of weatherization dwellings during the monitoring process. WVOEO issued an *Income Eligibility Policy* on November 19, 2013, to provide updated uniform guidelines on the definition of income and determining income eligibility. WVOEO also provides to the WV WAP Network the Poverty Income Guidelines and Definition of Income document as revised by DOE each program year to supplement the *Income Eligibility Policy.*

All fifty-five (55) counties of West Virginia are eligible for weatherization services and are intended to be served by the WV WAP. Any West Virginia resident who meets client eligibility requirements and whose dwelling meets building eligibility requirements (also in compliance with 10 CFR 440.18(e)(2)(iii) regarding "Reweatherization") would be eligible to receive weatherization services. As per DOE requirements and 10 CFR 440.16(b), priorities are given to certain portions of the eligible population. The WV WAP has also incorporated some priority features to enhance the DOE required priority eligible population categories and allow for reasonable, efficient, and effective implementation of the WAP, including all funding sources. These priorities and the process followed are described in *Section V.3 Priorities.*

Qualified Aliens Eligibility for Benefits:

The steps in the application/intake process detailed in the previous *Eligibility Procedures Section* ensure DOE weatherization services shall only be provided to eligible populations. These same procedures and parameters including income eligibility are utilized for West Virginia's Low-Income Home Energy Assistance Program (LIHEAP) Weatherization services.

V.1.2 Approach to Determining Building Eligibility

Reweatherization:

The WV WAP has procedures in place to comply with DOE regulations and 10 CFR 440.18(e)(2)(iii) regarding "Reweatherization." Prior to any weatherization activity, a unit must be evaluated to determine whether previous weatherization services were provided after ***September 30, 1994***. If services have been provided *after this date* with DOE funds, the unit is not eligible for additional weatherization services with DOE funds.

The following actions must be taken on each unit prior to weatherization services to ensure the homes that have received weatherization services after September 30, 1994, are not reweatherized:

1. Each client's address must be entered into the data management system to identify whether the client's home has been weatherized during or after 2007 (length of WV WAP historical records with searchable addresses);

2. Each client's name must be entered into the data management system's "Old Weatherization Data" module, to check if the client has previously been reported as a completion during 1996 to 2007 (length of WV WAP historical records with client names only). If the client's name is found in the data management system as having had weatherization services, the subrecipient will verify with the client if they are living at the same address as when they received weatherization services in the past. If the client verifies that this is the same address, then the dwelling is ineligible for weatherization services.

3. A secondary verification occurs as each client must be asked whether their home has been weatherized after September 30, 1994.

4. If a dwelling passes the first two (2) verification steps, a third verification step is performed as a visual inspection of each home must be completed by an auditor to identify whether previous weatherization measures have been performed. If the home was completed after September 15, 2011, subrecipients are required to place standardized tags on specified areas of dwellings after completing the weatherization

process. This procedure is outlined in the *WAP Weatherized Unit Tagging Procedure as Amended February 9, 2012*.

5. If there are no documented, verbal, visual, or physical evidence of previous weatherization services, the subrecipient may proceed with weatherization services on the dwelling.

6. Subrecipients may provide services to a dwelling unit previously weatherized ***prior to September 30, 1994***, as noted in the American Reinvestment and Recovery Act of 2009, and *DOE WPN 16-1, Application Instructions Section V.1.2*. A reweatherized unit falls into the category of time indicated above and described under 10 CFR 440.18(e)(2)(iii). DOE gives subrecipients the flexibility to revisit those homes weatherized prior to September 30, 1994, that may not have received the full complement of weatherization services, including the use of an advanced energy audit or addressing health and safety concerns.

7. The DOE-issued *Weatherization Program Notice 12-7 Disaster Planning and Relief* allows for additional work to be done on homes due to natural disasters. In the event of a declared Federal or State disaster, allowable expenditures under WAP include:

    - The cost of incidental repairs to an eligible dwelling unit if such repairs are necessary to make the installation of weatherization materials effective.
    - The cost of eliminating health and safety hazards, elimination of which is necessary before the installation of weatherization materials (10 CFR 440.18(d)(9); 10 CFR 440.18(d)(15).
    - To the extent that the services are in support of eligible weatherization (or permissible "Reweatherization") work, such expenditure would be allowable.

    In the event of a declared Federal or State disaster, weatherization crews may return to a unit reported as a completion to DOE that has been "damaged by fire, or act of God to be reweatherized, without regard to date of weatherization" as per 10 CFR 440.18(f)(2)(ii). Local authorities must deem the dwelling unit(s) salvageable as well as habitable and if the damage to the materials is not covered by insurance or other form of compensation.

    - Debris removal from a dwelling unit that is not to be weatherized would not be an allowable cost.
    - Weatherization personnel can be paid from DOE funds to perform functions related to protecting the DOE investment. Such activities include: securing weatherization materials, tools, equipment, and weatherization vehicles, or protection of local subrecipient weatherization files, records and the like during the initial phase of the disaster response.

- Using DOE funds to pay for weatherization personnel to perform relief work in the community as a result of a disaster is not allowable.
- Local agencies may use weatherization vehicles and/or equipment to help assist in disaster relief provided the WAP is reimbursed according to the *DOE Financial Assistance Regulations* 10 CFR Part 600 and 2 CFR 200.

WAP rules require that priority be given to identifying and providing weatherization assistance to elderly persons, persons with disabilities, families with children, high residential energy users, and households with high energy burdens as per 10 CFR 440.16(b). However, it would be permissible to consider in households located in the disaster area, as a priority as long as the households are eligible and meet one (1) of the priorities established in regulation and are free and clear of any insurance claim or other form of compensation resulting from damage incurred from the disaster.

As referenced in #4 above, WVOEO developed and implemented a *Weatherized Unit Tagging Procedure* policy on September 15, 2011, (amended on February 9, 2012) to identify dwellings as "Weatherization Completions" and maintain compliance with DOE's *Reweatherization Policy*. WV WAP's *Weatherized Unit Tagging Procedure* requires the placement of a permanent and standardized tag on each completed dwelling unit including the following information:

a. Subrecipient Name

b. West Virginia Weatherization Assistance Program

c. Sequential Number

d. "DO NOT REMOVE" indication

e. Initials of subrecipient Quality Control Inspector and date of Quality Control Inspection (indicated in permanent marker)

There are specific locations in the dwelling outlined in the policy where the subrecipients are to attach the tags in an effort to make as permanent as possible. The subrecipient is to attach two (2) tags in different locations in each dwelling in the case that one (1) would become detached. The subrecipient must also maintain a picture of the tag and its location in the dwelling unit as a Portable Document Format (PDF) in the data management system. Failure to adhere to the policy could result in the dwelling unit not being deemed as a "Completion" and in turn all associated costs could be disallowed. The procedure implemented also maintains sufficient accountability of the subrecipient (and specific Quality Control Inspector) providing the weatherization services on a particular dwelling.

Eligible Structures:

Subrecipients shall ensure that weatherization services are being provided to low-income persons that live in standard types of housing (i.e., single-family, rentals, manufactured housing, and multifamily buildings). Subrecipients will exercise caution when approaching non-traditional type dwelling units including but not limited to shelters and apartments over businesses. WVOEO will seek guidance from the WV DOE Project Officer as necessary if the WV WAP approaches a non-traditional dwelling. Weatherization of non-stationary campers and trailers that do not have a mailing address associated with the eligible applicant will not be allowed, even if utilizing a post office box. For procedures regarding structures that require deferral of services due to the structure being deemed at least temporarily ineligible, refer to the *Deferral Process* in a following segment of this section. WVOEO will disallow partial weatherization of a dwelling if turned in as a completion. A dwelling will only be deemed a completion if all measures called for from the audit have been completed and the unit has been reviewed and signed off on by a certified Quality Control Inspector. If in very rare and extreme circumstances, a client does not allow a subrecipient to complete the quality control inspection in order to deem the dwelling as a completion or the crew must halt weatherization for an unforeseen circumstances with the client/dwelling (crew safety concern, etc.), the subrecipient must notify WVOEO, and allowable expenses can be submitted, but the dwelling will not be counted as a completion. This option will be extremely rare in occurrence and only approved if all reasonable options to perform the final inspection have been attempted. WVOEO will also pursue all other possible remedies including non-DOE funding sources for work performed, if allowable.

Historic Preservation

As noted in DOE Weatherization Program Notice 10-012, DOE in coordination with the Advisory Council on Historic Preservation (ACHP) and the National Conference of State Historic Preservation Officers (NCSHPO), has developed a Prototype Programmatic Agreement (PA) to address historic preservation requirements for the WAP. The WV WAP is evaluating all National Historic Preservation Act (NHPA) Section 106 reviews utilizing guidelines set forth in a Letter of Understanding with the West Virginia Division of Culture and History State Historic Preservation Office (SHPO). All measures that fall outside the WAP, exempt from NHPA Section 106 review are being approved by West Virginia SHPO. WVOEO has a staff member dedicated to Historic Preservation review, approval, and guidance for WV WAP subrecipients, and WVOEO has a second trained staff member as an alternate option if needed.

Our intention is to work very closely with our State SHPO office and to utilize the Prototype PA to overcome the challenges before us while still meeting all guidelines of the NHPA. This will not only build a strong partnership that will prove advantageous to our respective organizations but also to the West Virginia families that we strive to serve.

West Virginia's State Energy Program (SEP) Office has not been able to negotiate a SHPO PA and consequently our state does not have an official DOE Historic Preservation PA. As a result,

beginning in PY 2010, our state Weatherization Program Office worked with West Virginia SHPO to negotiate, draft and agree to a one (1) year Letter of Understanding for Historic Preservation Section 106 review compliance for weatherization activities. In subsequent years, renewed letters were executed. On December 1, 2014, WVOEO began a new three (3) year Letter of Understanding with West Virginia SHPO, through November 27, 2017. After that time, we will seek a renewed letter to continue compliance.

Rental Units:

The WV WAP may provide weatherization to rental units, including multiple dwelling units. The WV WAP has procedures that address the protection of renters' rights as per 10 CFR 440.22(b)(3) and 440.22(c)-(e). No rented dwelling unit can be weatherized without first obtaining the written permission of the owner (or his/her agent) of the dwelling unit. Completion of the "Owner Agreement of Rental Homes" form will be mandatory for rental units.

The "Owner Agreement of Rental Homes" form is designed to assure the following:

1. That the benefits of weatherization assistance shall reside primarily with the low-income tenants;

2. For a reasonable amount of time, the rent shall not be raised because of the increased value of dwelling unit(s) due solely to weatherization assistance provided under this program;

    - Should a rental increase occur and the tenant perceive it to be due solely to the weatherization services provided, the tenant would notify the applicable subrecipient who would then contact WVOEO, or the tenant may contact WVOEO directly.
    - WVOEO will instruct the tenant to file a written complaint with WVOEO detailing the situation and the perceived reason for the rent increase.
    - WVOEO will work with the subrecipient and make contact with the landlord and notify that a complaint has been filed, and provide the landlord with a copy of the complaint. The landlord will have the opportunity then to appeal the complaint.
    - WVOEO will obtain all of the pertinent information applicable to the dwelling and the weatherization services received and will review all of the information provided, seeking guidance from DOE and/or legal counsel as needed.
    - WVOEO will work to resolve the situation in a way agreeable to all parties. WVOEO encourages the use of alternative dispute resolution procedures including arbitration.

3. That no undue or excessive enhancement shall occur to the value of the dwelling unit; and

4. In the case of multifamily buildings, that the landlord understands the requirements set forth by the *Financial Participation Policy for Rental Units* that requires a landlord with income outside of the poverty guidelines of the WV WAP, to contribute a percentage of the costs of the various weatherization measures.

In the event that all possible negotiations with the landlord have been attempted yet the landlord refuses contribution, the dwelling may still be weatherized with proper documentation and approval from WVOEO.

All multifamily units will follow the established client prioritization protocols as established in single-family weatherization, unless otherwise determined by WVOEO. Multiple dwelling units are defined as buildings containing five (5) units or more and can be weatherized if 66 percent (50 percent for duplexes and quadraplexes) of the occupants qualify for weatherization assistance pursuant to Federal Regulation 10 CFR 440.22. Weatherization services provided to multifamily dwelling units will also be supported by WVOEO's *Multiple Dwelling Unit Policy and Guidance* implemented in February 25, 2011, detailing the process, procedures, and requirements including the "West Virginia Multifamily Owner Agreement" which is similar to the owner agreement described above, but adapted for multifamily units. WVOEO's *Multiple Dwelling Unit Policy and Guidance* is currently under review for revision; however, WVOEO will not finalize and implement until DOE finalizes the Draft Multifamily and Rental WPNs. WVOEO's revision of the policy is being guided by the current draft. WVOEO will also seek input and guidance from the DOE Project Officer on the *Multiple Dwelling Unit Policy and Guidance* prior to finalization and implementation.

Deferral:

The WV WAP developed and implemented a WV WAP *Deferral Policy* on August 21, 2012, to assist in the decision to defer weatherization assistance on an eligible dwelling in attempt to standardize the procedure throughout West Virginia. As per the policy, a deferral does not mean that weatherization assistance will never be available, but that work must be postponed until the problems at the home can be resolved. Subrecipient crews and contractors are expected to pursue all reasonable options on behalf of the client, within program guidelines. After an on-site visit has been conducted, if conditions warrant and the subrecipient determines that the home meets one (1) or more of the following deferral conditions, a letter must be sent to the client outlining the conditions present at the dwelling and the justification for deferral. The reason for deferral must be selected and documented in the database management system and the database management system automatically generates the deferral letter with the proper justification to be submitted to the client.

Possible deferral conditions include but may not be limited to the following:

a. Structurally unsound dwelling that is not suitable and adaptable to weatherization services, and the WAP does not have the resources to do necessary repairs;

b. Electrical or plumbing hazards that cannot be resolved prior to or as part of weatherization services;

c. The presence of raw sewage around or in any part of the dwelling;

d. The presence of a dead animal, or animal feces, in an area where program staff must install weatherization measures;

e. Excessive debris and clutter around the dwelling that limits access to the dwelling;

f. Pets unchained or running loose that would be distracting or unsafe to program staff;

g. The client is uncooperative, abusive, or threatening to the crew, or there is an apparent threat of violence or abuse to any program worker, or any household member, during the weatherization process;

h. The presence or use of any controlled substance in the dwelling during the weatherization process;

i. Environmental hazards, such as serious moisture problem, known excessive radon, friable asbestos, excessive lead paint, or other environmental hazards that cannot be resolved prior to or as part of the weatherization services;

j. Evidence of substantial infestation of rodents, insects, bats, or other harmful/objectionable animals that are difficult to control;

k. Major remodeling is in progress, limiting the proper installation of weatherization measures;

l. Substantial standing water in or around the crawl space or basement area limiting the proper completion of weatherization measures;

m. Dwelling resident has a medical condition that prohibits the installation of insulation and/or other weatherization measures;

n. No cost-effective or appropriate health and safety measures can be done to the house resulting in minimal energy savings.

o. Customer in arrears with utility vendor, gas service has been shut off, or electric service has been shut off;

p. Client refusal of primary energy conservation measure (SIR ≥ 2);

q. Client refusal of health and safety measure(s) necessary for client safety;

r. Income verification needed;

s. Updated utility information needed; and

t. Other conditions not listed above that prohibit complete weatherization.

There are several steps detailed in the WV WAP *Deferral Policy* outlining the subrecipient and/or client's responsibilities after the aforementioned deferral letter is generated in order to possibly complete weatherization for a client that was originally deferred. These steps involve allowing the client to correct the identified issues or barriers to weatherization and providing the subrecipient with documentation that issues have been addressed. There is also a procedure in place in the event that issues are not addressed or no response is received from the client. Once reasons for deferral are resolved, the application is re-activated within the data management system. Depending on the timing of the correction of deferral issues, eligibility criteria including income verification and prioritization status may need refreshed. The WV WAP Deferral Policy outlines the timing parameters in more detail. All applicable steps must be followed and all required documentation retained.

V.1.3 Definition of Children

In terms of prioritizing households including children, the State of West Virginia has defined "children" as those eighteen (18) years old and under in compliance with 10 CFR 440.3

V.1.4 Approach to Tribal Organizations

In accordance with Federal rule, the State of West Virginia recommends that tribal organizations not be treated as local applicants eligible to submit an application to operate a Weatherization Assistance Program. In accordance with 10 CFR 440.16(f), low-income Native Americans will receive benefits equivalent to assistance provided to other low-income persons within the State as eligible individual applicants under program guidelines.

V.2 Selection of Areas to be Served

The method used to select each area to be served by a weatherization project will be as follows:

1. All fifty-five (55) counties in West Virginia will be served by the WV WAP.

2. Selection of weatherization subrecipients or qualified entities is made pursuant to 10 CFR 440.15.

3. Subrecipients in the state operate the WAP in service areas designated by specific counties, barring any unforeseen circumstances necessitating service area alteration. Subrecipients may contract with one another in efforts to more efficiently and effectively provide weatherization services to all counties within a subrecipient's service area.

4. In the event that WVOEO determines that a subrecipient fails to meet WV WAP Grant Agreement requirements, options include (but are not limited to) allocating the funds to other eligible subrecipients or qualified entities in the State.

   Redistribution Provision: As necessary through the administration and management of this award, WVOEO may move funds between cost categories, functions, and activities to fully expend the monies during the budget period, which could include moving funds between subrecipients. All budget alterations or revisions will be in accordance with 2 CFR 200.308(e) and all other applicable Federal rules and regulations. Parameters and criteria outlining situations in which a subrecipient would have an allocation reduced, receive an additional allocation, or need to move funds within their own budget are laid out in the subrecipient WV WAP Grant Agreements, following all applicable Federal rules and regulations.

V.3 Priorities

The WV WAP will give priority to identifying and providing weatherization assistance to elderly persons (60 years of age or older), persons with disabilities, and households with children (18 years of age or younger). Priority can also be given to households with a high energy burden which has two (2) components to its definition. Clients can be considered high energy burden if:

a. Fifteen percent (15%) or more of the household income is utilized to pay for energy usage; and/or

b. Clients are eligible for the Energy Crisis Intervention Program (ECIP), an emergency heat services component of the LIHEAP funding the WV WAP receives from the West Virginia Department of Health and Human Resources (DHHR).

Priority can also be given to clients considered high energy users. Clients will be considered high energy users if $2,100 or more is expended by the client on residential energy annually, which will be calculated within the database management system utilizing utility bill information.

All of these priorities are weighted the same with regards to the points they receive except for ECIP eligibility allowing for comprehensive weatherization services to be provided within a reasonable amount of time from when the client received emergency heat services, increasing the efficiency and cohesiveness between the programs.

Another factor considered when prioritizing clients in order to have an reasonable and equitable system is the time spent on the wait list; however clients only receive 1 (one) point per year and therefore it will be ensured that time on the waitlist does not outweigh other factors within the prioritization system.

The WV WAP has also incorporated priority features to enhance the DOE required priority eligible population categories and allow for reasonable, efficient, and effective implementation of the WAP. Such prioritization features allow for consideration of timing of services provided by other funding sources.

There are utility funds that supplement the WV WAP, and Federal and non-Federal resources are blended in order to serve more low-income clients as well as in some cases provide services in addition to those the traditional WAP is able to provide. There are situations in which clients eligible for certain utility program funding may receive additional priority in order for the utility funds to be expended effectively and within the proper time periods. This allows the WV WAP to continue to obtain these funds for future program years.

Finally, there could be instances in which clients are given priority as part of a multifamily project completion. Clients in an identified eligible multifamily dwelling may not all be at the top of the prioritization list, and therefore additional priority could be given to the clients in order for the project to be completed. However, WVOEO requires advance planning from subrecipients for the completion of multifamily dwellings and ensures that multifamily projects do not supplant services provided to single-family dwellings, which are the large majority of completions for the WV WAP.

WVOEO has developed a point system to rank clients using the aforementioned prioritization criteria in the data management system that tracks all clients, dwellings, and weatherization work. The WV WAP subrecipients must adhere to this prioritization list and point system within the data management system unless otherwise directed or approved by WVOEO.

WVOEO may modify the prioritization system throughout the Program Year within the parameters of the program in instances including but not limited to adjusted rules and regulations or additional funding sources identified. The intent of the prioritization system will always remain consistent on serving low-income clients as efficiently and effectively as possible, working to reduce energy costs, as well as to expending all funding sources within the proper timeframes and in compliance to all applicable rules and regulations. Subrecipients do not have the ability to manipulate or alter the prioritization system or criteria without written approval from WVOEO.

WVOEO implemented *WAP Priorities for Service Delivery* on July 1, 2014, which will remain in place for PY 2016 – 2017. WVOEO modified the database management system to ensure clients are being prioritized properly and effectively. The database management system only allows those clients highest on the priority list (based on the previously described point system) to be selected for service by a particular subrecipient, unless otherwise approved by WVOEO.

The system allows for a reasonable "pool" of high priority clients a subrecipient has to select from so that there is flexibility built into the system, while also ensuring all clients served are high priority clients. Due to the number of high priority clients that will be available to a subrecipient to select from, WVOEO does not anticipate any issue with all counties in West Virginia being provided weatherization services in an efficient and effective manner throughout the year. However, this process will be monitored throughout the year by WVOEO and adjusted if necessary.

Subrecipients shall ensure that weatherization services are being provided to low-income persons that live in standard types of housing (i.e., single-family, rentals, manufactured housing, and multifamily buildings). Housing type is not a recognized priority and is not factored into the WV WAP prioritization process. WVOEO will monitor the system through completion and deferral review to ensure eligible clients are not discriminated against due to housing type.

V.4 Climatic Conditions

West Virginia is the 41st largest of the 50 United States with a total area of 24,230 square miles. Within its boundaries, elevations reach as high as 4,863 feet above sea level (Spruce Knob in Pendleton County) and as low as 240 feet above sea level (Potomac River on the Virginia border).

The International Energy Conservation Code (IECC) has defined two (2) distinct climate zones that cover West Virginia. These climate zones help approximate the performance of a building within each zone due to the effects of heating- cooling demand, precipitation, and relative humidity.

Due to the variations in climate throughout the state, each energy audit shall be adjusted to most accurately model the climactic conditions of the individual location. Likewise, each energy audit shall indicate the model climate used represented as locations included in the DOE approved auditing software (the Weatherization Assistant software as described in *V.5.2 Auditing Procedures*). At the present time, Zone 1 is identified as Charleston, WV, and Zone 2 is identified as Elkins, WV, in the DOE approved auditing software. These two (2) zones are utilized by all WV WAP subrecipients, with one (1) exception; the subrecipient that covers the four (4) counties in the northern panhandle of West Virginia uses Zone 3 identified as Pittsburgh as that location more closely fits the subrecipient's local climate profile.

A rough map of the IECC climate zones and the additional zone is included as an attachment with this application.

Cooling Degree Days (CDD) and Heating Degree Days (HDD) data is submitted as an attachment to the application. A summary of the data for all three zones is as follows:

Zone 1 – Charleston, WV:
CDD - 1011

HDD - 4718

Zone 2 – Elkins, WV:
CDD - 307
HDD – 6438

Zone 3 – Pittsburgh, PA:
CDD – 740
HDD – 5637

Based on the cooling degree days and dual climate zones, the WV WAP has included specific cooling measures under certain circumstances as detailed under *Section V.7 Health and Safety*.

The HDD and CDD data used for analysis was obtained from the link below.

- National Climatic Data Center (using information from the NOAA) http://ggweather.com/normals/

V.5 Type of Weatherization Work to Be Done

V.5.1 Technical Guides and Materials

All measures and incidental repairs performed on client homes will meet the specifications, objectives and desired outcomes outlined in the Standard Work Specifications (SWS) for Home Energy Upgrades. WVOEO partnered with Community Housing Partners Energy Solutions Training Center (CHP) to develop the WV WAP Standard Work Specifications (WV WAP SWS) utilizing the "Deck of Cards" model. This document functions as a combination standards and field guide. These field standards meet or exceed the minimum standards outlined in the national SWS. The document references the appropriate SWS for the procedure being described and clearly states with narrative and photographs the required specifications for that procedure. It functions as in-field instructional reference guide for program supervisors and technicians and has replaced all previous field guides or standards.

WVOEO submitted the WV WAP SWS for Single Family Homes and WV WAP SWS for Manufactured Housing on December 23, 2015 and was approved by DOE on January 7, 2016. A link to both documents is provided:

https://www.dropbox.com/sh/edmdfrf6ocsih6t/AADH01_uD5MxC1m9PXnoGWExa?dl=0

WVOEO develops and distributes West Virginia Weatherization Program Notices (WV WPN) and West Virginia Weatherization Bulletins (WV WxBulletin) to provide additional guidance on specific requirements and major program updates and/or changes. These notices are in supplement to DOE Weatherization Program Notices and are the basis of the WV WAP Procedures Manual that is currently under development to revise/replace the dated West Virginia Finance and Administration Guide (2005).

Prior to the start of PY 2016 – 2017, WVOEO will distribute the revised/approved WV WAP SWS to subrecipients to advise them of the expectations of work quality. WVOEO provides all subrecipients with technical requirements for field work including: audits/testing; installation of energy conservation, health and safety and incidental repair measures; and final inspections. WVOEO provided both electronic and physical guides based on preference of each subrecipient. WVOEO confirms receipt and acknowledgment of those requirements through execution of DOE WAP Grant Agreements with subrecipients, with a signature on behalf of the subrecipient serving as proof of receipt.

The specifications for work to be inspected is referenced in the subrecipient DOE WAP Grant Agreement. Contractors hired by the subrecipient must have agreements that include the same technical requirements referenced above. The work of the contractor must be consistent with all WV WAP standards and requirements.

Additional training as necessary on WV WAP SWS is provided to subrecipients as detailed in *Section V.8.4 Training and Technical Assistance* to ensure consistent compliance throughout the network.

All weatherization work is being performed in accordance to the DOE-approved energy audit procedures and 10 CFR 440 Appendix A.

Language Added to Subrecipient Grant Agreements:

To meet requirements within DOE WPN 15-4, WVOEO added the following language to the subrecipient DOE WAP Grant Agreements:

"The subrecipient shall perform weatherization services during the Program Year in accordance with the WV WAP State Plan, the WV WAP Standard Work Specifications, and other WVOEO WV WAP manuals or directives as applicable and any amendments thereto. The subrecipient's signature on this agreement signifies its responsibility to follow all work standards as outlined in the documents referenced in this paragraph, as well as the subrecipient's responsibility to ensure weatherization staff and sub-contractors receive and review these documents and use them to guide the weatherization work performed in client homes."

Potential Pilot Project:

Potential Pilot Project language below was included in PY 2015-2016 WV WAP State Plan but the project was not pursued due to complicating factors. However, WVOEO is including the language again for PY 2016-2017 as an option, if barriers can be overcome.

All weatherization work is to be performed in accordance to the DOE approved energy audit procedures and 10 CFR 440 Appendix A with one (1) exception upon various levels of approval from DOE. The WV WAP has interest in pursuing a pilot project of photovoltaic (PV) solar installations in weatherization, focusing on multifamily apartment buildings. WVOEO

understands the need to follow the weatherization process including intake and eligibility procedures, proper procurement and energy audit procedures for the Savings-to-Investment Ratio (SIR) of one (1) or greater (≥1), as well as performing all the traditional weatherization work. The project is currently estimated at a little more than 65 KW total of PV at a preliminary budget for the installed cost of roughly $125,000 for the four (4) buildings in the complex identified. Although WVOEO is interested in pursuing other DOE grant opportunities for such projects, WVOEO is also interested in pursuing the opportunity though the regular formula weatherization funds as well. WVOEO understands this could be a lengthy, multi-level application and approval process with many barriers for this type of pilot project. However, WVOEO wanted to include the language in this application so that the WV WAP may have the opportunity to move forward in looking into the feasibility of the opportunity, working closely with the WV DOE Project Officer and other DOE experts.

WVOEO is aware there are multiple challenges a project of this nature presents and understands items including but not necessarily limited to the following need to be considered and addressed during the process with DOE guidance and approval:

- Performance of a proper environmental review as applicable
- Performance of proper energy audit procedures to provide required justification for installation of measures
- Consideration of collaboration of other funding sources to address the potential high cost of a project that could inhibit the SIR for the project if only funded with DOE funding, along with consideration of regular weatherization items that would also be installed if deemed cost effective
- Addressing in collaboration with DOE the questions and challenges of leasing v. purchasing of equipment.

Other Renewable Energy Systems:

Assistance under the WAP may be provided for renewable energy systems. Any renewable energy system measures implemented by a subrecipient must have WVOEO written approval prior to work being performed. A site-specific Weatherization Assistant energy audit must be included as part of the client file which will be reviewed by WVOEO as part of the approval process.

10 CFR §440.18 (Allowable Expenditures) incorporates the renewable energy system provisions and specifies a ceiling of $3,000 per dwelling for labor, weatherization materials, and related matters, subject to annual adjustments. As per DOE WPN 16-1 Section 3.1.1, the percentage increase in the Consumer Price Index (CPI) for the previous 12-month period (October 2014 – September 2015) was 0 percent, so no increase was applied to the PY 2015 adjusted average of $3,545. The PY 2016 adjusted average for renewable energy measures is **$3,545 with a SIR greater than one (≥1).**

The adjusted average for renewable energy measures is not a separate average, but part of the overall adjusted average expenditure limit of $7,105.

Because the total average cost per unit exceeds the renewable measures allowance, the major effects of the regulation are to provide criteria and a procedure for integrating renewables into the WAP, and to establish a process for evaluating petitions to use new or innovative renewable energy systems in the WAP.

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

Approved renewable energy systems will be listed in Appendix A of Part 440, Standards for Weatherization Materials.

V.5.2 Energy Audit Procedures

Unit Types	Audit Procedures and Dates Most Recently Approved by DOE
Single-Family	NEAT, Submitted for Approval 2016
Multifamily	- 1-5 Units, individually heated/cooled, garden style apartments - NEAT audit with 3 or less stories - Small MDU less than 25 units, individually heated/cooled - NEAT audit Sampling* - MDU greater than 25 units – DOE Project Officer Approval
Mobile Home	MHEA, Submitted for Approval 2016

**Audit Sampling:* To ensure a true representation of the building, an audit(s) must be completed on apartments with different configurations and heat loss characteristics. (ex: 1 bed. bottom floor, 1 bed. middle floor, 1 bed. top floor, 2 bed. bottom floor) an audit of at least 25 percent of the total number of units in each building must be conducted. Each audit must include photo documentation of existing conditions (ex, insulation levels, venting, etc.)

WV WAP uses the Weatherization Assistant software as its energy audit tool. The Weatherization Assistant energy audit software was developed by Oak Ridge National Laboratory specifically for the use for the Weatherization Assistance Program. There are two (2) components to the Weatherization Assistant software: the National Energy Audit Tool (NEAT) for single family houses and the Manufactured Home Energy Audit (MHEA) for mobile homes.

As per 10 CFR 440.21 (i), WVOEO submitted the Weatherization Assistant audit procedures to DOE for approval for use in the WV WAP for another five (5) years on February 17, 2016.

As per10 CFR 440.21.(h) WVOEO included within the submittal of audit procedures the DOE determined list of general heat waste (GHW) reduction weatherization materials from DOE WPN 13-5 and plan to incorporate the usage of the identified GHW materials upon approval, guided by DOE WPN 13-5 any other applicable DOE guidance.

Each subrecipient must have at a minimum one (1) energy auditor with a good working knowledge of NEAT and MHEA or an approved contract in effect with another subrecipient to perform energy audits. Some subrecipients have obtained the Home Energy Professional Energy Auditor certification, and WVOEO will continue offer the training and certification to subrecipients during PY 2016 – 2017 to improve and enhance the audit process.

For multifamily units, until MulTEA is fully developed and implemented, WVOEO has a procedure in place (*Multiple Dwelling Unit Policy and Guidance)* implemented on February 25, 2011, that was developed with oversight and direction from a former DOE Project Officer as mentioned in *Section V1.2.* WVOEO's *Multiple Dwelling Unit Policy and Guidance* is currently under review for revision; however, WVOEO will not finalize and implement until DOE finalizes the Draft Multifamily and Rental WPNs. WVOEO's revision of the policy is being guided by the current draft. WVOEO will also seek input and guidance for the DOE Project Officer on the *Multiple Dwelling Unit Policy and Guidance* prior to finalization and implementation.

Multifamily units are defined as buildings containing five (5) units or more and can be weatherized if 66 percent (50 percent for duplexes and quadraplexes) of the occupants qualify for weatherization assistance pursuant to Federal Regulation 10 CFR 440.22. The majority of eligible units in West Virginia are considered to be primarily garden style apartments, with less than twenty-five (25) units per structure, three (3) stories or less where the units are individually heated and/or cooled and have exterior access. Hence, these dwellings will be the focus of the WV WAP's multifamily weatherization efforts. Each multifamily unit (including those that have less than five [5] units) must meet the previously mentioned audit procedures and all other procedure and documentation requirements set forth in the WV WAP *Multiple Dwelling Unit Policy and Guidance.* Prior to commencing weatherization of the building, WVOEO must review and approve of the project. A minimum 25 percent audit sampling must be completed on apartments with different configurations and heat loss characteristics for each building to be weatherized.

Due to increased and more complicated requirements and procedures, any multifamily project *greater* than twenty-five (25) units would have to be submitted for review and approval to the DOE Project Officer prior to commencing weatherization.

V.5.3 Final Inspection

Quality Control Inspectors (QCI) working for, or contracted by, the WV WAP must possess the knowledge, skills, and abilities in the National Renewable Energy Laboratory (NREL) Job Task Analysis (JTA) for Quality Control Inspectors. This applies to all individuals who perform an

evaluation and sign off on work performed in homes, including subrecipient final inspectors and WVOEO monitoring staff.

Certified subrecipient QCI's are required to perform a final inspection of each dwelling unit before it can be reported as a completion. The final inspection must be performed by the certified QCI using the WV WAP mandated "QCI form" (attachment to application) and certify that the work has been completed in a professional manner and is in accordance with the priority determined by the audit procedures required by 10 CFR 440.21. To be in compliance with DOE WPN 15-4, during PY 2016 – 2017, only those who possess the Home Energy Professional (HEP) QCI certification may perform inspections and sign off on work performed in homes. All subrecipients but one (1) have demonstrated QCI competency by receiving certification as an HEP QCI; one (1) subrecipient lost their QCI during the last PY. Any subrecipient without a QCI on staff will ensure a certified QCI outside the agency performs all inspections until the certification is achieved.

The credentials of each subrecipient QCI are maintained in the database management system. WVOEO will review the system periodically to ensure QCI credentials remain up-to-date as well as during the annual monitoring process. WVOEO has set up or reviewed/approved all training and certifications of QCI staff (as described in *Section V.8.4 Training and Technical Assistance Activities*) thereby ensuring the validity of all credentials. WVOEO will continue to either set up any additional certifications for the Network, or review or approve that the proper certification is sought and obtained and all procedures followed prior to reimbursement for any training/certification expenses.

The standardized QCI form was based off of DOE's example of a quality assurance document, modified to meet the needs of the WV WAP. As previously mentioned, this form and policy are being revised to reflect the WV WAP SWS.

The form and the associated policy provide uniform guidelines and practices for final inspections of units at the subrecipient level, to ensure such are performed correctly and thoroughly prior to being submitted as a completed unit. Signatures are required on the form certifying the unit had a final inspection and met all required standards. The inspection includes and an assessment of the Weatherization Assistant audit performed and confirms that measures called for on the work order were appropriate signifying the proper SIR.

In regards to DOE WPN 15-4 compliance, WVOEO will ensure through the monitoring process described in *Section V.8.3 Monitoring Activities* that work performed by the subrecipient meets the criteria outlined in the WVWAP SWS.

If during the monitoring process, it is discovered a subrecipient QCI is not inspecting units using the standards adopted by the State and consistent with the WV WAP SWS, WVOEO will initiate a Quality Improvement Plan (QIP) process with the subrecipient also described in *Section V.8.3 Monitoring Activities*. WVOEO will work with the subrecipient to identify the best course of action to address whatever deficiencies may exist in the Quality Control Inspection process including both internal steps a subrecipient can take as well as external training and technical assistance WVOEO can provide or obtain. Depending on the nature and severity of the issues

found, WVOEO may take disciplinary or punitive actions including but not limited to the monitoring of any job a subrecipient is attempting to turn in as a completion, or disallowing of costs/completions and repayment of funds.

Due to staffing limitations of certain subrecipients, the WV WAP will have to institute a combination of the two (2) DOE Prescribed QCI Policies of Independent QCI and Independent Auditor/QCI. Unfortunately not all subrecipients have the staff to have a separate Auditor and QCI. For such subrecipients, WVOEO will increase the monitoring efforts of completed dwelling units as per DOE WPN 15-4. For subrecipients that have an independent QCI, WVOEO will monitor at least 5 percent of completed dwelling units. For subrecipients that have an Auditor that also performs the functions of QCI, WVOEO will monitor at least 10 percent of completed dwelling units. This percentage will increase based on issues identified and/or capacity of WVOEO staff. WVOEO will work with the subrecipients and make all reasonable efforts with the funding available to train and certify enough staff to separate the Auditor and QCI duties at the subrecipient level where it is possible to do so. As stated in *Section V.8.4 Training and Technical Assistance Activities,* WVOEO will continue to offer additional QCI training and certifications as funding allows throughout the PY. Except for extremely extenuating circumstances, the QCI will not have performed any other work on the completed dwelling unit; (there is one (1) subrecipient with only three (3) crew members, two (2) of which are inexperienced and need crew supervision). WVOEO will utilize the monitoring process to ensure the integrity, impartiality, and quality of the inspection process.

V.6 Weatherization Analysis of Effectiveness

WVOEO performs a variety of analysis of the WV WAP (statewide, subrecipient specific, objective/measure/process specific, etc.) at different times throughout a program year. Some data collection and analysis is performed on a routine basis for general oversight purposes; however WVOEO also investigates specific issues as they arise using different tools and database reports. Program production, goal attainment, and expenditure rates are tracked on a monthly basis for each subrecipient at the State level on a statistical analysis tool. These statistics are analyzed periodically, and the appropriate feedback and technical assistance is provided to those subrecipients not meeting goals, benchmarks, or compliance expectations. The subrecipients use the same statistical analysis tool for tracking their own production and expenditures to further ensure routine evaluation of local programs and reevaluation of goals when necessary.

A monthly "Dashboard" outlining the status of the weatherization program statewide was developed by WVOEO and is submitted to the Network after all reports have been submitted, data reviewed, and funding requests approved. This spreadsheet displays a wide range of summary information including expenditure numbers, health and safety percentages, completion data, and average job cost. WVOEO developed supplemental spreadsheets to the "dashboard" which breaks down information in a more detailed manner. It provides a detailed line item breakdown of expenditures per funding source and average job cost. It also displays dwelling type served and fuel type served.

WVOEO developed an analysis tool called the Master Agency Checklist (MAC). This comprehensive spreadsheet takes information from all of the other analysis tools that WVOEO utilizes, and compiles all of the data in a single location. This tool encompasses all areas of compliance that WVOEO would utilize to evaluate a subrecipient in all components of the program: programmatic/administrative, financial, and field. This tool can be used to periodically evaluate the network on a multitude of parameters for identification of trends and areas of improvement, but could also be used for funding/territory award evaluation if WV WAP awards were to be framed in a Request for Proposal (RFP) or other competitive process. WVOEO tested and revised the tool during PY 2015 – 2016 and will continue to utilize this spreadsheet in PY 2016 – 2017.

WVOEO works to establish production and expenditure benchmarks and includes as necessary and feasible in the subrecipient WAP Grant Agreements to increase accountability and ensure proper program management.

The WV WAP utilizes the database management system to track all weatherization work performed on any dwelling. The database management system coupled with the aforementioned statistical analysis tool and other statistical spreadsheets facilitate a review/analysis process essential for program management and oversight. The review process in various forms including desk-top review, serve as routine procedures to ensure compliance, as well as an initial monitoring process to confirm that measures are performed and tracked according to program standards, and that diagnostic and health and safety tests are performed and documented correctly. This process allows for the identification of trends that may convey a training or technical assistance need, or specific jobs that may need to be monitored due to documentation of measures.

As mentioned in the *State Plan Annual File*, during PY 2015 – 2016, WVOEO developed and implemented a system to estimate annual energy savings for all funding sources as per 440.14(c)(4). The process entails utilizing data from the "Weatherization Assistant Recommended Measures Output Report." Once enough data has been collected, the WV WAP should have the capability to compare productivity and associated energy savings data from the individual subrecipients and even could have the capability to break it down by measure. In PY 2016 – 2017, the WV WAP will be able to collect a full program year of data and WVOEO will pursue any additional development needed of the database management tool reporting capabilities to be able to utilize the data effectively in the future. WVOEO performs a review of the Weatherization Audit Tool usage by each subrecipient during monitoring visits to ensure material and fuel costs are up to date in the "Setup Libraries" ensuring the system is performing accurate cost effectiveness evaluation.

As stated in section *V.8.3 Monitoring Activities*, WVOEO also tracks the most significant deficiencies of subrecipients in a "Root Cause Analysis" spreadsheet that displays trends of the subrecipients' performance over a period of several years. This analysis is another contributing factor to the identification of training and technical assistance activities and priorities. For PY 2016 – 2017, WVOEO added the tracking of Strengths, Weaknesses, Best Practices, and Other

Needs for more efficient analysis from more information readily available and organized. The collection and analysis of the data, and the improvement of tools and processes each year keeps WVOEO on a path of continuous improvement with regards to support, guidance, and oversight which in turn will keep the subrecipients on the same path regarding the weatherization services provided and management of the program.

During the monitoring process, WVOEO confirms the subrecipient has an internal evaluative processes in place to facilitate improvement as needed (ex. Quality Control Inspector) to identify issues internally at the subrecipient level. This subrecipient process can assist WVOEO in identification of training and technical assistance needs. Also, as discussed in *V.8.3 Monitoring Activities*, WVOEO also ensures through the monitoring process that identified deficiencies are corrected through a Quality Improvement Plan (QIP) and WVOEO follows up and verifies the correction through desk-top monitoring or on-site follow-up visits as necessary.

A final piece of analysis of a segment of the WV WAP is performed by a third party as part of evaluation of one (1) of the utility/leveraged programs that supports the WV WAP. As discussed in the *State Plan Annual File*, one (1) of the programs that has supplemented the WV WAP since 2012 is funding received from American Electric Power (AEP) for comprehensive weatherization services for customers within AEP's service territory. A third party company is brought in to evaluate the program each year by analysis of data, surveys of participants and program managers, and site visits of a sample of dwellings served by the program.

V.7 Health and Safety

The *WV WAP Health and Safety Plan* is included as an attachment. A "Material Identification Chart" is also included as an attachment as part of the *WV WAP Health and Safety Plan* which assists in identification of health and safety, incidental repair, and ancillary materials/measures.

V.8 Program Management

V.8.1 Overview and Organization

The WV WAP is administered by the WV Office of Economic Opportunity (WVOEO). WVOEO is a division under the West Virginia Department of Commerce. WVOEO WAP staff consists of a Manager, an Assistant Manager (who also functions as a monitor), and three (3) additional monitoring staff, one (1) who functions as a Compliance Team Lead. The program is also supported by a Program Development Manager and a Database Systems Specialist, as well as administrative staff. The WV WAP is overseen by the WVOEO Director. WVOEO also administers the Community Services Block Grant (CSBG), Emergency Solutions Grant (ESG), Housing Opportunities for Persons with AIDS (HOPWA), Low-Income Home Energy Assistance Program (LIHEAP), and LIHEAP Application Intake. An organizational chart is provided as an attachment. WVOEO is not responsible for the State Energy Program, which is administered by

the West Virginia Division of Energy, which is also an agency under the West Virginia Department of Commerce.

The WV WAP is administered utilizing all applicable Federal rules and regulations including 10 CFR Part 440 as well as any additional rules and regulations that come into effect due to the Federal implementation of the OMB Circular 2 CFR 200 - Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (2 CFR 200.); DOE specific regulations codified in Part 910 of 2 CFR and Department of Health and Human Services (HHS) specific regulations codified in 45 CFR Part 75; all applicable provisions of Treasury Circular Number 1075, and State of West Virginia Executive Order 12372 (Intergovernmental Review Procedure); and all other state rules and regulations that apply including West Virginia Purchasing Procedures. The WV WAP also follows all DOE specific guidance as provided through DOE WPNs and WAP Memorandums. The WV WAP incorporates these requirements as applicable into subrecipient WAP Grant Agreements and Memorandums of Understanding, as well as into any operations manuals or guidance created.

V.8.2 Administration Expenditure Limits

For PY 2016 – 2017, the statutory ten percent (10%) of administrative funds will be divided evenly between the subrecipients and WVOEO. WVOEO will retain 5 percent (5%) of the grant for administrative costs and 5 percent (5%) will be made available to program subrecipients, as per DOE guidance in DOE WPN 16-01.

As per DOE WPN 16-01: *"A Pass-through entity may provide for subrecipients who receive less than $350,000 of new DOE appropriated funds with permission, to use up to an additional 5 percent of their sub-grants for administration if the Pass-through entity has determined that such subrecipient requires the additional amount to effectively implement the administrative requirements of the Program."* The WV WAP has eleven (11) of twelve (12) subrecipients that receive less than $350,000 of new DOE appropriated funds and therefore WVOEO has allowed an increase to those subrecipients' administrative funds to 10 percent (10%) of each subrecipient allocation. Overall, the WV WAP will be below the 15 percent (15%) allowable for administrative funds for these special cases with the WV WAP utilizing 12.35 percent (12.35%) of funds overall for Pass-through entity and subrecipient administrative expenses.

A separate budget category is permitted by DOE for financial audits. The cost of these audits was previously charged to the already over-burdened administrative cost category and sometimes resulted in financial audits of less than adequate quality. WVOEO is providing relief to the subrecipients by allowing these charges to be covered by a separate category, if the subrecipients meet the threshold contained in 2 CFR 200. These costs will be actual costs of the weatherization portion of the audit.

V.8.3 Monitoring Activities

Introduction

Monitoring is one of the most significant and intricate procedures undertaken by WVOEO. WVOEO must adhere to multiple funding bodies' guidelines as well as construct and adhere to state-specific guidelines and protocols structured in a way to facilitate successful and functional program management throughout the State of West Virginia. Monitoring is one of the many tools utilized by WVOEO in an effort to continually improve the capabilities and effectiveness of the various subrecipients. Monitoring is a systematic process of gathering and evaluating information, as well the physical visitation of sites, in order to support and assess the subrecipients and their programs in terms of performance, capacity, and compliance. As a Pass-through entity of Federal dollars, WVOEO ensures that grant funds are expended in accordance with applicable law, including regulations contained in 10 CFR part 440 specifically 10 CFR §440.23(a); 2 CFR 200 specifically 2 CFR 200.331, 2 CFR 910 and 45 CFR Part 75; DOE WPNs including DOE WPN 16-4, and other policies and procedures that DOE may issue. The WV WAP Monitoring Plan will include the following areas:

Approach

WVOEO will conduct a monitoring of each subrecipient at least once a year, provide a written report to the subrecipient, and maintain both electronic and physical files related to monitoring which are accessible to DOE during its monitoring visits. The monitoring tools utilized by WVOEO are based off of tools and templates provided by DOE through *WPN 16-4 Updated Weatherization Assistance Program Monitoring Guidance* and *WAP Memorandum 015 - Weatherization Financial Toolkit – 2 CFR 200 Regulations and Procurement Procedures.* WVOEO is in the process of revising monitoring tools and forms to reflect the updated guidance as well as WV WAP SWS references. WVOEO is also in the process of developing a monitoring module of the database management system to be used for formation of monitoring reports, QIPs, and other monitoring process aspects.

WVOEO will also conduct periodic off-site desk-monitoring utilizing the database management system used to track all weatherization work, at times coupled with the statistical management tool and related analytical spreadsheets used to track production, expenditures, and other performance indicators. This process will serve as a pre-monitoring activity as well as routine review and oversight as needed. The desk-monitoring activity is utilized to confirm that measures are performed and tracked according to program standards, and that diagnostic and health and safety tests are performed and documented correctly. It is also used to ensure all documentation for a client and dwelling are maintained and completed properly and accurately. This process allows for the identification of trends that may convey a training need, or specific jobs that may need to be monitored due to documentation of measures. The development of the database management system over the last several programs years greatly increased WVOEO desk-top monitoring capabilities to increase efficiency and effectiveness of monitoring, as well as

to reduce expenses. WVOEO will continue to use these enhanced capabilities for the current Program Year.

The monitoring performed by WVOEO will be broken down into three (3) components which may be performed at different times if necessary and may have differing frequency depending on quality of subrecipient performance in each focus area. The monitoring will include the following focus areas and details:

Programmatic and Management Monitoring

- Subrecipient Production Analysis and Review (ensuring benchmark and yearly goal completion)
- Financial/Administrative Components
- Inventory (Equipment and Materials)
- Warehouse
- Rolling Stock
- Eligibility processes and compliance
- "Reweatherization" compliance
- Compliance with all WVOEO mandated forms, processes, and policies
- Database management system usage and reporting
- Reporting and funding requests
- Client Files and related documentation
- Health & Safety Components (Safety meetings/Lead Safe Work [LSW] Practices, documentation/Warehouse & Vehicle Safety/Health and Safety percentage)
- Energy Education
- Training & Technical Assistance
- Procurement Practices
- Client Prioritization methods
- Utility (leveraged) fund usage, documentation, and reporting
- Insurance coverage
- Subrecipient personnel qualifications/certifications and associated work performed
- Subrecipient internal corrective action procedures (for reduction of deficiencies)

Field/Technical Monitoring

- Program Overview (Client File Review, Work Orders, documentation of measures, etc.)
- Compliance with all WVOEO mandated field/technical forms, processes, and policies (ex. Quality Control Inspection form and process)
- Rental unit/Multifamily documentation and process compliance
- Energy Audits (Process and Documentation - Weatherization Assistant Audit Program Libraries, inputs/usage, adherence to guidance, etc.)

- Weatherization of Units (all work performed on dwellings – HVAC, shell measures including insulation and air sealing, baseload measures, etc.
- Health & Safety (HVAC, LSW compliance, current ASHRAE 62.2 ventilation requirements, mold/moisture, electrical, etc.)
- Final Inspections/Quality Control process and documentation
- Client interaction and client education process

Field monitoring incorporates all new DOE mandated regulations including ASHRAE 62.2-2013 (and any applicable updates when implemented), Zonal Pressure Diagnostic standards, and Combustion Appliance Zone testing compliance. Also, in compliance with DOE WPN 15-4, all field monitoring inspections will be performed by a certified HEP QCI and the monitoring inspection form will include a signature of the monitor(s), to supplement the client file and subrecipient QCI form.

Fiscal Monitoring

- Financial Policies and Procedures
- Cash Management
- Procurement policies and practices
- Financial management of Material Inventory
- Financial management of Property and Equipment
- Contracts/Sub-awards
- Payables/Receivables/Expenses Management
- Invoicing and Reporting accuracy
- Review of Funding Requests and specific line items/expenses for accuracy and proper documentation
- Bank records and reconciliation
- Financial Statements
- Internal Controls
- Financial Management of utility (leveraged) funds
- Single Audits (See page 26)

A-133 Financial Audits (2 CFR 200 Subpart F)

Subrecipient Single Audits are due to WVOEO within nine (9) months of the end of the subrecipient's fiscal year. If the deadline is not met, WVOEO sends the subrecipient a reminder notice in the mail using the "Audit Reminder Letter" and the "Audit Extension Request Form." Once a subrecipient submits an extension request using the "Audit Extension Request Form", WVOEO will review for approval or disapproval. This form will be signed by a WVOEO authorized employee and e-mailed to the subrecipient Executive Director.

WVOEO will verify when the audit was submitted to the Federal Clearinghouse (FAC), and note this on the "Annual Audit Chart", maintained by the WVOEO Fiscal Compliance Monitor. If the

subrecipient did not submit the audit to the FAC by the deadline as per Federal regulations, WVOEO mails a reminder letter to the subrecipient.

The WVOEO Fiscal Compliance Monitor will review all audits using the "WVOEO Pass-through entity Audit Review Checklist." An "Audit Review Summary" is completed for the audit, and maintained on WVOEO's shared drive. Depending on the results of the review, WVOEO forwards to the subrecipient either (1) a letter indicating no findings or (2) a letter requesting a Corrective Action Plan (CAP). The subrecipient has six (6) weeks to submit a CAP if applicable.

If a subrecipient has not submitted the CAP within the deadline, the CAP "Reminder E-mail" will be forwarded to the Executive Director. Upon receipt of the CAP, WVOEO will review and forward to the subrecipient either the (1) "CAP Acceptance E-mail" or (2) another correspondence requesting modification to the CAP. As per 2 CFR 200, as a Pass-through entity, WVOEO is required to follow-up/issue a management decision for Federal award findings related to the programs WVOEO administers.

Currently, all WAP subrecipients expend more than $750,000 in Federal funds in a fiscal year and thus are required to have a Single Audit.

Monitoring Staff

Monitoring will be performed by several WVOEO staff members with differing credentials and areas of expertise to effectively monitor all of the various components of the WV WAP as outlined above. Monitoring staff members may monitor more than one (1) component. The monitoring process and the different components are managed and overseen by a Compliance Team Lead, who is also the Fiscal Monitor. The WV WAP Manager reviews and signs off on each report. The current WVOEO monitors are as follows:

Programmatic and Management Monitors (Administrative Monitors):

- 1 Weatherization Assistance Program Manager
- 1 Weatherization Assistance Program Assistant Manager
- 1 Program Development Manager
- 1 Weatherization Systems Specialist

Qualifications: The qualifications of the Programmatic and Management Monitors (Administrative Monitors) include extensive experience with the weatherization program (both at the Pass-through entity level and subrecipient level) as well as certifications and education that benefit the monitoring team as they oversee and evaluate the subrecipient management of the weatherization program. The staff members have experience in management and finance/accounting. The certifications include Masters of Business Administration (MBA), Results Oriented Management and Accountability (ROMA) certification, and multiple WV WAP specific certifications that are now superseded by HEP or other state/national certifications, but still provide a strong foundation of knowledge; (e.g., WV WAP Quality Control Inspector Certification, WV WAP HVAC Systems Inspection Certification, Weatherization Assistant Training Certificate) as well as attendance and presentation at regional and national energy conferences.

Field Monitors (Technical Monitors):

- 2 Weatherization Specialists (Field)

Qualifications: The qualifications of the Field Monitors (Technical Monitors) include extensive experience with the weatherization program as well as extensive building science knowledge. The Field/Technical monitors have several BPI certifications (including HEP QCI), Weatherization Assistant Training Certificate, as well as multiple WV WAP specific certifications that are now superseded by HEP or other state/national certifications, but still provide a strong foundation of knowledge; (Energy Auditor, Quality Control Inspector, multiple HVAC certifications) as well as attendance to regional and national energy conferences. As previously stated, all field monitoring inspections will be performed by a certified HEP QCI at the Pass-through entity level.

Fiscal/Financial Monitors:

- 1 Fiscal Compliance Monitor
- 1 Weatherization Assistance Program Assistant Manager(support if needed)
- 1 Program Development Manager (support if needed)

Qualifications: The qualifications of the Fiscal/Financial Monitors include education (bachelor's and master's level) and experience in the accounting, finance, and management fields, as well as knowledge of Federal financial requirements. Some of the monitoring staff experience is specifically with the Weatherization Assistance Program both on the Pass-through entity and subrecipient level. The Fiscal/Financial monitors will also utilize WVOEO's Chief Financial Officer (CFO) and experienced accounting staff as additional resources during the monitoring activities as needed.

WVOEO staff have received multiple 2 CFR 200 Uniform Guidance trainings and will seek additional training on the new regulations if necessary. WVOEO will pursue additional certifications as identified and/or needed as the Program Year progresses.

Monitoring Expenditures:

Monitoring staff members will be paid out of the Training and Technical Assistance (T&TA) budget category with the exception of the Program Development Manager, the Fiscal Monitor, and WAP Manager who will be paid out of the Administrative budget category given the nature of their work in relationship to the organization and other programs they work within. The estimated percentage of T&TA funds directed toward this effort is 44 percent. WVOEO has budgeted $16,251 out of DOE funds for travel expenses related to monitoring activities. These funds will be supplemented by LIHEAP funds.

Monitoring Schedule:

The monitoring schedule will follow a basic plan of one (1) or two (2) programmatic, field, and fiscal monitoring visits performed per month for the twelve (12) subrecipients. This varies

throughout the year due to when WVOEO starts the monitoring process for the Program Year, also considering holidays, subrecipient leave time, etc.; therefore some months have one (1) visit, and some have two (2).

WVOEO will strive to set the monitoring schedule for the Program Year within the first quarter (July-September) of the DOE grant cycle. WVOEO will disseminate a preliminary schedule to the Network and ask subrecipients to confirm the proposed monitoring dates for their organization or ask for different dates if conflicts exist.

If conflicts arise after the final monitoring schedule is set for the Program Year, WVOEO asks that subrecipients inform WVOEO as soon as possible. At a minimum, subrecipients must notify WVOEO within 48 hours of the receipt of the official monitoring notification.

WVOEO avoids scheduling visits during back-to-back weeks when possible so that WVOEO monitoring staff can work to finalize reports and adequately prepare for the next visit. This plan is only tentative as visits to a subrecipient could increase if there are serious deficiencies identified. The scheduling of the subrecipients will depend in part of when their last visit occurred as well as reasonably taking into consideration geographic location and time of the year. Also, any subrecipients that had major or repeated deficiencies identified from the PY 2015 - 2016 monitoring process and have not had a follow-up visit (due to deficiencies being identified toward the end of PY 2015-2016); these subrecipients will be first priority in PY 2016 - 2017, with additional reviews scheduled as necessary until deficiencies are corrected.

Pre-Monitoring Procedures

WVOEO will provide timely notification of monitoring to subrecipients and complete some parts of the monitoring prior to arriving onsite for monitoring. Those activities include:

- Distribution of official notifications of monitoring at least thirty (30) days prior to onsite monitoring by e-mail to Executive Director/CEO, CFO/Finance Director, and WAP Coordinator. Official notifications will direct the subrecipient how to prepare for the review and WVOEO's expectations. The subrecipient should confirm receipt of the notification and respond within 48 hours if the dates for monitoring need to be changed for any reason.
- During the week before the scheduled onsite, the WVOEO monitoring team confirm arrival times and arrange any necessary logistics.
- An assigned field/technical monitor will contact the subrecipient with a job monitoring pool to schedule jobs to be monitored at least one (1) week prior to onsite monitoring.
- Monitors will conduct desk reviews of relevant information to increase efficiency onsite.

Visit

A typical visit can be expected to require three (3) to five (5) days on-site. The on-site visit process will include the following:

- An entrance interview during which any concerns or questions about the review can be discussed between WVOEO and subrecipient staff.
- Requests of documentation for review including, but not limited to, subrecipient policies and procedures, program documents, client files and financial records.
- Conducting interviews with program staff regarding program operations and job functions.
- Conducting interviews with administrative and fiscal staff.
- Inspecting completed weatherized dwelling units.
- Inspecting Weatherization assets including but not limited to warehouse(s), material inventory, tools, equipment, and vehicles.
- Offering a daily update to the subrecipient regarding the progress of the review and issues that have already been found.

The staffing and credential make up of a subrecipient will determine the number of completed dwelling units needing to be visited by WVOEO as per DOE WPN 15-4. For subrecipients that have an independent QCI, WVOEO will monitor at least 5 percent of completed dwelling units. For subrecipients that have an Auditor that also performs the functions of QCI, WVOEO will monitor at least 10 percent of completed dwelling units. This percentage will increase based on issues identified and/or capacity of WVOEO staff. WVOEO will also review units "in progress" beyond the 5 or 10 percent completed units respectively, in order to assess: quality and compliance; appropriate and allowable materials; appropriateness and accuracy of energy audits; final inspections; safe work practices, such as lead safe weatherization protocols; and other factors that are relevant to on-site work.

An important continued focus of WV WAP subrecipient monitoring for PY 2016-2017, will be the supplemental components to the Weatherization Program, including but not limited to the utility partnership programs, and LIHEAP components including the Energy Crisis Intervention Program (ECIP), the Electrical Upgrade Component, and the Weatherization Related Home Repair Component. These projects provide additional funding for the WV WAP, enable additional work to be done on a large percentage of weatherized homes, and make possible the weatherization of some homes that may have had to be deferred because of necessary repairs that are outside the scope of the DOE WAP. WVOEO will also monitor any other components that are developed and approved as additional appropriate LIHEAP measures. Monitoring of the supplemental components will be part of the standard monitoring process (unless determined necessary to do otherwise) focusing on the correct utilization, tracking, and accountability of the supplemental component funds. WVOEO will take advantage of desk-top monitoring opportunities as appropriate for additional components of the WV WAP.

Upon the completion of each monitoring visit of any of the three (3) components, an Exit Conference is held between the members of the subrecipient (as selected by the subrecipient management) and the monitoring staff to discuss strengths, weaknesses, deficiencies, call-backs and monitor recommendations. As per DOE WPN 16-4, within thirty (30) days after each visit, WVOEO will prepare a written report for the subrecipient that describes the current monitoring assessment (identification any deficiencies, recommendations, commendations, and best practices) and any corrective actions as part of a QIP, if applicable. A draft of this report is provided during the Exit Conference and then finalized by WVOEO staff following the visit. A subrecipient typically has thirty (30) days to respond with a QIP unless the nature and severity of findings deem a more expedient response. If the subrecipient does not respond within the required time limit, the subrecipient is notified and disciplinary or punitive actions may be taken if the subrecipient does not comply with the requirement to submit a QIP.

Process of Corrective Action, Discipline and/or Removal of a Subrecipient from the Program

WVOEO has a system in place to review each QIP provided by the subrecipients either approving of the plans made or requiring additional information or actions. Regardless of monitoring focus, WVOEO follows up with each subrecipient to ensure that the corrective actions outlined in the plan have been implemented either through a subsequent monitoring visit and/or desk-top review, or requiring the submission of documentation confirming the corrections. WVOEO will offer and provide training and technical assistance if requested and appropriate in response to a QIP. If a subrecipient's response is to contest an identified deficiency, WVOEO will either sustain or revise its initial deficiency and provide additional guidance or instructions.

WVOEO increases visits (both the number of units reviewed and the frequency of monitoring visits) to the subrecipient until it can be assured deficiencies are resolved. If necessary, WVOEO has implemented a system of monitoring every potential job prior to submission as a completion for an agency if sustained compliance cannot be demonstrated. If significant deficiencies are discovered, such as health and safety violations, poor quality installation of materials, major measures missed, then the subrecipient must take appropriate corrective action to resolve the outstanding issues in a timely manner. If health and safety issues are found that present an immediate danger to people in the home, the subrecipient must immediately resolve the issues.

If subrecipient noncompliance or repeated unresolved deficiencies (based on a minimum of two (2) monitoring visits at a subrecipient) will be reported to the DOE Project Officer. Sensitive or significant noncompliance deficiencies, such as waste, fraud, or abuse must be reported to DOE immediately by WVOEO.

Once the deficiencies are corrected and procedures are put in place to prevent reoccurrence, WVOEO will resume the original percentage sampling of that particular subrecipient's work in subsequent monitoring visits.

If repeated monitoring and technical assistance do not correct identified noncompliance issues or if a subrecipient continuously fails to respond to an identified deficiency, WVOEO will begin the process of disciplinary action which will include the imposition of additional requirements. Subrecipients will be informed of the nature of additional requirements, the reason why additional requirements are being imposed, the actions needed to remove the additional requirement and the time allowed for completing the actions, if applicable.

Depending on the type of noncompliance issues, actions and additional requirements may include but are not necessarily limited to:

- Withholding disbursement of grant funds until noncompliance issues are corrected
- Disallowing completions that do not meet program standards
- Placing the subrecipient on an "At Risk" status
- Suspending part or all of the program for the subrecipient
- Asking the subrecipient to voluntarily relinquish the program
- Removing part or all of the program from the subrecipient
- Requiring payments as reimbursement rather than advance payments
- Requiring all weatherized dwelling units to be inspected by a third party before being turned in for completions
- Requiring additional, more detailed reporting
- Establishing additional prior approvals

Once the noncompliance issue that caused WVOEO to take disciplinary action and impose additional requirements is resolved, WVOEO will promptly remove the additional requirements. The subrecipient will be notified of the removal in writing.

If a subrecipient wishes for WVOEO to reconsider the imposition of additional requirements, the subrecipient must provide in writing within two (2) weeks of being informed of additional requirements the following:

- Detailed reason why WVOEO should reconsider imposing additional requirements
- Evidence that the issue of noncompliance has been satisfactorily resolved
- A plan to prevent similar issues of noncompliance going forward

Within thirty (30) days of receiving the above information from a subrecipient, WVOEO will either sustain or remove the additional conditions and disciplinary actions imposed.

WAP Grant Award Termination

If WVOEO determines that all remedies for noncompliance and training and technical assistance opportunities have been exhausted in an effort to correct an issue of noncompliance or definitive waste, fraud, or abuse were uncovered during the course of monitoring, the subrecipient's WAP grant awards will be terminated. WVOEO will provide the subrecipient with written notification of termination and cause of termination.

If a subrecipient wishes to contest a termination action, they must provide WVOEO with information and documentation showing that the cause of termination had been remedied or conditions as understood by WVOEO that caused the termination were not accurate within one (1) week of being informed of the termination action. WVOEO will respond in thirty (30) days either sustaining or reversing the termination action.

Tracking & Analysis

The subrecipient monitoring process from notification to final approval and confirmation of corrective actions is tracked by WVOEO to final resolution in a "Monitoring Log." WVOEO also tracks the most significant deficiencies in a "Root Cause Analysis" spreadsheet to evaluate and analyze trends of the subrecipients' performance. For PY 2016 – 2017, WVOEO added the tracking of Strengths, Weaknesses, Best Practices, and Other Needs for more efficient analysis from more information readily available and organized This process allows for the identification of training and technical assistance needs and is an evaluative tool used to keep both WVOEO and the subrecipients on a path of continuous improvement. The results of the monitoring efforts also get pulled in the "Master Agency Checklist" (MAC) for comprehensive evaluative purposes as discussed in *V.6 Weatherization Analysis of Effectiveness.*

V.8.4 Training and Technical Assistance Approach and Activities

Training & Technical Assistance (T&TA) funding is used to pay salary, travel, and operational costs for WVOEO staff to provide monitoring/T&TA to subrecipients. Subrecipient expenses for participation in T&TA activities (including special conference attendance) will be funded from DOE T&TA and/or other funds including LIHEAP. T&TA activities are intended to maintain or increase the efficiency, quality, and effectiveness of the WAP at all levels and are designed to maximize energy savings, minimize production costs, improve program management and field "quality of work," and/or reduce the potential for waste, fraud, abuse, and mismanagement.

WVOEO assesses training needs regularly as part a constant process as the PY progresses. This process and the related training plan are flexible and WVOEO incorporates information from the process into the training plan as needed. WVOEO assesses T&TA needs of its subrecipients through:

- WVOEO monitoring efforts
- Internal trend analysis
- Training Needs Assessment Surveys
- Communication with national experts regarding new technologies and/or standards/practices
- Communications with DOE Project Officer

- Guidance as provided by the Department of Energy (DOE) including industry-wide initiatives and future program requirements (certifications, health and safety implementation, etc.)
- Monitoring visits from the DOE Project Officer, DOE contracted representatives, or the Office of Inspector General

Overview

The WV WAP has made an important transition with regards to trainings provided to the subrecipient network over the most recent Program Years. Trainings and certifications have and will continue to be provided by Interstate Renewable Energy Council (IREC) accredited and certified Weatherization Training Centers (WTC) within close proximity to West Virginia. WVOEO does have a training center in partnership with New River Community and Technical College that can be used for certain training and technical assistance opportunities. WVOEO has attempted in the past to discuss with New River Community and Technical College the possibility of the center becoming a Building Performance Institute (BPI) accredited test site where IREC accredited trainers and proctors could be contracted to train and certify Home Energy Professionals in all four (4) major categories which is currently offered by BPI. However, so far this goal has not been achieved. WVOEO will continue to look into the possibility if it is feasible.

In PY 2014 - 2015, the major training priority was to ensure that all program personnel (Pass-through entity and subrecipient) performing inspections on completed dwelling units were HEP QCI Certified. As of July 1, 2015, all twelve (12) subrecipient weatherization providers had at least one (1) HEP QCI Certified staff, and several had more than one (1). One (1) subrecipient lost their QCI due to job transfer during the Program Year. At this time they are working with another subrecipient to ensure all dwelling units completed are inspected by a certified HEP QCI. Training and certification will continue to be offered in PY 2016 - 2017 to the Network during this Program Year for re-certification and additional staff.

Major areas of focus this year: Implementation of the final form of the WV WAP Standard Work Specifications (WV WAP SWS) functioning as the West Virginia Weatherization Standards/Field Guide; updated ASHRAE rule, Continuing Education Credits (CEUs) necessary for certain re-certifications including Healthy Homes Specialist and HEP certifications, and the continued re-certification of Energy Educators. Additional training consisting of New Hire Requirements, HVAC certification, and Weatherization Assistant will also be made available. WVOEO will also continue to offer HEP Energy Auditor (EA) training and certification as funding allows, as well as additional HEP QCI training and certifications as necessary for more efficient and effective implementation of the WV WAP on the subrecipient level.

Descriptions:

State Weatherization Standards (Tier 1)

The WV WAP Network will be utilizing the DOE approved WV WAP SWS during PY 2016 -2017. Any additional variances identified will be sought utilizing the proper DOE approval process. Continued WV WAP SWS training will be provided as needed.

WVOEO will document the verification of receipt and usage of the WV WAP SWS by the subrecipient as required by DOE WPN 15-4, using the subrecipient WAP Grant Agreements.

HVAC Technician Certification Class 1(Tier 1):

During the 2015 West Virginia State Legislature, an addition to the existing state requirements for HVAC businesses and technicians was added. By January 1, 2016, all individuals working on heating systems are required to have a HVAC Technician License from the West Virginia Commissioner of Labor. Individuals in West Virginia who engage in the business of installing, erecting, testing, repairing, servicing or altering heating, ventilating and air conditioning equipment or systems to heat, cool or ventilate residential structures, are required to have an HVAC Technician License when the project exceeds $1,000.

With this new State requirement WVOEO decided to re-certify the subrecipient HVAC Technicians, using the West Virginia Contractors Licensing Board regulations. Normally, individuals seeking to obtain an HVAC Technician Certification are required to sit for an HVAC exam. However the West Virginia Contractors Licensing Board is grandfathering (or opting out of the exams) applicants who present satisfactory evidence of having at least two thousand hours (2,000) of experience and/or training working on HVAC systems and at least six thousand hours (6,000) of experience and/or training in HVAC systems and relating work which includes other sheet metal industry tasks. The opting out period expires on July 1, 2016.

Those individuals who do not have the required hours can register as an HVAC Technician in Training. Candidates must have a 1:1 ratio of Certified HVAC Technicians to Technicians in Training Class 2. Once a Technician in Training has the required hours, the individual will have to pass the HVAC exam, unless it is still within the opting out phase.

All subrecipients were contacted in September 2015, and had at least one (1) person who could be grandfathered in (or opted out). WVOEO coordinated with subrecipients to apply for both HVAC Technician and Technician in Training Licensing with the West Virginia Commissioner of Labor. HVAC certifications are renewed every year through the West Virginia Commissioner of Labor.

Certification will continue throughout the PY as the HVAC Technicians in Training Class 2 become eligible to apply for HVAC Technician Class 1.

Client Education (Tier 2)

Energy Education is one of the most important weatherization processes to ensure the maximum effectiveness of the weatherization measures. Each subrecipient has identified at least one (1) Energy Educator. Last year, WVOEO began recertifying all Energy Educators through online training provided by an IREC accredited WTC. This course is designed to assist the student in acquiring adult education skills to establish an effective means of communication between the Energy Educator and the client. The online Client Education course prepares students to develop a strategy for effective client education from pre-approval to quality assurance. Videos and documents are presented to use with clients to ensure that they get the information they need during the client education process. After each topic is presented, a short self-quiz follows each section and feedback is given. A final test consisting of a single multiple choice-true/false exam is given at the end of the course. For certification, the student must pass this final exam. After passing the certification test, the Energy Educator will work with clients to affect change in poor energy conservation habits.

The Energy Educator utilizes a tabletop easel with energy saving and maintenance tips for weatherization measures. The process is intended to be interactive between the Energy Educator and client. A key element of the process is a "contract" called the Energy Savers Partnership Plan, where the client agrees to do certain actions to conserve energy in their home. WV WAP has also received materials and guidance from utilities partners to improve the client energy education process.

Energy Educator Certification will continue to be on an as needed per person basis. An Energy Educator must renew their certification every five (5) years.

New Hire Requirements (Tier 2)

WVOEO has designed a curriculum of on-line courses and videos, as a requirement for all new hires at the subrecipient level for the WV WAP. This set of trainings will introduce a new employee to the WV WAP and familiarize them with the program and process. Each new hire will be required to complete all courses during the first six (6) months of employment. These trainings are designed as an introduction to the job of the retrofit installer technician which is the entry level position in the weatherization field, and provide a basic understanding of the WV WAP. These trainings will give students an overview of what is expected of a retrofit installer technician on the job site, knowledge of the use of the basic tools of weatherization, and an understanding of basic building science.

The following is a listing of courses for a new hire retrofit installer technician:

- "This is the World of Weatherization" - Video
- Retrofit Installer Technician – On-line course
- HVAC Fundamentals – On-line course
- Blower Door Basics: Part 1 – Prep & Setup - WxTV

- Blower Door Basics: Part 2 – The Test Process - WxTV
- Blower Door Basics: Part 3 – The Breakdown - WxTV

These courses will be available all year on an "as needed" basis for current "new" subrecipient staff, or additional crew staff that are hired this Program Year.

HEP QCI/HEP EA (Tier 1)

As previously mentioned, WVOEO will be offering additional HEP QCI training and certification opportunities as well as HEP EA training and certification as funding allows. WVOEO understands that some subrecipients need more than one (1) certified QCI due to size, service territory and jobs needed completed, and/or crew make-up. WVOEO also encourages subrecipients to pursue the HEP EA certification even though it is not yet a requirement due to the value of the knowledge and certification given the importance of the position to a strong program. WVOEO will also fund opportunities during PY 2016 – 2017 for Pass-through entity and subrecipient staff to retain their current HEP certifications by obtaining Continuing Education Units (CEUs).

Healthy Homes Specialist (Tier 2)

It has long been known that there is a connection between health and housing. The DOE Weatherization Plus Health initiative is a national effort to enable the comprehensive, strategic coordination of resources for energy, health, and safety in low-income homes. Several subrecipients have programs to take a holistic approach to identify and resolve problems that threaten the health and well-being of residents in low-income homes. WVOEO made training and certification of a Healthy Homes Specialist available to all subrecipients (and several WVOEO staff) two (2) years ago. Healthy Homes Specialists must renew their certification every two (2) years and therefore WVOEO will be working with subrecipients to ensure certifications are retained by staff, if necessary/requested during this Program Year.

Approach

In PY 2016-2017, WVOEO will continue to provide a different approach to Tier 1 and Tier 2 trainings. WVOEO does not anticipate as much need for single training classes consisting of large numbers of students. Instead, WVOEO is pursuing an "as needed, per person" approach as subrecipients anticipate hiring new staff throughout the year, and current certifications and licenses expire at different times throughout the year. Also, there is less of a need for certified staff in certain positions as subrecipients are now just fulfilling needs for additional staff, already having some with recent certifications. (ex. EA, QCI)

WVOEO will make available Tier 1 and Tier 2 trainings to the weatherization network during the entire year. Subrecipients have requested more flexibility in scheduling training when needed in order to better accommodate for production. Instead of a series of set classes, which at times takes crews away from production for a longer period of time which could put a burden on an organization, subrecipients will have the ability to fit trainings into their schedule. WVOEO will

set a time frame for when all subrecipients will need certain certifications completed to continue operating the WV WAP and ensure subrecipients plan and meet expectations during the year. WVOEO also tracks all required licenses needed by subrecipients to properly perform work within the WV WAP (West Virginia HVAC Electrician License, West Virginia Single Family Dwelling Electrician License, EPA Section 608 Refrigerant Transition Technician Certification, HVAC Contractor License, etc.) and WVOEO will ensure all subrecipients remain current with all WV WAP required licenses.

Trainings planned this PY will be a combination of Tier 1 and Tier 2, primarily provided by IREC accredited WTCs as previously mentioned. Training will also be provided as determined by the various assessment and analysis methods mentioned throughout the State Plan. Attendance for all Tier 1 and 2 trainings is mandatory for the appropriate program personnel unless extenuating circumstances exists and approval is received from WVOEO.

WVOEO has implemented a *Subrecipient Training Request and Reimbursement Policy*, which establishes uniform guidelines for internal WVOEO documentation and tracking of training, technical assistance, workshops, certifications, and licenses within the WV WAP as well as the funding or reimbursement process for said trainings, as applicable.

Trainings will be determined through assessment, monitoring, internal analysis and requests from subrecipients. All requests for training from subrecipients will be submitted utilizing the WVOEO website (www.oeo.wv.gov) by submitting a "Subrecipient Training Request Form."

Trainings will be presented in various venues and settings including traditional classroom settings, on-site/hands-on opportunities, and online/web based sessions.

Subrecipients are required to submit a list designated by quarters of any anticipated WAP related T&TA needed to meet standards as part of the application process. This list will ensure at the beginning of the Program Year that an estimated needs list is captured for the subrecipient for proper planning throughout the year. WVOEO will review this list and incorporate into a "Training Tracking Chart" that has been developed to track each subrecipient's staff member in a spreadsheet format. This chart tracks expiration dates on certifications/licenses, and requests from subrecipients on trainings, certifications/licenses and other information needed to plan for upcoming trainings. This chart is updated on a regular basis, as requests for training, certifications/licenses become due, or findings are documented in monitoring reports, and is compared to the database management system that tracks trainings and certifications as entered by subrecipients.

Requested/planned training during the subrecipient application process must be completed as planned barring extenuating circumstances. The "Training Tracking Chart" is reviewed and WVOEO and subrecipients work together to complete the requested trainings in a timely manner. In this way, certification renewals should not lapse and funds are spent by the end of the Program Year.

Training Time Line for the PY 2016 – 2017

Beginning last Program Year, WVOEO determined a different approach was needed for Tier 1 and Tier 2 trainings. As the need for single training classes consisting of large numbers of students has diminished, WVOEO will continue to pursue an "as needed, per person" approach as subrecipients anticipate hiring new staff throughout the year, and current certifications and licenses expire at different times during the year.

WVOEO will make available Tier 1 and Tier 2 trainings to the weatherization network during the entire year, utilizing WTCs and other sources. These trainings/certification and renewals are:

- HEP BPI Quality Control Inspector (Tier 1)
- HEP BPI Energy Auditor (Tier 1)
- Initial Lead Renovator Certification (Tier 1)
- Lead Renovator Refresher Recertification (Tier 1)
- EPA section 608 Training (Tier 2)
- HEP CEUs (Tier 1)
- Healthy Homes Specialist CEUs/Recertification (Tier 2)

While Tier 1 and Tier 2 trainings are available during the PY, there is still a need for benchmarks, assessment, and adjustments, to ensure subrecipients are receiving the necessary training/certifications to operate a weatherization program. Records of trainings, certifications, and licenses are kept in the data management system and supplemented with the information from the "Training Tracking Chart."

During the First Quarter of the Program Year, a combination of funding will be utilized for T&TA. DOE funding will be used; however, LIHEAP funding will also be used for training costs, as approved by West Virginia DHHR, West Virginia's LIHEAP Grantee. The combination funding will support the trainings listed above and these additional trainings:

First Quarter - July 1 through September 30, 2016

- Lead Renovator Refresher Recertification (Tier 1)
- HEP BPI Quality Control Inspector Recertification (Tier 1)
- Energy Educator (Tier 1)
- New Hire Requirements (Tier 2)
- Weatherization Roundtable Meeting (Tier 2)
- Healthy Homes Specialist CEUs/Recertification (Tier 2)
- Infrared Camera Refresher Course (Tier 2)

Second Quarter & Third Quarter - October 1 through December 31, 2016 & January 1 through March 30, 2017*

- HVAC Technician Class 1
- HVAC Technician in Training Class 2
- HEP BPI Quality Control Inspector Recertification (Tier 1)
- ASHRAE New Rule (Tier 2)
- West Virginia HVAC Electrician License
- West Virginia Single Family Dwelling Electrician License
- West Virginia Journeyman's Electrician License
- West Virginia Apprentice Electrician License
- CAZ (Tier 2)

*An assessment of the success of Quarter 1 training, regarding scheduling and implementation efforts will determine the objectives for Quarters 2 & 3, which is why the Quarters are combined at this time.

Fourth Quarter – April 1 through June 30, 2017

The Final Quarter activities will continue with trainings and certifications on an as-needed, per person/subrecipient basis.

Credentials/Certifications/Licenses

WVOEO places great emphasis on maintaining workforce credentials for both WVOEO and subrecipient staff. Credentials, certifications, licenses, and certificates are all tracked for WVOEO and subrecipient staff in the database management system. Credentials, certifications, licenses, and certificates are reviewed and training, continuing education, re-testing, etc., is planned and performed as necessary to ensure WVOEO and subrecipient staff maintain all necessary credentials.
WVOEO has implemented an internal *Standard Operating Procedure-WV WAP Training Policy* to establish uniform procedures for documentation and tracking of certifications, licenses, training, technical assistance and workshops within the WV WAP, as well as the funding or reimbursement process for said trainings as applicable.

WVOEO Weatherization Specialists must maintain proficiency on new methods and techniques pertinent to the WAP. WVOEO Weatherization Specialist staff must maintain levels of knowledge aligned with the Weatherization industry as well as State and National Standards, and are also furnished with all State and Federal regulations as they are updated and released. At this time, one (1) WVOEO Weatherization Field Specialist is currently certified as HEP QCI, with the second Weatherization Field Specialist, who is a new hire, to be certified before July 1, 2016. One (1) WVOEO Weatherization Field Specialists is BPI Certified with Building Analyst and Envelope Professional certifications as well.

The WV WAP understands the direction that the DOE WAP is moving with regards to the requiring of national certifications. The WV WAP participated in the NREL/BPI Pilot program that was implemented in partnership with WV WAP and DOE. The WV WAP had workers tested on QCI Certifications as well as EA Certifications. As funding allows, the WV WAP will continue to pursue HEP Certifications for subrecipient workers as the incorporation of DOE WAP curricula, certifications, and standards have been incorporated into HEP Certifications. WVOEO feels the partnership between DOE/WAP and NREL/BPI is a great step toward standardization of the weatherization and energy efficiency industries.

Due to funding and time constraints, WVOEO understands that it will not be possible to get all subrecipient staff HEP certified for each position in this Program Year. However, as outlined above, WV WAP will incorporate the EA into WV WAP requirements and will add additional HEP certifications in subsequent years. In order to be certified at a particular position in the WV WAP, the person must attend the IREC accredited certification training and be able to pass the written test and field test as applicable. The following are the current defined WV WAP certifications:

1. HEP EA Certification
2. HEP QCI Certification
3. Energy (Client) Educator Certification
4. Environmental Protection Agency (EPA) Accredited Lead Renovator Certification (and Recertification as applicable)
5. HVAC Technician Certification

The following certifications are under consideration as requirements in the future for the respective weatherization staff positions in addition to the certifications listed above:

1. HEP Retrofit Installer Technician Certification
2. HEP Crew Leader Certification

In addition to the HEP level certifications and other required certifications, the WV WAP will periodically offer licensing testing through the West Virginia Fire Marshal's Office, the West Virginia Contractors Licensing Board, as well as EPA certification testing venues for the following:

1. West Virginia HVAC Electrician License
2. West Virginia Single Family Dwelling Electrician License
3. West Virginia Journeyman's Electrician License
4. West Virginia Apprentice Electrician License
5. EPA Section 608 Refrigerant Transition Technician Certification
6. HVAC Technician License
7. HVAC Technician in Training License

All weatherization programs must also have a West Virginia Residential Contractors License at the subrecipient level, obtained through the West Virginia Contractors Licensing Board.

Special projects are constantly being undertaken to ensure that the WV WAP keeps up with state-of-the-art energy conservation and management techniques. The following are other additional Tier 2 trainings that will be offered throughout the year as needed, especially with regards to the implementation of the *WV WAP Health and Safety Plan*:

1. ASHRAE 62.2 -2013
2. Combustion Appliance Zone (CAZ) training
3. Lead Safe Work Practices Training
4. OSHA Confined Spaces in Construction Standard Course
5. Healthy Homes
6. Weatherization Assistant Training
7. Duct Blaster
8. Infrared Camera Training
9. Database Management Training
10. Utility Program Training
11. Administrative/Programmatic/Financial Training
12. WV WAP Policy and Procedure Training

There are certain trainings (Tier 1 and 2) that are mandatory for compliance with rules and regulations in performance of the WAP. Currently, each subrecipient must have a certified QCI inspect all completed units, either in-house or through working with another subrecipient. As DOE mandates additional certifications, trainings will be made available to the subrecipients for compliance.

If a subrecipient does not have such due to losing an employee or another circumstance, then attending one (1) of those trainings would be mandatory or the functions must be contracted out to a subrecipient with certified staff. There is also a requirement that each subrecipient has a certified EPA Lead Renovator on staff as well as staff that have attended periodic mandatory trainings regarding new requirements with health and safety related measures (ASHRAE/CAZ, etc.) as well as having electrician's licenses to perform those functions. Also, after September 30, 2016, HVAC work will not be performed by subrecipient staff that does not have the proper West Virginia HVAC Technician or Technician in Training certification.

Non-compliance with regards to any mandatory training without the written approval from WVOEO due to extenuating circumstances could result in a subrecipient not able to perform certain functions with their staff until the requirements are met.

There are no certification requirements imposed by WVOEO of subrecipient staff prior to hire, however as previously mentioned WVOEO is instituting a set of "courses" for newly hired crew personnel. If a new hire is to perform any functions that require a specific certification

previously mentioned, (QCI, HVAC, etc.) then the certification must be obtained before any related work is performed.

Technical Assistance

The WV WAP will continue to utilize the traditional approaches of on-site program, administrative, fiscal, and in-field technical assistance based on monitoring findings and/or needs of particular subrecipients. T&TA activities are intended to maintain or increase the efficiency, quality and effectiveness of the WAP at all levels. Activities will be designed to maximize energy savings, minimize production costs, improve program management and crew/contractor "quality of work," and/or reduce the potential for waste, fraud, abuse and mismanagement.

As previously mentioned, WVOEO has issued an internal Standard Operating Procedure, *WV WAP Training Policy,* to establish uniform guidelines for internal WVOEO identification, execution, documentation, and tracking of technical assistance activities. T&TA is a vital responsibility of the WVOE0 and must be adequately tracked, documented, and reported.

Technical assistance will continue at this time to be provided by WV WAP Specialists. The Weatherization Specialists also perform subrecipient monitoring, so their familiarity with each subrecipients operation enables focused attention to specific technical assistance needs of particular subrecipients. The combination of monitoring report findings, discussions at staff meetings, peer exchanges, subrecipient feedback, and research of state-of-the-art energy conservation techniques all help determine the focus of the technical assistance.

Energy Savings:

As mentioned in the *State Plan Annual File*, during PY 2015 – 2016, WVOEO developed and implemented a system to estimate annual energy savings for all funding sources as per 440.14(c)(4). The process entails utilizing data from the "Weatherization Assistant Recommended Measures Output Report." Once enough data has been collected, the WV WAP should have the capability to compare productivity and associated energy savings data from the individual subrecipients and even could have the capability to break it down by measure. In PY 2016 – 2017, the WV WAP will be able to collect a full program year of data and WVOEO will pursue any additional development needed of the database management tool reporting capabilities to be able to utilize the data effectively in the future. This data can contribute to identifying areas of training or technical assistance needed for the work being performed in the field.

Pass-through entity Assessment:

Training needs have been identified and are continuously evaluated. The first priority is providing trainings for compliance with any new DOE regulations or guidance. After that is met, then trainings are scheduled by the greatest need, i.e., the number of subrecipients that need a

particular training. At the same time, WVOEO will evaluate how many HEP certifications have been obtained to be in compliance, and how many more could be obtained with available funding. WVOEO asses periodically both the needs of the subrecipients as well as funds that are available to meet those needs and will plan accordingly. WVOEO also makes assessments at the end of a grant cycle (DOE or LIHEAP) evaluating the amount that was budgeted for training during the previous grant cycle, and what was provided, comparing to anticipated training needs and funding available for the new grant cycle.

V.9 Energy Crisis and Disaster Response Plan

V.9.1 Energy Crisis

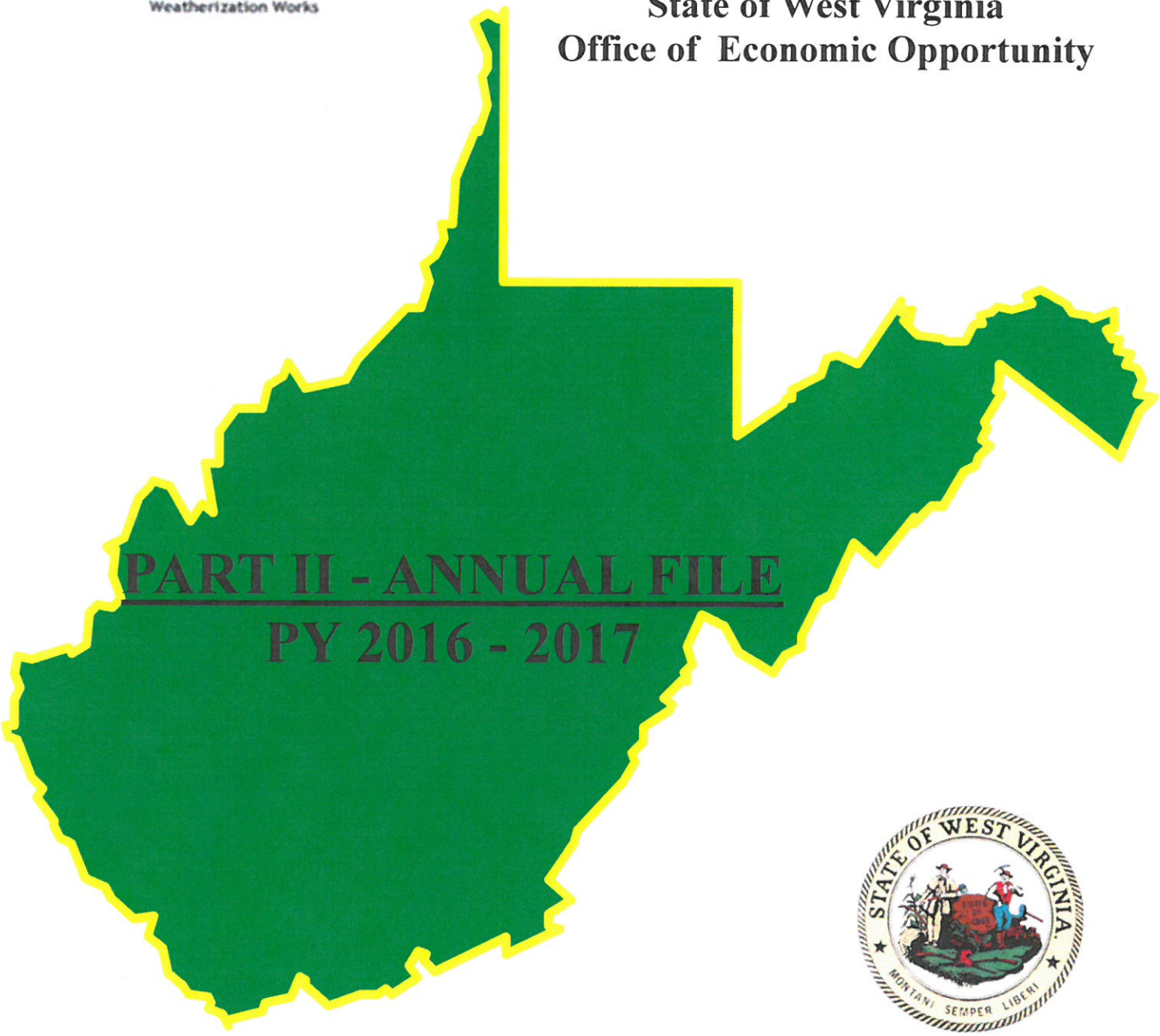
The WV WAP utilizes LIHEAP WAP funds to operate the Energy Crisis Intervention Program (ECIP). The intent of ECIP is to provide emergency heat during the winter heating season. The program addresses non-operable or severely malfunctioning and unsafe heating systems. Any household that is eligible for WAP is eligible for ECIP services. Any household that receives the emergency heating system repairs or replacements from ECIP must apply for regular WAP services. ECIP provides emergency assistance within 72 hours to ensure the household will have heat. Weatherization services will be provided by the end of the program year, unless conditions exist that deems the dwelling ineligible for weatherization services at that time. During the LIHEAP Weatherization Application and Award process, the subrecipients are provided updated ECIP guidance.

V.9.2 Disaster Response Plan

The WV WAP Disaster Response Plan is addressed in *Section V.1.2 Approach to Determining Building Eligibility (#7)* and is in accordance with DOE WPN 12-7 *Disaster Planning and Relief* and all applicable Federal regulations.

West Virginia Weatherization Assistance Program

State of West Virginia
Office of Economic Opportunity



PART II - ANNUAL FILE
PY 2016 - 2017

State of West Virginia
Office of Economic Opportunity

U.S. Department of Energy
Program Year: 2016 - 2017
State Plan Annual File

IV.1 SUBRECIPIENTS

Due to the amount of information needed, this Section is provided as an attachment.

IV.2 WAP Production Schedule:

Average Unit Costs, including Reweatherization, Subject to DOE Program Rules	
VEHICLE & EQUIPMENT AVERAGE COST PER DWELLING UNIT (DOE RULES)	
A. Total Vehicles & Equipment ($5,000 or more) Budget	$0
B. Total Units Weatherized	383
C. Total Units Reweatherized	0
D Total Dwelling Units to be Weatherized and Reweatherized (B+C)	383
E. Average Vehicles & Equipment Acquisition Cost per Unit (A divided by D)	$0
AVERAGE COST PER DWELLING UNIT (DOE RULES)	
F. Total Funds for Program Operations	$1,838,514
G. Total Dwelling Units to be Weatherized and Reweatherized (from line D)	383
H. Average Program Operations Costs per Unit (F divided by G)	$4,800
I. Average Vehicles & Equipment Acquisition Cost per Unit (from line E)	$0
J. Total Average Cost per Dwelling (H plus I)	$4,800

Total Units (excluding reweatherized): **383**

Reweatherized Units: **0**

IV.3 ENERGY SAVINGS

The West Virginia Weatherization Assistance Program (WV WAP) will utilize the WAP algorithm to calculate projected energy savings for the purpose of this application. The estimated energy savings for PY 2016-2017 is 11,222 MBtu.

The West Virginia Office of Economic Opportunity (WVOEO) developed and implemented a system to estimate annual energy savings for all funding sources as per 440.14(c)(4). The process entails utilizing data from the "Weatherization Assistant Recommended Measures Output Report." Once enough data has been collected, the WV WAP should have the capability to compare / report energy savings data. In PY 2016 – 2017, the WV WAP will be able to collect a full program year of data and WVOEO will pursue any additional development needed of the database management tool reporting capabilities to be able to utilize the data effectively in the future.

Energy Savings		
DOE Program	**Amount**	**Line**
Total DOE State Weatherization Allocation	$2,977,505	(a)
Total Cost associated with Administration, T&TA, Financial Audits, and Insurance	$1,138,991	(b)
Subtract the amount entered in line (b) from line (a), for a total Federal (DOE) funds available to weatherize homes	$1,838,514	(c)
State Average Cost per Home	$4,800	(d)
Divide the amount entered on line (c) by the amount entered on line (d), for Total Estimated Homes to be Weatherized	383	(e)
Multiply (e) by 29.3 MBTU for Total Annual Estimated Energy Savings resulting from DOE appropriated funds	11,222	(f)

The PY 2016 – 2017 energy saving calculations uses the most recent Metaevaluation of the National Weatherization Assistance Program (ORNL/CON-493).

IV.4 DOE-Funded Leveraging Activities:

WV WAP plans to continue to actively pursue non-Federal resources to supplement the Program through the development or continuation of leveraging projects and partnerships. The WV WAP expects at least a dollar return for every dollar invested in leveraging project activity. Weatherization leveraging activities in WV WAP since 2002 have consistently and successfully produced a greater number of dollars leveraged than expended every year on leveraging activities.

WVOEO will have a staff member that will continue to participate in leveraging activities. For PY 2016 - 2017, WVOEO plans to utilize **0.01 percent ($3,000)** of the annual formula DOE allocation for leveraging activities.

Planned activities will include the following objectives as needed to increase the scope of weatherization services to low-income West Virginia households:

- Continued facilitation in the development of utility/WAP projects and partnerships, including supporting representation activities in the West Virginia Public Service Commission if needed for new partnerships. WVOEO staff will continue to be involved in technical assistance, planning, and rules development of any negotiated projects or partnerships. Expansion or altering of certain weatherization-utility partnership activity may be negotiated between the utility companies and the local weatherization providers, with WVOEO made fully aware of any changes made in this manner, providing input as needed.

- Continued facilitation of the expansion of potential subrecipient leveraging activities by:
    - Assisting subrecipients and West Virginia Community Action Partnership (WVCAP) through the negotiation of partnerships, agreements, and other arrangements;
    - Presentation of arguments and associated activities before state or local agencies, as contained under Section 142 of the Energy Policy Act of 1992 (amended in 2005) and providing training and technical assistance support to WVCAP and subrecipients as part of their active participation in utility rate proceedings and process in West Virginia; and
    - Continued contact with both the utility industry and the private energy service company network

- Continue to provide support and leadership to subrecipients and WVCAP offering tools and resources to assist in weatherization outreach, possibly including fall Energy Awareness activities. Such potential activities may involve:
    - Support in holding leveraging-related meetings;
    - Preparation of statewide weatherization statistical documents;
    - Preparation of public information/energy efficiency data; and
    - Technical assistance in the organization of weatherization site demonstrations at the local subrecipient level to illustrate program technology for policymakers and other partners.

It is anticipated that continued leveraging activities will enable the WV WAP to enhance and expand comprehensive low-income weatherization services and be viewed as a leader in energy conservation technology and a viable partner in conservation projects.

Listed below are the identified funding sources outside of DOE funding for the WV WAP at this time. However, it is a goal of the WV WAP to continue to pursue all funding possible to support and build upon the weatherization program in the State of West Virginia. This pursuit may include but not be limited to grants, foundation funds, and other non-federal partnerships.

Current non-DOE Funding Supporting WV WAP

Low-Income Home Energy Assistance Program (LIHEAP): The WV WAP will continue to utilize Low-Income Home Energy Assistance Program (LIHEAP) funds in the operation of the weatherization program. WVOEO has worked with the West Virginia Department of Health and Human Resources (DHHR), the LIHEAP Grantee, to identify allowable measures and costs that could be supported by LIHEAP funding outside of DOE regulations and requirements. As per LIHEAP IM 1999-11, Weatherization Grantees "may use some, all or none of the statutory and regulatory provisions that apply to the Department of Energy's Low-Income Weatherization Assistance Program when spending LIHEAP funds on weatherization activities, provided the grantee administers both programs." Therefore, WVOEO works with DHHR to construct the LIHEAP agreement to provide more flexibility within the program and the ability to address issues that may not be able to be addressed with DOE funding due to certain restrictions.

Currently, the most notable exceptions of LIHEAP funding are the three (3) Supplemental Components: Electrical Upgrade, Weatherization Related Home Repair, and the Energy Crisis Intervention Program (ECIP) which historically have been approved measures of the Grant Agreement WVOEO has with DHHR. DHHR has also approved additional funds for Health and Safety measures through LIHEAP funding to keep the WV WAP Network in compliance with the 15 percent threshold for Health and Safety with DOE funds.

Utility Programs

Through participation of rate-case energy advocacy intervention activity at the Public Service Commission of West Virginia (WVCAP), the WVCAP continues to work and advocate for utility-weatherization leveraging partnership initiatives administered by WVOEO such as the following:

Dominion Hope Gas: In spring of 2009, WVCAP had intervened in a Dominion Hope Gas Company rate increase case in northern West Virginia. This case became complicated as the Company was also put up for sale in an acquisition case, in which negotiations became very complex. Although a new low-income weatherization program was agreed to in negotiations, the sale of the Company fell through and all proceedings were tabled. However, communication was reestablished with Dominion Hope and the Company provided $300,000 for a low-income weatherization partnership for the Company's low-income rate payers. During 2015, Dominion Hope Gas provided an additional $100,000 and will continue to provide $100,000 per year until the Company's next rate case.

AEP dba Appalachian Power Company and Wheeling Power Company: In early 2009, WVCAP had intervened in an Appalachian Power Company/Wheeling Power Company filing at the

Public Service Commission (PSC) of West Virginia, in a rate increase request. Through various meetings and proceedings over a period of eighteen months, in the fall of 2010 the PSC of West Virginia ruled that the Companies would offer various Demand Side Management (DSM) programs for a two (2) year period of time. A Low-Income Weatherization DSM Program was approved, for gross costs of $367,050 in year one, and $489,400 in year two. There were lengthy contract negotiations and development that occurred between AEP and WVOEO. A contract was finalized, implementing the DSM program in April of 2012. PY 2015 – 2016 was the fourth year of the contract. The contract and program scope will be revised for improvement. The contract and scope will be agreed upon by both WVOEO and AEP and the contract and program will be extended through March 24, 2017. For calendar year 2016, AEP will provide $415,000 for the program.

FirstEnergy Corporation dba Mon Power Company and Potomac Edison Company: As of February 25, 2011, Allegheny Energy and its subsidiaries, merged and became part of the FirstEnergy family of companies headquartered in Akron, Ohio. In West Virginia, FirstEnergy will continue to utilize Potomac Edison Company for the service area in the eastern panhandle, and the Mon Power Company in the north-central service area of the state. From this point forward, the former Allegheny Power programs will be FirstEnergy programs.

- **FirstEnergy EEP:** In a rate case settlement with Allegheny Energy in the summer of 2010, the Company agreed to continue funding an Electric Efficiency Partnership (EEP), with the same program design as the previous EEP, which ran from July 2007 thru June 2010, for $250,000 per year. FirstEnergy has sustained this commitment after the merger with Allegheny Energy. For PY 2015 – 2016, FirstEnergy contributed $100,000 and WVOEO anticipates a similar contribution for the continuation of an energy efficiency program in PY 2016-2017.

- **TrAILCo EEP+:** As a result of a negotiated settlement in 2009 for a new 500 kV transmission line that would be run through part of West Virginia, WVOEO, in partnership with Allegheny Energy, agreed to a new "TrAILCo" (Trans-Allegheny Interstate Line Company) Electric Efficiency Partnership 'Plus' program. The TrAILCo EEP+ was designed to enhance the existing low-income Weatherization Assistance Program and what was known at the time as the Allegheny Energy EEP by expanding comprehensive energy efficiency services to low-income Allegheny Energy customers in the six (6) county area that the TrAILCo transmission corridor passes through; North Central West Virginia Community Action Association serves Monongalia, Preston, and Tucker counties and Eastern West Virginia Community Action Agency serves Grant, Hardy, and Hampshire counties. TrAILCo EEP+ participation was restricted to those low-income customers who qualified for DOE Weatherization and are customers of FirstEnergy in the six (6) county high transmission line corridor. During PY 2016-2017 the WV WAP will continue to spend carry-over funds from previous years. $500,000 would be available this year.

- **LICUAP:** FirstEnergy Corporation has also developed and had approved a Low-Income Check-Up Audit Program (LICUAP) allowing the WV WAP subrecipients to perform "walk-thru" audits for low-income customers and address some basic baseload needs, as a complement to the WV WAP. This program was implemented in May 2012. This program will continue through PY 2014-2015. This program will differ than the others as the funds will not be administered by WVOEO; it is a contract between the utility company, its contracted entities, and the subrecipients. The program has been approved for five years, for a total of $2,785,919. According to the *Monongahela Power and The Potomac Edison Company Phase I Energy Efficiency and Conservation Plan* the funding amount made available by FirstEnergy Corporation for year five of the program is $678,779, adjusted by the Company for current expenditure progress. FirstEnergy Corporation is currently involved in the planning and approval process for future years.

IV.5 Policy Advisory Council:

The Policy Advisory Council (PAC) historically meets at least once a year with periodic updates sent to members if major changes occur. A PAC meeting is scheduled during the WV WAP State Plan process to solicit input from the PAC Committee on the development of the program for PY 2016 – 2017.

Policy Advisory Council Members:

NAME	*ORGANIZATION*	*CONTACT INFORMATION*	*REPRESENTING*
Steve Gilman	PRIDE Community Services Inc.	Steve@prideinlogan.com	WV WAP Network
Ann McDaniel	WV Statewide Independent Living Council	ann.meadows@wvsilc.org	Disabled West Virginians
Gaylene Miller	Senior State Director, AARP	GMiller@aarp.org	Elderly
Mary Chipps	Executive Director, WV Community Action Partnership	mchipps@suddenlinkmail.com	Community Action Agencies
Jacqueline Roberts	Public Service Commission; Consumer Advocate Division	jroberts@cad.state.wv.us	Consumers in West Virginia
VACANT	Utility Company or Utility Sector Representative	N/A	Utility Sector

The WV WAP PAC was reorganized in 2011 and has had recent adjustments in PY 2013 – 2014 and 2014 - 2015. WVOEO and the PAC are always open and considering if the addition of further representatives would be beneficial to the PAC. Currently there is a vacant Utility

Company or related representative position within the PAC. During the last PY, there was a person identified from a local utility company that has a partnership with the WVWAP that was going to be pursued for participation. However, that person has since relocated to a Virginia office. However, during the most recent PAC meeting, the vacancy was discussed and another option was brought up. This person does not work for a utility company, but has been heavily involved in utility rate cases, advocating for WV residents, testifying on behalf of energy efficiency initiatives and consumer advocate groups, and has published articles regarding energy efficiency programs and policies. The PAC is considering pursuit of her participation during PY 2016-2017.

The PAC works to advise state weatherization staff on issues, challenges, and future direction of the program. The council is composed of members of associations and organizations serving the citizens of West Virginia. PAC members, by their leadership roles in the larger community, bring added value from an outside perspective to the program. The committee can also be an advocate for the general public about the Weatherization Assistance Program, low-income energy needs, and energy efficiency. The PAC will advise WV WAP staff on policy, based on their knowledge, perspective, and sensitivity to their particular constituency.

During the scheduled PAC meeting on April 6, 2016, members had a chance to provide input for the PY2016 – 2017 State Plan as well as discuss challenges of the upcoming year. The agenda and notes of the meeting are submitted as an attachment to this plan.

IV.6 State Plan Hearings:

An announcement of the Public Hearing was posted for three (3) consecutive days, at least ten (10) days prior to the Public Hearing in eight (8) major newspapers throughout the state. The Public Hearing will be announced March 28, 2016, and WVOEO plans to hold the Public Hearing on April 12, 2016. The following newspapers are planned to advertise the hearing:

- Bluefield Daily Telegraph
- Charleston Newspapers
- Dominion Post (Morgantown)
- The Herald Dispatch (Huntington)
- Parkersburg News and Sentinel
- Register-Herald (Beckley)
- The Journal (Martinsburg)
- Wheeling Newspaper, Inc.

The "Public Hearing Notice" that appeared in the newspapers is included as an attachment. WVOEO also included evidence that each newspaper published the announcement as back-up documentation.

A court reporter was retained to provide a transcript of the Public Hearing and WVOEO provided the written transcript as an attachment.

IV.7 Miscellaneous:

"Recipient Business Officer"

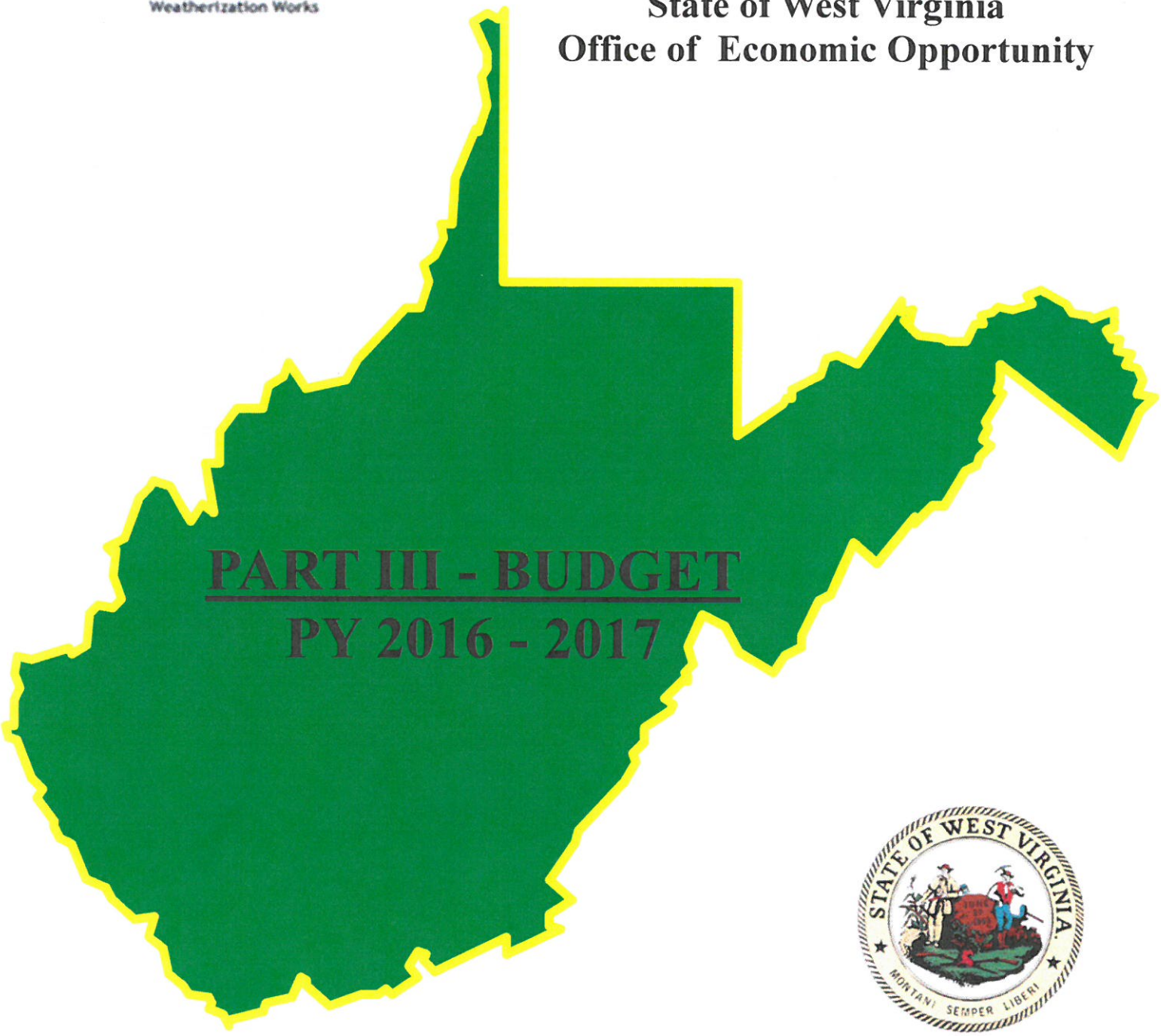
Name: Julie Alston – WVOEO Director
Email: Julie.A.Alston@wv.gov
Phone: 304 – 558 – 8860 ext. 312

"Recipient Principal Investigator"

Name: Mark Adams – WAP Administrator
Email: Mark.A.Adams@wv.gov
Phone: 304 – 558 – 8860 ext. 223

West Virginia Weatherization Assistance Program

State of West Virginia
Office of Economic Opportunity



PART III - BUDGET
PY 2016 - 2017

U.S. Department of Energy

BUDGET INFORMATION REMARKS

(Grant Number: EE0006192)

Remarks

WVOEO will be utilizing non-DOE resources to assist in the meeting of DOE WAP requirements. Primarily, these funds will be LIHEAP funds allocated to the WV WAP by the WV Department of Health and Human Resources. WVOEO has budgeted an even 50/50 split on the majority of expenses (unless otherwise noted in the specific Object Class Categories of the Budget Justification) between DOE WAP and LIHEAP funds. WVOEO will also utilize utility program administrative funds for the management of utility programs that run parallel to the DOE WAP.

Redistribution Provision: As necessary through the administration and management of this award, WVOEO may move funds between cost categories, functions, and activities to fully expend the monies during the budget period, which could include moving funds between subrecipients. All budget alterations or revisions will be in accordance with 2 CFR 200.308(e) and all other applicable Federal rules and regulations. Parameters and criteria outlining situations in which a subrecipient would have an allocation reduced, receive an additional allocation, or need to move funds within their own budget are laid out in the subrecipient WV WAP Grant Agreements, following all applicable Federal rules and regulations.

OMB Approval No. 0348-0044

BUDGET INFORMATION - Non-Construction Programs

1. Program/Project Identification No. EE0006192	2. Program/Project Title Weatherization Assistance Program	
3. Name and Address	West Virginia Office of Economic Opportunity 700 Washington Street East Charleston, WV 253010000	4. Program/Project Start Date 07/01/2016 5. Completion Date 06/30/2017

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. PY2016-17 DOE Annual Grant	81.042	$ 0.00		$ 2,977,505.00		$ 2,977,505.00
2.						
3.						
4.						
5. TOTAL		$ 0.00	$ 0.00	$ 2,977,505.00	$ 0.00	$ 2,977,505.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) GRANTEE ADMINISTRATION	(2) SUBGRANTEE ADMINISTR	(3) GRANTEE T&TA	(4) PROGRAM OPERATIONS	
a. Personnel	$ 75,324.00	$ 0.00	$ 133,000.00	$ 0.00	$ 210,467.00
b. Benefits	$ 30,129.00	$ 0.00	$ 53,200.00	$ 0.00	$ 84,186.00
c. Travel	$ 12,466.00	$ 0.00	$ 19,685.00	$ 0.00	$ 32,151.00
d. Equipment	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
e. Supplies	$ 2,700.00	$ 0.00	$ 2,562.00	$ 0.00	$ 5,262.00
f. Contract	$ 0.00	$ 218,756.00	$ 159,865.00	$ 1,838,516.00	$ 2,540,524.00
g. Construction	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
h. Other	$ 28,256.00	$ 0.00	$ 76,659.00	$ 0.00	$ 104,915.00
i. Total Direct Charges	$ 148,875.00	$ 218,756.00	$ 444,971.00	$ 1,838,516.00	$ 2,977,505.00
j. Indirect	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
k. Totals	$ 148,875.00	$ 218,756.00	$ 444,971.00	$ 1,838,516.00	$ 2,977,505.00
7. Program Income	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

OMB Approval No. 0348-0044

BUDGET INFORMATION - Non-Construction Programs

1. Program/Project Identification No.	2. Program/Project Title
EE0006192	Weatherization Assistance Program

3. Name and Address	West Virginia Office of Economic Opportunity 700 Washington Street East Charleston, WV 253010000	4. Program/Project Start Date	07/01/2016
		5. Completion Date	06/30/2017

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Federal Catalog No. (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1.						
2.						
3.						
4.						
5. TOTAL		$ 0.00	$ 0.00	$ 2,977,505.00	$ 0.00	$ 2,977,505.00

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1) HEALTH AND SAFETY	(2) LIABILITY INSURANCE	(3) FINANCIAL AUDITS	(4) LEVERAGIN G	
a. Personnel	$ 0.00	$ 0.00	$ 0.00	$ 2,143.00	$ 210,467.00
b. Benefits	$ 0.00	$ 0.00	$ 0.00	$ 857.00	$ 84,186.00
c. Travel	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 32,151.00
d. Equipment	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
e. Supplies	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 5,262.00
f. Contract	$ 275,776.00	$ 35,708.00	$ 11,903.00	$ 0.00	$ 2,540,524.00
g. Construction	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
h. Other	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 104,915.00
i. Total Direct Charges	$ 275,776.00	$ 35,708.00	$ 11,903.00	$ 3,000.00	$ 2,977,505.00
j. Indirect	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00
k. Totals	$ 275,776.00	$ 35,708.00	$ 11,903.00	$ 3,000.00	$ 2,977,505.00
7. Program Income	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

U.S. DEPARTMENT OF ENERGY

BUDGET JUSTIFICATION FOR FORMULA GRANTS

Applicant: West Virginia Office of Economic Opportunity
Award number: EE0006192

Budget period: 07/01/2016 - 06/30/2017

1. **PERSONNEL** - Prime Applicant only (all other participant costs are listed in 6 below and form SF-242A, Section B. Line 6.f. Contracts and Sub-Grants).

Positions to be supported under the proposed award and brief description of the duties of professionals:

Position	Description of Duties of Professionals
OEO Accountant	Payment and tracking of agency funding request and other bills
OEO Accounting Tech	Support for accounting staff
OEO Administrative Secretary	General secretarial duties for agency/management
OEO Chief Financial Officer	Oversee fiscal operations at OEO
OEO Director	Direct and manage Office of Economic Opportunity
Program Development Manager	Work with Utility Compaines to leverage funds for WAP $2,143 Leveraging (Seperate Line)
Program Specialist	Monitoring and T&TA
Program Specialist/Monitoring	Monitoring and T&TA
Program Specialist/Training	Monitoring and T&TA
WAP Systems Specialist	Develop and maintain data management system, train CAA staff
Weatherization Administrator	Administer, manage, and coordinate WV Weatherization Assistance Program
Weatherization Assistant Adminstrator	Assist in management and administration of WAP, includes some monitoring
Weatherization Secretary	General secretarial duties
Training Coordinator	Manage/oversee training and technical assistance activities
Fiscal Monitor	Perform fiscal monitorings
Program Development Manager	Leveraging portion

Direct Personnel Compensation:

Position	Salary/Rate	Time	Direct Pay
OEO Accountant	$40,512.00	19.9989 % FT	$8,101.95
OEO Accounting Tech	$34,332.00	15.0007 % FT	$5,150.04
OEO Administrative Secretary	$30,456.00	5.0007 % FT	$1,523.01
OEO Chief Financial Officer	$54,504.00	15.0007 % FT	$8,175.98
OEO Director	$68,004.00	11.9992 % FT	$8,159.94
Program Development Manager	$47,668.00	20.0008 % FT	$9,533.98
Program Specialist	$40,000.00	50.0000 % FT	$20,000.00
Program Specialist/Monitoring	$44,508.00	50.0000 % FT	$22,254.00
Program Specialist/Training	$50,856.00	50.0000 % FT	$25,428.00
WAP Systems Specialist	$41,676.00	39.9990 % FT	$16,669.98
Weatherization Administrator	$52,000.00	50.0000 % FT	$26,000.00
Weatherization Assistant Adminstrator	$45,636.00	50.0000 % FT	$22,818.00
Weatherization Secretary	$31,284.00	9.9995 % FT	$3,128.24
Training Coordinator	$51,660.00	50.0000 % FT	$25,830.00
Fiscal Monitor	$37,008.00	14.9991 % FT	$5,550.87
Program Development Manager	$47,668.00	4.4957 % FT	$2,143.01
		Direct Pay Total	$210,467.00

2. FRINGE BENEFITS

a. Are the fringe cost rates approved by a Federal Agency? If so, identify the agency and date of latest rate agreement or audit below, and attach a copy of the rate agreement to the application.

b. If a. above does not apply, please use this box (or an attachment) to further explain how your total fringe benefits costs were calculated. Your calculations should identify all rates used, along with the base they were applied to (and how the base was derived), and a total for each (along with grand total). If there is an established computation methodology approved for state-wide use, please provide a copy. Also, please fill out the table below with the Fringe Benefits Calculations.

The basis for computation of rates for fringe benefits of State employees includes federal and state regulations, personnel policies, and past experience. Fringe benefits to be paid from this grant include:Social Security match - FICA @ 7.65% of the gross salary as per federal regulation
Workers compensation - calculated at .64% of gross salaryUnemployment compensation - calculated at 1.21% of gross salaryHealth insurance - depends on salary, type of coverage (single or family), optional life, and choice of plan, as per personnel policies and state options - calculated at 16% of gross salaryState Retirement fund - calculated at 14.5% of gross salaryWe are using 40% for budgeting purposes in this grant year, based on average fringe benefit costs from the previous grant year.

Fringe Benefits Calculations

Position	Direct Pay	Rate	Benefits
OEO Accountant	$8,101.95	39.9998 %	$3,240.76
OEO Accounting Tech	$5,150.04	39.9997 %	$2,060.00
OEO Administrative Secretary	$1,523.01	39.9997 %	$609.20
OEO Chief Financial Officer	$8,175.98	39.9998 %	$3,270.38
OEO Director	$8,159.94	39.9998 %	$3,263.96
Program Development Manager	$9,533.98	39.9998 %	$3,813.57
Program Specialist	$20,000.00	39.9999 %	$7,999.98
Program Specialist/Monitoring	$22,254.00	39.9999 %	$8,901.58
Program Specialist/Training	$25,428.00	39.9998 %	$10,171.15
WAP Systems Specialist	$16,669.98	39.9998 %	$6,667.96
Weatherization Administrator	$26,000.00	39.9990 %	$10,399.74
Weatherization Assistant Adminstrator	$22,818.00	39.9998 %	$9,127.15
Weatherization Secretary	$3,128.24	39.9998 %	$1,251.29
Training Coordinator	$25,830.00	39.9990 %	$10,331.74
Fiscal Monitor	$5,550.87	39.9998 %	$2,220.34
Program Development Manager	$2,143.01	39.9998 %	$857.20
		Fringe Benefits Total	$84,186.00

3. TRAVEL

a. Please provide the purpose of travel, such as professional conference(s), DOE sponsored meeting(s), project management meeting, etc. If there is any foreign travel, please identify.

Purpose of Trip	Number of Trips	Cost Per Trip	Total
National Healthy Homes Conference 1 x 2200=$2200 X 50% (DOE cost) =$1100	1	$1,100.00	$1,100.00
WVOEO staff travel for Training for Certifications 2400 x 50% (DOE cost) = 1200 All TTA	4	$300.00	$1,200.00
National CAP Conference $1100 DOE admin put towards conference expenses for 2 admin staff	2	$550.00	$1,100.00
WAP Field Monitoring Total Cost: $13050 (450 per trip) DOE cost 50% = 6525 (225 per trip)	29	$225.00	$6,525.00

WAP Program Monitoring Total Cost 13,892 DOE 50% = 6946 Admin 5086 TTA 1860	10	$694.60	$6,946.00
WVOEO staff travel for Field/Technical Meetings/Roundtables 2400 x 50% (DOE cost) = 1200 (All TTA)	4	$300.00	$1,200.00
WAP Fiscal Monitoring Total Cost: 2460 All admin DOE cost 50% = 1230	12	$102.50	$1,230.00
Return Field Monitoring Trips for Follow Up compliance Total Cost: 3100 DOE Cost 50% = 1550 (All TTA)	10	$155.00	$1,550.00
WVOEO staff travel for WV WAP Programmatic/Administrative Meeting 1000 x 50% (DOE cost) = 500 250 Admin 250 TTA	2	$250.00	$500.00
Fall & Mid-Winter NASCSP Conference Total Cost $12000 DOE Total Cost: 6000 (Admin: 2400; TTA 3600)	6	$1,000.00	$6,000.00
CAPLAW Conference 4 x $2,400= $9,600 x 50% (DOE cost)= $4800 Admin: 2400 TTA: 2400	4	$1,200.00	$4,800.00
		Travel Total	$32,151.00

b. Please provide the basis for estimating the costs, such as past trips, current quotations, Federal Travel Regulations, etc. All listed travel must be necessary for the performance of the award objectives.

Most travel estimates are based on State Travel Policy and past trips of a similar nature.

4. EQUIPMENT - Equipment is generally defined as an item with an acquisition cost greater than $5,000 and a useful life expectancy of more than one year.

a. List all proposed equipment below and briefly justify its need as it applies to the objectives of the award.

Equipment	Unit Cost	Number	Total Cost	Justification of Need

b. Please provide a basis of cost such as vendor quotes, catalog prices, prior invoices, etc. and justify need. If the Equipment is being proposed as Cost Share and was previously acquired, please provide the source and value of its contribution to the project and logical support for the estimated value shown. If it is new equipment which will retain a useful life upon completion of the project, provide logical support for the estimated value shown. Also, please indicate whether the Equipment is being used for other projects or is 100% dedicated to the DOE project.

5. SUPPLIES - Supplies are generally defined as an item with an acquisition cost of $5,000 or less and a useful life expectancy of less than one year. Supplies are generally consumed during the project performance.

a. List all proposed supplies below, the estimated cost, and briefly justify the need for the supplies as they apply to the objectives of the award. Note that all direct costs, including Supply items, may not be duplicative of supply costs included in the indirect pool that is the basis of the indirect rate applied for this project.

General Category	Cost	Justification of Need
General Office Supplies, DOE Share	$2,400.00	Office supplies for daily use in operating program-paper, ink, pens, clips, binders, tape, etc. Total 12 month cost: 4800 (DOE 50%) admin 1200 tta 1200
Computer Purchase Admin	$1,500.00	Total cost $3000 (DOE 50%)
computer purchase/upgrade	$1,362.00	Total Cost: 2724 (50% DOE) TTA funds
Materials and Supplies Total	$5,262.00	

b. Please provide a basis of cost for each item listed above and justify need. Examples include vendor quotes, prior purchases of similar or like items, published price list, etc.

Costs are based on previous year's costs.

6. CONTRACTS AND SUBGRANTS - Provide the following information for New proposed subrecipients and subcontractors. For ongoing subcontractors and subrecipients, this information does not have to be restated here, if it is provided elsewhere in the application; under Name of Proposed Sub, indicate purpose of work and where additional information can be found (i.e weatherization subgrants, Annual File section II.3).

Name of Proposed Sub	Total Cost	Basis of Cost*
Southwestern CAC	$306,628.00	Operate local WAP
Community Resources, Inc.	$298,297.00	Operate local WAP
CHANGE, Inc.	$137,126.00	Operate local WAP
Coalfield CAP	$280,204.00	Operate local WAP
Training Centers/Trainers Costs for Subrecipients - All TBD	$126,865.00	All costs are estimates - All trainings will go through bidding process Total DOE cost: 126,865. Additional cost picked up with other funding sources DOE Costs - ALL TTA: HVAC: $8,290 BPI QCI: $16,700 BPI EA: $28,452 OSHA: $3293 New Hire/Basic WX: $225 WV State Electrical licenses: $2367 ASHRAE: $25,900 Lead Safe: $750 CAZ: $2160 Infrared Camera: $16,000 HEP Crew Leader: $5250 CEUs (HEP, Healthy Homes): $17478
Nicholas CAP	$40,471.00	Operate local WAP
MountainHeart Community Services	$103,321.00	Operate local WAP
DBA FACSPro	$33,000.00	WAP database management sys. Total WAP cost: $66,000 DOE upgrade cost: 13,000 TTA DOE System Maintenance Fee: 20,000 TTA
Community Action of South Eastern WV	$232,352.00	Operate local WAP
North Central WV CAA, Inc.	$515,412.00	Operate local WAP
Mountain CAP of WV, a CDC	$115,224.00	Operate local WAP
Eastern WV CAA, Inc.	$246,160.00	Operate local WAP
Council of the Southern Mountains	$49,280.00	Operate local WAP
PRIDE Community Services	$56,184.00	Operate local WAP
Contracts and Subgrants Total	$2,540,524.00	

*For example, Competitive, Historical, Quote, Catalog

7. OTHER DIRECT COSTS - Other direct costs are direct cost items required for the project which do not fit clearly into other categories. These direct costs may not be duplicative of costs included in the indirect pool that is the basis of the indirect rate applied for this project. Examples are: conference fees, subscription costs, printing costs, etc.

a. Please provide a General Description, Cost and Justification of Need.

General Description	Cost	Justification of Need
Commerce Marketing Fees	$330.00	Total cost: $660 DOE 50% All TTA
T&TA Support for Sub-grantee Travel for Trainings & Certifications	$27,431.00	Sub-grantee Travel Costs Only Total WAP Cost: $47,232 DOE: $27,431 (58%) TOTAL WAP Cost: BPI QCI: $6,975 (DOE 50%: 3487) BPI EA: $14,725 (DOE 50%: 7362) ASHRAE: $12,400 (DOE 50%: 6200) EPA 608: $4,185 (DOE 50%: 2093) Lead Safe Training & Healthy Homes CEUs: $1,318 (DOE 50%: 659) CAZ: $4,220 (DOE 100%) OSHA: $1085 (DOE 100%) BPI Crew Leader: $2,325 (DOE 100%)
OEO Insurance	$5,030.00	WX Share = 10060 DOE 50% = 5030 Admin 2200 TTA 2830
Parking	$2,190.00	WX Share: $4380 DOE 50%: 2190 Admin: 1200 TTA: 990
Miscellaneous cost	$420.00	Miscellaneous items such as bottled water for office water cooler, cell phone accessories etc. Total: $840 DOE: 50% Admin 210 TTA 210

NASCSP Yearly Membership Fees	$1,350.00	Association Dues Total Cost: 2700 DOE Cost: 1350 All admin
Office Equipment Rental, Maintenance, and Repair	$1,408.00	Training Center Office Equip 2816 X 50% = $1408 All TTA
Field Equipment Maintenance and Repair	$500.00	Total WX cost: 1000 DOE 50%: 500 All TTA
Telecommunications	$3,930.00	Desk phones, cell phones, and conference calls WX share: $7,860 DOE 50% = $39,300 Admin: $1830 TTA: $2100
Subrecipient Round Table/Meetings	$9,000.00	Total WAP expenses 28,000; DOE cost 32%
Postage	$100.00	Total WX cost: $200 DOE 50%: $100 All admin
Associations and Professional Memberships	$562.00	Total cost 1125 DOE 50% = 562 All TTA Total WAP Cost: 1125 HVAC Contractor License: 300 HVAC Electrical License: 150 Single Family Electrical: 150 EPA Section 608: 525
Office Space	$30,432.00	WX: $60,864 (OEO main office and Ghent Training Center Office) DOE cost 60,864 x 50% = $30,432 Admin: $12,090 TTA: $18,342
Vehicle Fuel	$3,600.00	WX Cost: 7200 DOE 50%: 3600 All TTA
Advertising and Transcript for Public Hearing	$950.00	total cost: $1900 50% = $950 all admin
Computer Networking	$13,682.00	Computer Networking cost, IT costs, Website costs Costs based on actual expenses Total WX cost: 27,364 Doe 50%: 13682 Admin: 7996 TTA: 5686
Vehicle Maintenance/Repairs	$4,000.00	WX share: 8000 DOE 50%: 4000 All TTA
Other Direct Costs Total	$104,915.00	

b. Please provide a basis of cost for each item listed above. Examples include vendor quotes, prior purchases of similar or like items, published price list, etc.

Rental and dues costs are based on agreements. Other costs are estimates based on prior similar expenditures or recent estimates
All costs included in Other Direct Costs are properly segregated from indirect costs to ensure there are not duplicate charges.
All costs proposed are only being used in support of the WAP program.

8. INDIRECT COSTS

a. Are the indirect cost rates approved by a Federal agency? If so, identify the agency and date of latest rate agreement or audit and provide a copy of the rate agreement.

b. If the above does not apply, indicate the basis for computation of rates, including the types of benefits to be provided, the rate(s) used, and the cost base for each rate. You may provide the information below or provide the calculations separately.

The name and phone number of the individual responsible for negotiating the State's indirect cost rates.

Name: Phone Number:

WEST VIRGINIA
WEATHERIZATION ASSISTANCE PROGRAM

2016 – 2017 STATE PLAN

ATTACHMENTS

REC'D APR 14 2016

West Virginia USA

WEST VIRGINIA DEVELOPMENT OFFICE

1900 Kanawha Boulevard East • Charleston, WV 25305-0311
(304) 558-2234 • (800) 982-3386 • WVDO.org

April 6, 2016
File: PNRS-WVOEO
SAI-WV160331-021

Mr. Mark A. Adams
Weatherization Manager
West Virginia Office of Economic Opportunity
700 Washington Street East, 4th Floor
Charleston, West Virginia 25301

Dear Mr. Adams:

RE: CFDA # 81.042 Weatherization Assistance for Low-Income Persons

The State Clearinghouse has reviewed the West Virginia Office of Economic Opportunity's request to the U.S. Department of Energy (DOE) for financial assistance in the amount of Two Million, Nine Hundred Seventy Seven Thousand, Five Hundred, and Five Dollars ($2,977,505.00). The funding would come from the U. S. Department of Energy Annual Weatherization Assistance Program and would assist low-income persons statewide.

Thank you so much for contacting us here in Community Development. We will assist you in every way possible. This will certify that the requirements of the State's Intergovernmental Review Process have been met, and the State Process is in concurrence with the project. Clearinghouse approval does not constitute approval of the application by the funding agency.

Sincerely yours,

Mary Jo Thompson, Director
Community Development Division

MJT: sf

cc: Michael Peterson/USDOE
All Regional PDCs

REC'D DEC 10 2014

WEST VIRGINIA
Division of Culture and History

The Culture Center
1900 Kanawha Blvd., E.
Charleston, WV 25305-0300
Randall Reid-Smith, Commissioner
Phone 304.558.0220 • www.wvculture.org
Fax 304.558.2779 • TDD 304.558.3562
EEO/AA Employer

December 5, 2014

Ms. Lyn M. Bartges
Weatherization Administrator
WV Office of Economic Opportunity
700 Washington Street East 4th Floor
Charleston, WV 25301

RE: Three Year Agreement - Excluded Activities
FR# 15-89-MULTI

Dear Ms. Bartges,

We have received your letter which outlines the specific roles and responsibilities of the WV Office of Economic Opportunity and the State Historic Preservation Office for a period of three years from December 1, 2014 to November 30, 2017. Attached is a list of exempted activities from individual review. These activities relate to the U.S. Department of Energy Grantees of the Weatherization Assistance Program for Low Income Persons (WAP) in the State of West Virginia. We concur with the contents of your letter and the list. Fulfillment of the agreed procedures and adherence to the list fulfills the obligations of our agencies according to Section 106 of the National Historic Preservation Act of 1966.

Thank you for your cooperation. Please contact our office should there be any programmatic or staff changes, as well as questions or concerns.

Sincerely,

Susan M. Pierce
Deputy State Historic Preservation Officer

OCT 22 2014

West Virginia Office of Economic Opportunity
700 Washington Street, E., 4th Floor, Charleston, WV 25301
Phone: 304-558-8860 | Fax: 304-558-4210
www.oeo.wv.gov

October 22, 2014

Susan M. Pierce
Deputy State Historic Preservation Officer
West Virginia Division of Culture and History
1900 Kanawha Boulevard East
Charleston, WV 25305

Dear Ms. Pierce,

I would like to request a renewal of the agreement between the Office of Economic Opportunity and the WV State Historic Preservation Office for a period of three (3) years, from December 1, 2014 to November 30, 2017. The Office of Economic Opportunity (OEO) is the administering agency of DOE funds for WAP in the State of West Virginia. This correspondence is to ensure compliance with the National Historic Preservation Act (NHPA or "the Act"), 16 U.S.C 470 et seq., as it relates to Department of Energy (DOE) Grantees of the Weatherization Assistance Program for Low-Income Persons (WAP), specifically in the State of West Virginia. It is our opinion that our program will result in numerous projects that do not have the potential to impact historic resources. We request your concurrence with this determination and have attached to this letter a list of the undertakings that we would request to be exempt from Section 106 review by your office. In anticipation of your agreement with these findings, we have taken the liberty to outline what our organization believes to be the roles and responsibilities of the State Historic Preservation Office and the Office of Economic Opportunity.

Specific roles and responsibilities of both parties are as follows:

1. OEO shall be responsible for conducting Section 106 reviews in a timely manner, preparing documentation, and maintaining records on undertakings. Undertakings that involve properties greater than forty five (45) years old and are not listed on Appendix A (attached) shall be submitted to the SHPO for review.
2. OEO shall ensure that the provisions of this agreement apply to its sub-grantees and to their sub-recipients.
3. OEO shall not submit to the SHPO undertakings outlined on the attached list as they do not have the potential to cause effects on historic properties even when historic properties may be present.
4. As allowed under Section 106 of the NHPA, the SHPO shall provide comments to OEO within thirty (30) days for reviews. In the event that the SHPO fails to comment within the thirty (30) day period, OEO can assume the SHPO has concurred, and proceed.

5. OEO will advise sub-grantee agencies of the provisions in Section 110 (k) of the Act and will advise the sub-grantees that Section 106 reviews may be compromised when project undertakings are initiated prematurely.
6. Both parties shall make every effort to expedite Section 106 reviews for a period of less than the 30-day review when consistent with the terms of the DOE grant agreements. OEO has identified two (2) qualified staff members to review these projects. These qualified persons have attended training regarding the National Register of Historic Places and will be applying the criteria of the National Register. Their certificates are attached. When an emergency, as defined by OEO, has the potential to impact a building 45 years or older and necessitates a quicker review by the SHPO, the SHPO will make every reasonable effort to expedite the review. As defined by the OEO, emergencies exist where there is a need to eliminate an imminent threat to health and safety of residents. It is the OEO's responsibility to communicate to the SHPO the need for an expedited review.
    a. OEO shall forward documentation to the SHPO for review immediately upon notification that an emergency exists. Documentation should include a) nature of the emergency; b) the address of the historic property involved; c) photographs showing the current condition of the building; and d) the time frame allowed by local or county officials to respond to, or correct, the emergency situation.
    b. If an emergency undertaking will result in an adverse effect to a historic resource, the OEO will work with the SHPO to avoid, minimize or mitigate the adverse effect.
7. OEO shall maintain a list of undertakings and shall make the documentation available to the public.

We request that the attached list be exempted from individual review for a period of three (3) years, from December 1, 2014 until November 30, 2017. OEO and its sub-recipients will maintain appropriate documentation of its funded activities should the SHPO wish to review the ongoing application of these exemptions. Please provide your comments and concurrence with this proposed list of exemptions.

Sincerely,

Lyn M. Bartges

Lyn M. Bartges
Weatherization Administrator

WAP UNDERTAKINGS EXEMPT FROM SECTION 106 REVIEW

All undertakings will be done in accordance with applicable local building codes or the International Building Code, where applicable. In accordance with 36 CFR 800.3(a)(1), the following undertakings have been determined to have no potential to cause effects on historic properties:

A. Exterior Work

1) Air sealing of the building shell, including caulking, weather-stripping, and other air infiltration control measures on windows and doors, and installing thresholds in a manner that does not harm or obscure historic windows or trim.
2) Thermal insulation, such as non-toxic fiberglass and foil wrapped, in walls, floors, ceilings, attics, and foundations in a manner that does not harm or damage historic fabric.
3) Blown in wall insulation where no holes are drilled through exterior siding, or where holes have no permanent visible alteration to the structure
4) Removable film on windows (if the film is transparent), solar screens, or window louvers, in a manner that does not harm or obscure historic windows or trim.
5) Reflective roof coating in a manner that replicates the historic materials and form, or with materials that restore the original feature based on historic evidence, and in a manner that does not alter the roofline, or where not on a primary roof elevation or visible from the public right-of-way.
6) Repair of minor roof and wall leaks prior to insulating attics or walls, provided repairs replicates existing surface composite

B. Interior Work

Special Note: Undertakings to interior spaces where the work will not be visible from the public right of way; no structural alterations are made; no demolition of walls, ceilings or floors occurs; no drop ceilings are added; or no walls are leveled with furring or moved, should be automatically excluded from **SHPO** review. This work includes:

1. Energy efficiency work within the building shell:

a. Thermal insulation in walls, floors, ceilings, attics, crawl spaces, ducts and foundations
b. Blown in wall insulation where no decorative plaster is damaged.
c. Plumbing work, including installation of water heaters
d. Electrical work, including improving lamp efficiency
e. Sealing air leaks using weather stripping, door sweeps, and caulk and sealing major air leaks associated with bypasses, ducts, air conditioning units, etc.
f. Repair or replace water heaters
g. Adding adjustable speed drives such as fans on air handling units, cooling tower fans, and pumps
h. Install insulation on water heater tanks and water heating pipes

i. Install solar water heating systems, provided the structure is not visible from the public right of way
j. Install waste heat recovery devices, including desuperheater water heaters, condensing heat exchangers, heat pump and water heating heat recovery systems, and other energy recovery equipment
k. Repair or replace electric motors and motor controls like variable speed drives
l. Incorporate other lighting technologies such as dimmable ballasts, day lighting controls, and occupant controlled dimming

2. Work on heating and cooling systems:
a. Clean, tune, repair or replace heating systems, including furnaces, oilers, heat pumps, vented space heaters, and wood stoves
b. Clean, tune repair or replace cooling systems, including central air conditioners, window air conditioners, heat pumps, and evaporative coolers
c. Install insulation on ducts and heating pipes
d. Conduct other efficiency improvements on heating and cooling systems, including replacing standing pilot lights with electronic ignition devices and installing vent dampers
e. Modify duct and pipe systems so heating and cooling systems operate efficiently and effectively, including adding return ducts, replace diffusers and registers, replace air filters, install thermostatic radiator controls on steam and hot water heating systems
f. Install programmable thermostats, outdoor reset controls, UL listed energy management systems or building automation systems and other HVAC control systems

3. Energy efficiency work affecting the electric base load of the property:
a. Convert incandescent lighting to fluorescent
b. Add reflectors, LED exist signs, efficient HID fixtures, and occupancy (motion) sensors
c. Replace refrigerators and other appliances

4. Health and safety measures:
a. Installing fire, smoke or carbon dioxide detectors / alarms
b. Repair or replace vent systems on fossil-fuel-fired heating systems and water heaters to ensure that combustion gasses draft safely to outside
c. Install mechanical ventilation, in a manner not visible from the public right of way, to ensure adequate indoor air quality if house is air-sealed to building tightness limit

Advisory Council on Historic Preservation

The Section 106 Essentials

April 17-18, 2012, Atlanta, GA

This will verify that

Teresa Longfellow

has successfully completed the course

Advisory Council on Historic Preservation

The Section 106 Essentials

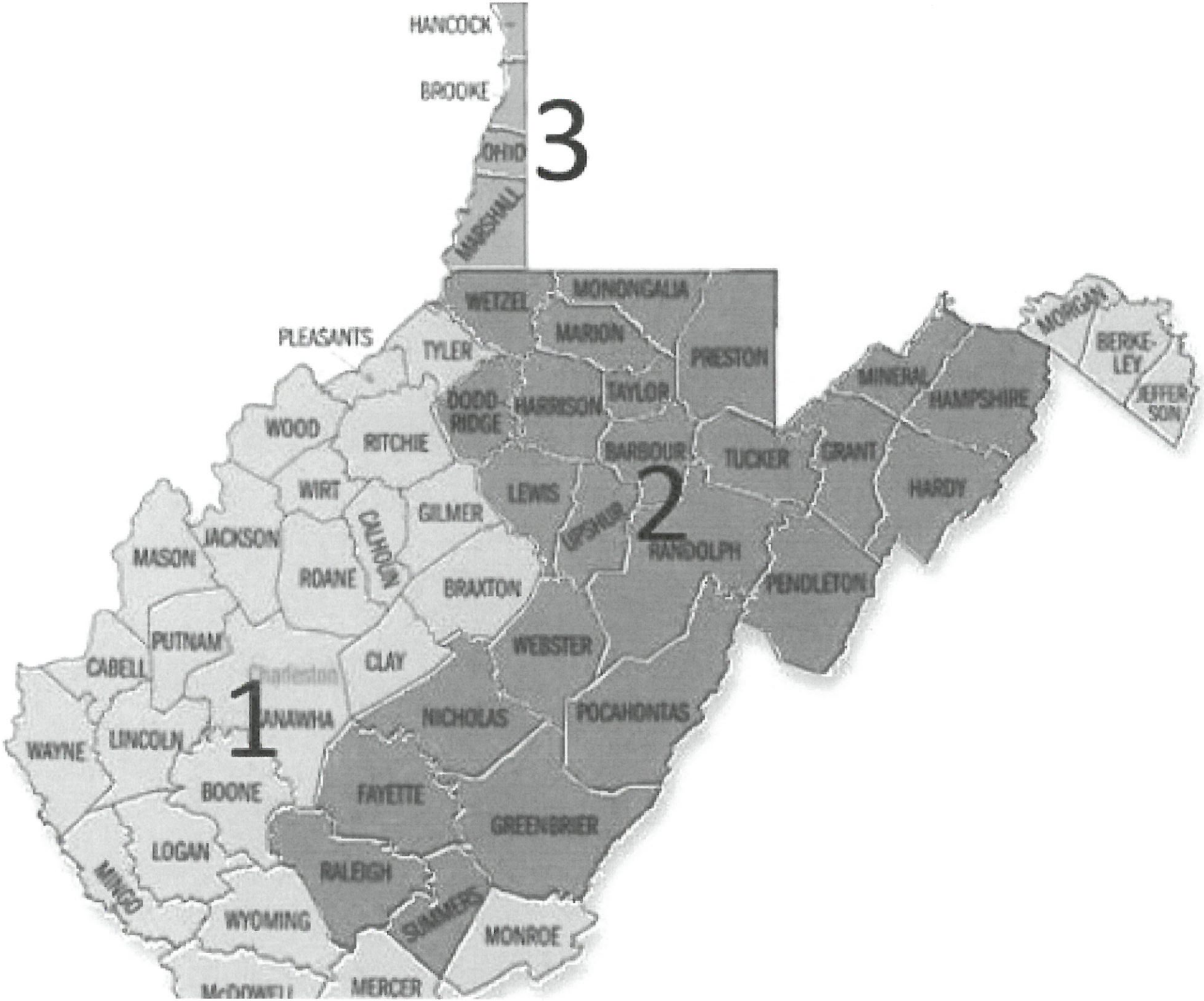
November 5-6, 2015, Washington, DC

This will verify that

Mark A. Adams

has successfully completed the course

Reid Nelson
Director, Office of Federal Agency Programs
Advisory Council On Historic Preservation


HANCOCK
BROOKE
OHIO
MARSHALL
3
WETZEL
MONONGALIA
MARION
PRESTON
PLEASANTS
TYLER
DODD-RIDGE
HARRISON
TAYLOR
MINERAL
HAMPSHIRE
MORGAN
BERKE-LEY
JEFFER-SON
WOOD
RITCHIE
BARBOUR
TUCKER
GRANT
HARDY
WIRT
LEWIS
GILMER
UPSHUR
2
JACKSON
CALHOUN
RANDOLPH
MASON
ROANE
BRAXTON
PENDLETON
PUTNAM
WEBSTER
CABELL
CLAY
Charleston
1
KANAWHA
NICHOLAS
POCAHONTAS
WAYNE
LINCOLN
BOONE
FAYETTE
GREENBRIER
LOGAN
RALEIGH
MINGO
WYOMING
SUMMERS
MONROE
MERCER

CDD
National Climatic Data Center
1980-2010

108 Locations	**CDD**	
ALDERSON, WV	702	
ANSTED HAWKS NEST SP, WV	816	
ATHENS, WV	442	
BARTOW 1S, WV	224	
BAYARD, WV	247	
BECKLEY RALEIGH CY AP, WV	558	
BECKLEY VA HOSPITAL, WV	313	
BELINGTON, WV	535	
BLUEFIELD MERCER CO AP, WV	854	
BLUEFIELD, WV	477	
BLUESTONE LAKE, WV	924	
BUCKEYE, WV	463	
BUCKHANNON, WV	645	
BURTON, WV	526	
CACAPON ST PRK # 2, WV	783	
CAIRO, WV	779	
CANAAN VALLEY 2, WV	149	
CANAAN VALLEY, WV	218	
CHARLESTON WSFO, WV	**924**	**1011**
CHARLESTON YEAGER AP, WV	**1097**	
CLARKSBURG 1, WV	807	
CLARKSBURG BENEDUM FLD, WV	744	
CLENDENIN, WV	999	
COOPERS ROCK SF, WV	320	
CRESTON, WV	782	
DAVIS 3 SE, WV	192	
DRY CREEK, WV	783	
DUNLOW 1 SW, WV	894	
ELIZABETH, WV	924	
ELKHORN, WV	782	
ELKINS 21 ENE, WV	**138**	**307**
ELKINS RANDOLPH CY AP, WV	**476**	
FAIRMONT, WV	895	
FLAT TOP, WV	503	
FRANKLIN 2 NE, WV	626	
FROST 3 NE, WV	221	
GASSAWAY, WV	927	
GLADY 1 N, WV	173	
GLENVILLE, WV	945	
GRANTSVILLE 1ESE, WV	865	
HACKER VALLEY, WV	486	
HAMLIN, WV	1058	
HARRISVILLE, WV	779	

HOGSETT R C BYRD DAM, WV	1025
HUNTINGTON SEWAGE PLT, WV	1240
HUNTINGTON TRI ST AP, WV	1135
KEARNEYSVILLE, WV	817
KEYSER 2 SSW, WV	873
KOPPERSTON, WV	501
KUMBRABOW, WV	174
LEWISBURG 3 N, WV	798
LOGAN, WV	1320
LONDON LOCKS, WV	1175
LOST RIVER, WV	598
MADISON 3NNW, WV	1187
MANNINGTON 8 WNW, WV	591
MARLINTON, WV	326
MARTINSBURG 2, WV	892
MARTINSBURG E WV RGNL AP, WV	896
MATHIAS, WV	603
MCROSS 3 E, WV	242
MIDDLEBOURNE 3 ESE, WV	710
MOOREFIELD 1 SSE, WV	857
MORGANTOWN HART FLD, WV	813
MORGANTOWN L&D, WV	753
MOUNDSVILLE, WV	909
MT NEBO 1 S, WV	559
MULLENS 3 E, WV	763
OAK HILL, WV	595
OCEANA 2 SE, WV	745
PARKERSBURG FAA AP, WV	956
PARKERSBURG, WV	1158
PARSONS 1 NE, WV	538
PEA RIDGE PSD, WV	997
PETERSBURG, WV	841
PHILIPPI, WV	733
PICKENS 2 N, WV	369
PIKE ISLAND L&D, WV	824
PINEVILLE, WV	858
R.D. BAILEY LAKE, WV	724
RICHWOOD 1SSE, WV	364
RIPLEY, WV	1093
ROCK CAVE 2 NE, WV	538
ROMNEY 1 SW, WV	878
ROWLESBURG 1, WV	613
SANDYVILLE 9 NE, WV	718
SENECA SF 1N, WV	323
SNOWSHOE, WV	54
SOUTHSIDE 3 NNW, WV	706
SPENCER, WV	786

STONEWALL JACKSON DAM, WV	793	
SUGAR GROVE 4 NNE, WV	565	
SUMMERSVILLE LAKE, WV	500	
SUTTON LAKE, WV	850	
TERRA ALTA #1, WV	372	
TYGART DAM, WV	558	
UNION 3 SSE, WV	664	
UPPER TRACT, WV	697	
WARDENSVILLE RM FARM, WV	743	
WEBSTER SPRINGS 8 N, WV	678	
WEBSTER SPRINGS, WV	696	
WEST UNION 2, WV	800	
WESTON, WV	820	
WHEELING OHIO CO CAA A, WV	688	
WHEELING, WV	929	
WHITE SULPHUR SPRINGS, WV	537	
WILLIAMSON, WV	1321	
WINFIELD LOCKS, WV	1086	
	75460	
WV Average CDD	**698.7**	
Median CDD	**743.5**	
PITTSBURGH ALLEGHENY AP, PA	744	**740**
PITTSBURGH ASOS, PA	736	

HDD
National Climatic Data Center
1980-2010

108 Locations	**HDD**	
ALDERSON, WV	5311	
ANSTED HAWKS NEST SP, WV	4856	
ATHENS, WV	5685	
BARTOW 1S, WV	6775	
BAYARD, WV	6996	
BECKLEY RALEIGH CY AP, WV	5340	
BECKLEY VA HOSPITAL, WV	6089	
BELINGTON, WV	5834	
BLUEFIELD MERCER CO AP, WV	4588	
BLUEFIELD, WV	5552	
BLUESTONE LAKE, WV	4844	
BUCKEYE, WV	6159	
BUCKHANNON, WV	5566	
BURTON, WV	5937	
CACAPON ST PRK # 2, WV	5514	
CAIRO, WV	5416	
CANAAN VALLEY 2, WV	7419	
CANAAN VALLEY, WV	6608	
CHARLESTON WSFO, WV	**4955**	**4718**
CHARLESTON YEAGER AP, WV	**4480**	
CLARKSBURG 1, WV	5456	
CLARKSBURG BENEDUM FLD, WV	5242	
CLENDENIN, WV	4877	
COOPERS ROCK SF, WV	6655	
CRESTON, WV	5493	
DAVIS 3 SE, WV	7275	
DRY CREEK, WV	5165	
DUNLOW 1 SW, WV	4841	
ELIZABETH, WV	5148	
ELKHORN, WV	4651	
ELKINS 21 ENE, WV	**7025**	**6438**
ELKINS RANDOLPH CY AP, WV	**5851**	
FAIRMONT, WV	5117	
FLAT TOP, WV	5787	
FRANKLIN 2 NE, WV	5219	
FROST 3 NE, WV	6603	
GASSAWAY, WV	4976	
GLADY 1 N, WV	7189	
GLENVILLE, WV	4988	
GRANTSVILLE 1ESE, WV	5286	
HACKER VALLEY, WV	5633	
HAMLIN, WV	4819	
HARRISVILLE, WV	5459	

HOGSETT R C BYRD DAM, WV	4883
HUNTINGTON SEWAGE PLT, WV	4499
HUNTINGTON TRI ST AP, WV	4513
KEARNEYSVILLE, WV	5363
KEYSER 2 SSW, WV	5426
KOPPERSTON, WV	5594
KUMBRABOW, WV	6897
LEWISBURG 3 N, WV	5954
LOGAN, WV	4343
LONDON LOCKS, WV	4369
LOST RIVER, WV	5681
MADISON 3NNW, WV	4609
MANNINGTON 8 WNW, WV	5975
MARLINTON, WV	6577
MARTINSBURG 2, WV	5252
MARTINSBURG E WV RGNL AP, WV	5249
MATHIAS, WV	5645
MCROSS 3 E, WV	6567
MIDDLEBOURNE 3 ESE, WV	5700
MOOREFIELD 1 SSE, WV	5290
MORGANTOWN HART FLD, WV	5183
MORGANTOWN L&D, WV	5395
MOUNDSVILLE, WV	5303
MT NEBO 1 S, WV	5791
MULLENS 3 E, WV	5173
OAK HILL, WV	5328
OCEANA 2 SE, WV	5178
PARKERSBURG FAA AP, WV	4972
PARKERSBURG, WV	4886
PARSONS 1 NE, WV	6004
PEA RIDGE PSD, WV	4963
PETERSBURG, WV	5090
PHILIPPI, WV	5331
PICKENS 2 N, WV	6138
PIKE ISLAND L&D, WV	5488
PINEVILLE, WV	5078
R.D. BAILEY LAKE, WV	5190
RICHWOOD 1SSE, WV	6024
RIPLEY, WV	4812
ROCK CAVE 2 NE, WV	5675
ROMNEY 1 SW, WV	5371
ROWLESBURG 1, WV	5751
SANDYVILLE 9 NE, WV	5536
SENECA SF 1N, WV	6447
SNOWSHOE, WV	8161
SOUTHSIDE 3 NNW, WV	5510
SPENCER, WV	5376

STONEWALL JACKSON DAM, WV	5424	
SUGAR GROVE 4 NNE, WV	5608	
SUMMERSVILLE LAKE, WV	5698	
SUTTON LAKE, WV	5147	
TERRA ALTA #1, WV	6159	
TYGART DAM, WV	5574	
UNION 3 SSE, WV	5308	
UPPER TRACT, WV	5150	
WARDENSVILLE RM FARM, WV	5476	
WEBSTER SPRINGS 8 N, WV	5247	
WEBSTER SPRINGS, WV	5090	
WEST UNION 2, WV	5322	
WESTON, WV	5250	
WHEELING OHIO CO CAA A, WV	5588	
WHEELING, WV	5308	
WHITE SULPHUR SPRINGS, WV	5690	
WILLIAMSON, WV	4163	
WINFIELD LOCKS, WV	4663	
	596084	
WV Average HDD	**5519.3**	
Median HDD	**5385.5**	

PITTSBURGH ALLEGHENY AP, PA	5563	**5637**
PITTSBURGH ASOS, PA	5710	

U.S. DEPARTMENT OF ENERGY
WEATHERIZATION ASSISTANCE PROGRAM
QUALITY CONTROL INSPECTION FORM

Subrecipient : _____ **Job #:** _____

Inspection Date: _____

Client Name: _____ ☐ **Owner** ☐ **Renter**

Physical Address: _____ **Zip Code:** _____

Year of Construction: _____ **Pre-1978 Home:** ☐ **Yes** ☐ **No**

Housing Type:
☐ **Site Built** ☐ **Mobile Home** ☐ **Mobile Home w/add-on** ☐ **Multi-family** ☐ **Double Wide**

Primary Fuel Type:
☐ **Natural Gas** ☐ **Propane** ☐ **Electric** ☐ **Oil** ☐ **Solid Fuel** **Other:** _____

DBA FACS Pro FILE REVIEW *WV WPN 15-19*	**YES**	**NO**	**N/A**	**Notes:**
1. Eligibility Determination present?	☐	☐	☐	
2. Input Report	☐	☐	☐	
3. Energy Audit Recommended Measures Report	☐	☐	☐	
4. DBA FacsPro Job Summary	☐	☐	☐	
5. Total Job Cost:				
DOE/DHHR Investment: $ _____				
Utility Investment: $ _____ Total Job Investment: $ _____				
6. Daily Material In/Outs	☐	☐	☐	
7. Utility Partnership Documentation	☐	☐	☐	
8. Weatherization Assistant Work Order	☐	☐	☐	
9. Lead Safe Work Documentation	☐	☐	☐	
10. Mold/Moisture Form Documentation	☐	☐	☐	
11. CO Warning Statement	☐	☐	☐	
12. Hold Harmless Form Documentation	☐	☐	☐	
13. State Historic Preservation Documentation	☐	☐	☐	
14. Client Education Documentation	☐	☐	☐	
15. Refrigerator Data / Replacement Justified	☐	☐	☐	
16. Pre & Post Combustion Safety Tests/Tapes	☐	☐	☐	
17. Pre & Post Blower Door Results (@CFM 50)	☐	☐	☐	
Pre #:_____ Post #:_____ QCI verified#:_____				
18. Customer Satisfaction Form Signed/Dated	☐	☐	☐	
19. HVAC Sizing Documentation	☐	☐	☐	
20. Solid Fuel Appliance Condition Report	☐	☐	☐	
21. WX Tag Documentation	☐	☐	☐	
22. Photo Documentation	☐	☐	☐	
23. FACS Pro Attachments are complete	☐	☐	☐	
24. Insulation Certificate Documentation	☐	☐	☐	
25. Other (Describe): _____	☐	☐	☐	

ON-SITE WORK ASSESSMENT

	YES	NO	N/A	
HEATING, VENTILATION, AIR CONDITIONING				**Comments – HVAC**
1. Heating System Replacement *WV WAP SWS 5*	☐	☐	☐	
2. Air Conditioning Replacement *WV WAP SWS 2.2*	☐	☐	☐	
3. Heating System Tune-Up	☐	☐	☐	
4. Air Conditioning Tune–Up	☐	☐	☐	
5. Distribution System Modifications	☐	☐	☐	
6. Ducts *WV WAP SWS 3.16, 4.16*	☐	☐	☐	
7. Thermostat Anticipator Reading Verified	☐	☐	☐	
8. Filter Installed and one left with client	☐	☐	☐	
9. Measures(s) were Properly Justified	☐	☐	☐	
10. Ventilation Requirements Verified and Comply with ASHRAE 62.2 2013 *WV WAP SWS 6*	☐	☐	☐	
11. CAZ Testing Verified, Documentation is Complete	☐	☐	☐	
12. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	
ATTIC *WV WAP SWS 3.10 ,2.06, 2.04*				**Comments – Attic Work**
1. Attic Insulation Installed: *WV WAP SWS 4*	☐	☐	☐	
2. Coverage R-value	☐	☐	☐	
3. Insulation Certificate Completed & Posted	☐	☐	☐	
4. Heat Source/ Vent Damming	☐	☐	☐	
5. Junction Box Markers Present	☐	☐	☐	
6. Attic Access Insulated and Secured	☐	☐	☐	
7. Attic Air Sealing was Performed *WV WAP SWS 3.10*	☐	☐	☐	
8. Measure(s) were Properly Justified	☐	☐	☐	
9. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	
SIDEWALLS & KNEEWALLS *WV WAP SWS 2.06, 3.11, 4.11*				**Comments - Sidewalls**
1. Walls Insulated by WAP	☐	☐	☐	
2. Plugs, Patching, & Painting appropriate	☐	☐	☐	
3. Measure(s) were Properly Justified	☐	☐	☐	
4. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	
SUBSPACE *WV WAP SWS 2.04, 2.05, 3.14, 3.13, 4.13, 4.14*				
1. Bandboard Insulation added by WAP	☐	☐	☐	
2. Floor Insulation added by WAP	☐	☐	☐	
3. Basement Wall Insulation added by WAP	☐	☐	☐	
4. Vapor Barrier added; Coverage & Secure	☐	☐	☐	
5. Measure(s) were Properly Justified	☐	☐	☐	
6. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	
WINDOWS/DOORS *WV WAP SWS 3.12*				**Comments – Windows/Doors**
1. Number of Windows Replaced: _____	☐	☐	☐	
2. Number of Storm Windows Installed: _____	☐	☐	☐	
3. Number of Doors Replaced: _____	☐	☐	☐	
4. Door Weather-stripping/Thresholds/Sweeps	☐	☐	☐	
5. Pre/Post Photo Documentation Completed	☐	☐	☐	
6. Measure(s) were Properly Justified	☐	☐	☐	
7. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	

OTHER MEASURES *WV WAP SWS 7*	**YES**	**NO**	**N/A**	**Comments – Other Measures**
1. Water Heater Replacement	☐	☐	☐	
2. Water Heater Treatment (Tank Wrap)	☐	☐	☐	
3. Pipe Insulation	☐	☐	☐	
4. Low Flow Shower heads	☐	☐	☐	
5. Lighting - CFLs Installed	☐	☐	☐	
6. Refrigerator Replacement	☐	☐	☐	
a. Metering/Justification/other documentation	☐	☐	☐	
7. Smoke Detectors *WV WAP SWS 2.03*	☐	☐	☐	
8. Carbon Monoxide Detector	☐	☐	☐	
9. Other H&S Measures_____	☐	☐	☐	
10. Other Energy Related Repairs_____	☐	☐	☐	
11. Air Sealing Measures	☐	☐	☐	
12. Other (Describe): _____	☐	☐	☐	
13. Measures were Properly Justified	☐	☐	☐	
14. Work Meets WV WAP SWS Installation Standards	☐	☐	☐	

Weatherization Assistant 8.9 Audit

1. All IRMs are justified in the client file with an explanation for their need and relationship to the specific energy conservation measure (ECM) or group of ECMs.

   YES ☐ NO ☐ N/A ☐

2. ECMs are all justified with a SIR >1. *Exception: Air Sealing DOE WPN 13-5 Attachement 1*

   YES ☐ NO ☐ N/A ☐

3. Ancillary items are charged to the appropriate ECM.

   YES ☐ NO ☐ N/A ☐

4. Are materials charged appropriately according to the current WA Materials Chart?

   YES ☐ NO ☐ N/A ☐

Does this unit need additional attention from the Subrecipient? ☐ **Yes** ☐ **No**

(*Add comments on additional pages if necessary, ** A check in the yes box requires completion of the **Required Corrective Action(s) Page**)

Notes:

REQUIRED CORRECTIVE ACTION(s)

All corrections must be completed and signed off by the crew leader. When corrections are completed the Quality Control Inspector (QCI) must sign off affirming that required deficiencies were addressed to WV WAP SWS, state policy and all relevant building codes. If job was inspected and all corrections were made on the final day of job, crew leader (CL) and QCI must sign Work Order to verify completion. Final day inspections must reflect corrections cited by QCI. Report must be included in client file.

CL	QCI	Corrections
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	
☐	☐	

******Crew Leader Signature is only required if corrections are made******

Crew Leader Name (Print): _____

Signature: _____ **Date:** / /

QCI Name (Print): _____

Signature: _____ **Date:** / /

☐ **WX tags has been correctly initialed, dated and posted in the correct locations.**
☐ **I hereby confirm that this job is considered complete, that all measures have been properly justified, all documentation is complete, properly uploaded into the database system and the job can be reported as a completion.**

Last Revised 8/18/2016

V.7 Health and Safety

Introduction

The primary goal for the WV WAP is to implement cost-effective weatherization procedures to conserve energy and to assess and correct related health and safety hazards for the well-being of clients, their dwellings, and weatherization personnel.

With more advanced diagnostics and installation techniques utilized in the WV WAP, it is increasingly necessary to take steps to ensure that program measures do not cause or exacerbate health and safety problems for workers or clients.

Each home weatherized must be individually assessed to determine the existence of potential hazards to weatherization personnel or clients. When conditions within the home are such that the health and safety of the client, crew, or subcontractor will be jeopardized prior to providing assistance, weatherization must not proceed until such problems are remedied. In some cases, mitigation of problems may be beyond the scope of the Weatherization program. In these instances, the client must be notified in writing and referred to alternative resources for resolution of the problem.

In those instances where the existing conditions are perceived to pose a threat to the client, crew or contractor's health and safety, the WV WAP allows for deferral of weatherization work until the identified condition is made acceptable. The WV WAP Deferral Policy is described in *Section V.1.2 Approach to Determining Building Eligibility*.

Budgeting

The WV WAP will budget Health and Safety in a separate category and thereby exclude such costs from the average unit cost calculations. This separate category will also allow these costs to be isolated from energy efficiency costs in program evaluation.

Incidental Repairs

Incidental Repairs means those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to, minor roof repair, framing or repairing windows and doors which could not otherwise be caulked or weather-stripped, and providing protective materials, such as paint, used to seal materials installed under this program. Incidental repairs must be justified in the client file with an explanation for their need and relationship to a specific energy conservation measure (ECM) and included in the Savings-to-Investment Ratio (SIR) of the group of ECMs. The WV WAP has developed a spreadsheet identifying allowable measures to be installed under Health and Safety and allowable measures to be installed as incidental repairs. (See *WV WAP Materials Chart Attachment*)

Health and Safety Expenditure Limits

For the 2016 – 2017 Program Year, West Virginia would request to utilize up to **15 percent** of our 2016 - 2017 Program Operation funds for Health and Safety Expenditures. WV WAP uses its data management system to implement a limit on Health and Safety costs charged to DOE on a per job basis. Any Health and Safety costs over 15 percent will be charged to Low-Income Home Energy Assistance Program (LIHEAP) funding, as approved from the West Virginia Department of Health and Human Resources (DHHR), the LIHEAP Grantee.

Health and Safety costs are recorded in the data management system and tracked separately at the subrecipient level for accounting purposes, as well as in the Weatherization Assistant auditing software and reported as a separate line item on the WV WAP "Monthly Progress Report." A list of materials that are allowable charges to Health and Safety has been developed and distributed. (See *WV WAP Materials Chart Attachment*) Subrecipients cannot add additional materials to this list. In this way, WVOEO can monitor the Health and Safety cost on each job. The Health and Safety costs reported on the WV WAP "Monthly Progress Report" are reviewed monthly and WVOEO works with the subrecipients to bring them into or remain in compliance. WVOEO also tracks the Health and Safety costs in the statistical analysis tool and other various spreadsheets as discussed in *Section V.6 Weatherization Analysis of Effectiveness.*

WVOEO has worked with the utility companies and scopes of work have been adjusted so that the WV WAP can use certain utility funding to cover particular Health and Safety costs (specified in the Scopes of Work/Program Designs of the utility program), to lessen the burden on the DOE funds. At this time, not all utility partnerships allow for Health and Safety costs in their programs, but WVOEO will continue to pursue this option in the future.

Energy Education:

As mentioned in *Section V.8.4 Training and Technical Assistance Approach and Activities,* Energy Education is one of the most important weatherization processes to ensure the maximum effectiveness of the weatherization measures and each subrecipient has at least one (1) certified Energy Educator. The Energy Education process, educational materials used, and forms utilized (described in *Section V.8.4*) will encompass all weatherization measures installed, including any Health and Safety related information or issues identified/ corrected, or those that could be encountered if the integrity of measures is altered, measures are removed, made not to function or damaged, or proper maintenance is not performed as instructed. WVOEO will also be adding a document to required client file documentation that has a client sign-off that includes (but is not limited to) whether client education took place and all education/maintenance information necessary was communicated. This will supplement current client education documents that also include client and subrecipient sign-offs.

Potential Hazard Considerations

1. ***Biological and Unsanitary Conditions***

   The detection and remediation of mold, odors, viruses, bacteria, unsanitary conditions, and rotting wood is often beyond the scope of the Weatherization Assistance Program, and may be a reason for deferral. Since workers often encounter these conditions, they try to remedy the situation if possible and take precaution to not exacerbate any potential problem. Factors such as cleaning agents, paints and turpentine, gasoline, sewage, animal waste, and excessive dust can sometimes be addressed to allow weatherization work to occur. Auditors will inform the client of observed conditions.

   - **Mold and Moisture** - The Weatherization Assistance Program is not a mold remediation program. The use of DOE funds for the removal of mold and other related biological substances is not an allowable weatherization expense. Mold testing is not an allowable cost. If necessary, Weatherization Assistance Program services may need to be deferred until the existing mold problem can be corrected or referred to another program for funding of remedial action.

All homes will be inspected for previous and existing moisture problems using the WV WAP "Mold Procedure/Checklist Form" to document existing mold and moisture related problems in homes.

Moisture, mold, and mildew can seriously affect the health and safety of the client and crew. Steps must be taken to alleviate moisture problems. The WV WAP will ensure that regular weatherization work is performed in a manner that does not contribute to the increase of any mold problems, and when the work is performed properly, can alleviate many mold conditions.

   - **Drainage** - Auditors will conduct a visual inspection. Major drainage issues are beyond the scope of the Weatherization Assistance Program. Homes with conditions that may create a serious health concern that require more than simple repair should be deferred.

2. ***Combustion Appliances and Combustion Gases*** - Proper venting to the outside for combustion appliances, including gas dryers is required. Correction of venting is allowed when testing indicates a problem.

   Subrecipients will be required to conduct combustion safety testing when combustion appliances are present

   Subrecipients will conduct inspection and testing of Combustion Appliance Zones (CAZ) and confirm adequate clearances and test naturally drafting appliances for draft and spillage under worst case conditions before and after air tightening and inspect gas cooking appliances for safe operability.

Subrecipients will provide the client with combustion Safety and Hazards information, including the importance of using exhaust ventilation when cooking and the importance of keeping burners clean to limit the production of Carbon Monoxide (CO).

- **Air Conditioning** - Research indicates that of all people who die of heat stroke, about 80 percent are age 50 or older. Deaths attributed to lung disease, diabetes and hypertension increase more than 50 percent during heat waves. Heat stroke occurs 12 to 13 times more frequently in people age 65 and older than in younger persons. It is also an accepted medical fact that infants and children up to 4 years of age are very sensitive to the effects of high temperatures and rely on others to regulate their environment.

- Considering preventable deaths may illuminate the need for allowing air conditioning measures. While there are no statistics devoted specifically to that category in West Virginia, the next two (2) paragraphs are devoted to understanding the health risks in our state that relate to the statements above.

- Each year in West Virginia there are approximately 1,500 Chronic Lower Respiratory Disease related deaths. According to the Center for Disease Control (CDC), West Virginia: Burden of Chronic Diseases report, in 2005, 6 percent of West Virginians died from stroke, and 766 people in West Virginia died from diabetes. In 2007, 10 percent of adults in West Virginians reported being diagnosed with non-pregnancy related diabetes.

- While hypertension is the most prevalent cause of stroke and kidney failure, hypertension must be recognized as part of a bigger disease conglomerate almost always accompanied by obesity, diabetes, kidney disease or many other co-existing problems involving lifestyle and/or genetics. The same CDC report referenced above states that 33 percent of West Virginian adults have high blood pressure which puts the State above the national average of 25 percent. The report goes on to state 42 percent of those surveyed had high blood cholesterol, which puts them at greater risk for developing heart disease and stroke.

- Air conditioning is the number one (1) protective factor against heat-related illness and death effecting people with health issues such as stated above. **Therefore air conditioning system replacement, repair or installation is allowed to be categorized as Health and Safety in homes with occupants under 4 years old, over 65 years old and/or where there are "at-risk" occupants.** Air conditioning system replacement, repair or installation must be attempted through cost justification as an ECM first before using Health and Safety funding. Where this measure can be justified by the approved NEAT/MHEA audit, replacement, repair or installation is not to be included in Health and Safety.

Persons requesting the need for air conditioning based on their health being "at risk" **must provide a letter from a doctor defining the condition requiring an air conditioned environment and the maximum allowable air temperature relevant to that person's individual condition.**

New replacement units must be ENERGY STAR rated and have an efficiency rating of at least:

- Central AC or Heat Pump Cooling Efficiency = 13 SEER
- Heat Pump Heating Efficiency = 7.7 HSPF
- Window and wall mount air conditioners = 10 EER

- **Heating Systems** - Heating system repair, replacement, or installation is allowed of red-tagged, inoperable, or nonexistent heating systems where climate conditions warrant. Repair and replacement of inoperable or unsafe combustion appliances is allowed, including the installation of direct vent-sealed combustion appliances. Direct vent-sealed combustion appliances may be installed to resolve Combustion Appliance Zone (CAZ) problems. Repair and cleaning must be considered before replacement. Correction of venting is allowed when testing indicates a problem.

- **Appliances and Water Heaters** - Poorly functioning water heaters that may pose a health concern may be replaced on a case-by-case basis. Installation of one (1) water heater per dwelling is allowed. Repair, replacement and installation of moisture control appliances, such as dehumidifiers, condensate pumps and sump pumps are allowable on a case-by-case basis. Documentation must be maintained to justify replacement of water heaters and moisture control appliances. Replacement and installation of other appliances for health and safety reasons is not allowed. Repair and cleaning for other appliances is allowed.

- **Smoke, Carbon Monoxide Detectors, and Fire Extinguishers** - If smoke alarms are inoperable or non-existent, at least one (1) alarm must be installed in each weatherized dwelling on each floor. Follow the manufacturer's recommendations for locating and installing the alarm(s). Typically, alarms are installed where the clients spend the most time, such as near bedrooms. If an entire multi-family building is to receive weatherization services, a CO alarm should be installed in each unit of the complex. If existing hard-wired smoke alarms are inoperable or broken, they must be replaced with comparable units. Replacement of operative smoke alarms is not an allowable expense.

Providing fire extinguishers is allowable only when solid fuel is present. Subrecipient will provide the client with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed.

3. ***Other Heating Sources***

- **Solid Fuel Heating -** Maintenance, repair, and replacement of primary indoor heating units is allowed where occupant health and safety is a concern. Maintenance and repair of secondary heating units is allowed.

  The WV WAP utilizes a "Solid Fuel Appliance Checklist" which addresses safety issues, including fire hazards, from wood and coal stoves. Issues relating to the stove, stove pipe, and chimney are also addressed. The auditor is required to inspect the chimney and flue and Combustion Appliance Zone (CAZ) depressurization.

- **Space Heaters Stand Alone Electric -** Repair, replacement, or installation of stand-alone electric space heaters is not allowed. Adhere to the following procedures:

  1. Check the electrical circuitry to ensure adequate power for existing space heaters.
  2. Inform client of the hazards of use and have client sign a waiver if removal is not allowed by the client.
  3. Inform the client that removal is recommended. Stand-alone electric space heaters may be used as a temporary heat source during weatherization if the primary heating system is disabled.

- **Space Heaters, Unvented Combustion -** Removal is required, except as a secondary heat where 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. Testing for ambient carbon monoxide (CO) is allowed. Units must be checked for the ANSI Z21.11.2 label. Clients will be informed of the dangers of unvented space heaters. CO, moisture, and Nitrogen Dioxide (NO2) can be dangerous even if the CO alarm does not sound.

- **Space Heaters, Vented Combustion -** Vented space heaters will be treated as furnaces. Venting will be tested consistent with furnaces. Proper testing methods for safe operation (draft, CAZ and CO) will be conducted at steady state efficiency.

4. ***Fire Hazards -*** Correction of fire hazards is allowed when necessary to safely perform weatherization. The auditor will visually inspect the dwelling during the audit and crews will inspect while performing weatherization.

5. ***Occupant Pre-existing or Potential Health Conditions -*** WV WAP subrecipients are required to take all reasonable precautions against performing work on dwellings that will subject clients to health and safety risks. Before beginning work on the dwelling, the subrecipient 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 a person'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.

When a person's health may be at risk and/or the work activities could constitute a health or safety hazard, the occupant at risk will be required to take appropriate action as previously identified, based on severity of risk. Temporary relocation of at-risk occupants may be allowed on a case by case basis. Failure or the inability to take appropriate actions must result in deferral.

Procedure for Identifying Occupant Health Concerns

- When a person's health may be at risk and/or the work activities could constitute a Health and Safety hazard, the occupant at risk will be required to take appropriate action based on the severity of the risk.
- The at-risk occupant should reveal they have known or suspected health concerns during the initial application for weatherization services.
- The at-risk occupant should be provided with known risks of the weatherization process.
- Subrecipient contact information should be provided to the occupant so that occupant can easily provide information about health issues or concerns.
- Failure or the inability to take appropriate actions must result in deferral of the weatherization work.

Documentation for identifying occupant health concerns will include:

- Client's name and address
- Dates of the audit/assessment and when the client was informed of a potential health and safety issue
- Clear description of the problem
- Statement indicating if, or when weatherization could continue
- Client(s) signature(s) indicating that they understand and have been informed of their rights and options.

6. ***Indoor Air Quality***

a. Asbestos - General asbestos removal is not approved as a Health and Safety weatherization cost. Major asbestos problems will be referred to the appropriate state subrecipient and/or Environmental Protection Agency (EPA).

- **In siding, walls, ceilings, etc.** - Removal of siding is allowed to perform energy conservation measures. All precautions must be taken not to damage siding. Asbestos siding should never be cut or drilled. It is recommended where possible to insulate through home interior. The client will be informed that suspected asbestos siding is present and how precautions will be taken.

- **In vermiculite** - When vermiculite insulation is found in an attic, unless testing proves otherwise, take precautionary measures as if the vermiculite contains asbestos. Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not permitted. Blower door testing should be done with pressurization rather than depressurization.

  Assess whether vermiculite is present. Asbestos Hazard Emergency Response Act of 1986 (AHERA) certified prescriptive sampling is allowed by a certified tester.

  Clients should be instructed not to disturb suspected asbestos containing material.

- **On pipes, furnaces, other small covered surfaces** - Subrecipients will assume asbestos is present in covering materials. Encapsulation is allowed by an AHERA asbestos control professional and should be conducted prior to blower door testing. Removal may be allowed by an AHERA asbestos control professional on a case-by-case basis. AHERA testing is allowed by a certified tester. Clients should be instructed not to disturb suspected asbestos containing material.

b. Spray Polyurethane Foam (SPF) - Spray polyurethane foam is a widely used and highly-effective insulator and sealant; however, eye, skin, and inhalation exposures to its key ingredients can cause asthma, lung damage, other respiratory problems, skin and eye irritation, and other adverse health effects.

- When working within the thermal enclosure with spray urethane foam, follow the EPA guidelines or manufacturer's guidelines available online at: http://www.epa.gov/dfe/pubs/projects/spf/spray_polyurethane_foam.html)
- When using spray urethane foam outdoors, isolate the area where the foam will be applied, take precautions to ensure the fumes will not be transferred to the indoor living area.
- Make sure all State and local fire codes are followed when spray polyurethane foam is used indoors.
- Subrecipients are required to have Safety Data Sheets (SDS) in each Weatherization vehicle with easy access to every employee.
- Auditors notify the client of the plans to use two-part foam and the precautions that may be necessary.

c. Radon - In homes where radon may be present:

- Provide the client with EPA's consumer guide to radon.
- Whenever conditions permit, exposed dirt must be covered with a vapor permeable ground cover.
- In dwellings where radon may be present, precautions should be taken to reduce the likeliness of making radon concentrations higher.
- Radon testing is an allowable DOE expense in locations with high radon potential.
- Radon abatement is not an allowable activity with DOE funds; major radon problems are deferred and referred to the appropriate local environmental agency.

d. Volatile Organic Compounds (VOCs) - Crew awareness of potential problems with formaldehyde and volatile organic compounds is important when addressing air sealing. Crews are instructed to remove any VOCs when possible and to give client education regarding the potential dangers. If removal cannot be performed or is not allowed by the client, the unit must be deferred.

7. ***Lead Paint – Lead Safe Work***

Subrecipients or contractors will follow EPA's Lead; Renovation, Repair and Painting Program (RRP). In addition to RRP, weatherization requires all weatherization crews working in pre-1978 housing to be trained in Lead Safe Weatherization (LSW). Deferral is required when the extent and condition of lead-based paint in the house would potentially create further Health and Safety hazards.

Testing is allowed. Job site setup and cleaning verification is required by a Certified Renovator.

Each subrecipient or contractor must give notification to the occupants of homes to be weatherized regarding the potential hazards of lead paint and lead paint dust if the home was built prior to 1978. EPA's publication "Renovate Right: Important Lead Hazard Information for Families, Child Care Providers and Schools" must be given to an adult occupant of the affected home prior to beginning weatherization. For occupied homes, the weatherization staff, crew, or contractor must have an adult tenant or homeowner sign an acknowledgement after receiving the pamphlet. As an alternative to delivery in person, the subrecipient or contractor may mail the lead hazard information pamphlet to the owner and/or tenant. The pamphlet must be mailed at least seven (7) days before renovation. Mailing must be documented by a certificate of mailing from the post office.

WVOEO has developed and implemented a *Lead Safe Work Policy* on July 27, 2012, including standardized forms and processes to supplement information available from DOE and the EPA (This policy was amended on August 16, 2013). The policy provides additional information and guidance on LSW, proper practices, and documentation requirements.

LSW includes weatherization worker protection, general LSW practice standards, and lead dust containment standards.

1. Level 1 Containment.

    a. Level 1 containment is required in pre-1978 homes when less than 6'2" in of interior painted surface per room or 20'2" of exterior painted surface will be disturbed.
    b. Level 1 containment consists of methods that prevent dust generation and contains all debris generated during the work process. The containment establishes the work area which must be kept secure.
    c. Measures that may fall within this guideline include:
        i. Installing or replacing a thermostat
        ii. Drilling and patching test holes
        iii. Replacing HEPA filters and cleaning HEPA vacuums
        iv. Changing furnace filter(s)
        v. Removing caulk or window putty (interior)
        vi. Removing caulk or window putty (exterior)
        vii. Removing weather-stripping

2. Level 2 Containment.

    a. Level 2 containment is required when weatherization activities will disturb more than 6'2" of interior surface per room or 20'2" of exterior surfaces in homes built prior to 1978. Level 2 containment consists of methods that define a work area that will not allow any dust or debris from work area to spread. Level 2 containment requires the covering of all horizontal surfaces, constructing barrier walls, sealing doorways, covering HVAC registers with approved materials, and closing windows to prevent the spread of dust and debris.
    b. Measures requiring Level 2 containment may include:
        i. Drilling holes in interior walls
        ii. Drilling holes in exterior walls, removing painted siding
        iii. Cutting attic access into ceiling or knee walls
        iv. Plane a door in place
        v. Replacing door jambs and thresholds
        vi. Replacing windows or doors
        vii. Furnace replacements

c. Additionally, Level 2 containment must ALWAYS be used where any of the following is conducted (even if the activities will disturb less than the hazard levels within the Level 1 category):
   i. Window replacement
   ii. Demolition of painted surface areas
   iii. Using any of the following: Open-flame burning or torching; machines to remove paint through high-speed operation without HEPA exhaust control; or operating a heat gun at temperatures at or above 1,100 FO **Note**: The use of a drill, reciprocating saw, or other power tool is considered a "machine" for removing paint. As examples: Cutting a hatch inside the dwelling or interior drilling of holes for the installation of insulation require Level 2 containment.

3. There must be adequate documentation in the client file to demonstrate that LSW measures were performed when necessary. Documentation should include photos of the site and containment set up, as well as a listing of materials used and measures taken. Post Work Inspector must also certify that LSW procedures were used and properly implemented.

4. WV WAP will adhere to EPA lead safe rules as written in the *Lead; Renovation, Repair, and Painting Program Final Rule* (LRRPP Final Rule), as directed by DOE.

5. Weatherization of HUD program housing stock, including HUD Section 8, is infrequent in West Virginia. These units will only be weatherized if the owner provides a "Certificate of Lead-Based Paint Compliance" (copy must be in client file) that documents abatement or control of any lead paint hazard has been addressed, and will agree that the local subrecipient will not be liable for any lead hazards, provided the safe work practices generally outlined above are employed.

6. In cases where the subrecipient cannot safely weatherize a home due to lead paint hazards, the subrecipient may defer the work. Such deferral will be considered by WVOEO on a case-by-case basis. Subrecipients may not weatherize dwellings where there are cases of documented or suspected lead poisoning. Additionally, subrecipients will not weatherize homes where there is an extraordinary lead paint hazard with no means to abate the hazard, including insufficient funds or insufficient training to properly address the hazard.

8. ***Building Structures and Roofing*** - WV WAP crews often encounter homes in poor structural condition. In some cases, Weatherization Assistance Program services have to be deferred until the dwelling is made safe and able to weatherize. When possible, subrecipients coordinate their efforts with other programs to enable and enhance services. Homes with conditions that require more than incidental repair should be deferred, unless repairs can be made with non-DOE funds.

The auditor will perform a visual inspection to ensure that access to areas necessary for weatherization is safe for entry and performance of assessment, work, and inspection. The client will be notified of structurally compromised areas.

9. ***Electrical Issues***

- **Electrical - Other than Knob-and Tube Wiring -** Minor electrical repairs are allowed where health and safety of the occupant is at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.

  Auditors will perform a visual inspection. Voltage drop and voltage detection testing are allowed.

- **Electrical – Knob-and Tube Wiring -** Minor upgrades and repairs necessary for weatherization measures and where the health or safety of the occupant is at risk are allowed.

  Where live knob-and-tube wiring exists, the following conditions must be met in order to install attic insulation:

  a. Wiring insulation must be intact and complete with no exposed areas and connections.
  b. S-type fuses that match the size of the wiring must be installed if they do not already exist. Any modification of the electrical panel must have prior written permission from the client. The subrecipient may wish to contract with a licensed electrician where questionable safety conditions exist.
  c. When installing cellulose or fiberglass, there must be a minimum of 1" clearance from the wiring. Precaution must be taken to prevent the possible drifting of the product, which could result in contact with the wiring.

  The presence of knob-and-tube wiring, overloaded circuits, live bare wires, asbestos siding, or untreatable moisture in the wall cavities will be allowable reasons for not insulating exterior walls. If the problems can be corrected within reasonable means, the walls may be insulated.

10. ***Refrigerant Issues*** - Subrecipients may reclaim refrigerant per the Clean Air Act of 1990, Section 608, as amended by 40 CFR 82, 5/14/1993. Qualified personnel use EPA testing protocols. Clients are instructed not to disturb refrigerants. Qualified personnel are trained on the EPA-approved section 608 type I or Universal Certification.

11. ***Code Compliance*** - The correction of preexisting code compliance issues is not an allowable cost other than where weatherization measures are being conducted. As per DOE WPN 11-06:
"Correction of preexisting code compliance issues is not an allowable cost other than where weatherization measures are being conducted. State and local (or jurisdiction having authority) codes must be followed while installing weatherization measures. Condemned properties and properties where "red tagged" Health and Safety conditions exist that cannot be corrected under this guidance should be deferred." Testing required: "Visual inspection. Local code enforcement inspections" The subrecipient personnel should also "Inform client of observed code compliance issues" according to the guidance.

12. ***Pests*** - In dwellings were pests are detected:

    1. Pest removal is cause for deferral unless other funds are available or the cost is considered when running NEAT or MHEA. Screening of windows and points of access is allowed to prevent pest intrusion.
    2. Auditors will assess the presence and degree of infestation and risk to workers.
    3. Auditors will inform clients of the observed condition and associated risks.

13. ***Ventilation*** - A complete review of the current version of ASHRAE minimum ventilation standards was completed in previous years including effective methods for full compliance to ASHRAE 62.2-2013. Continued training will occur as necessary.

    Weatherization trained personnel will calculate the ventilation requirements for each home utilizing the current ASHRAE spreadsheet or Residential Energy Dynamics (RED) online tool to ensure adequate indoor air quality. Continuous and/or intermittent ventilation fans will be installed based upon spreadsheet calculations. The ASHRAE 62.2-2013 standard was implemented December 1, 2013, and is monitored by the WVOEO weatherization specialist field/technical monitors.

    For homes that require added ventilation, subrecipients must implement a ventilation strategy that meets the requirements of the current ASHRAE standards. Subrecipients are required to evaluate any preexisting mold and moisture conditions, potential spot ventilation needs and pre and post fan flow rates. If whole-house ventilation requirements are **less than or equal to 15 CFM**, then additional ventilation is not required. If the Energy Auditor's pre-site evaluation determines that due to existing conditions the threshold ventilation is warranted, it will be allowed.

    If the whole-house minimum ventilation requirement is **greater than 15 CFM**, a system supplying the design ventilation airflow must be installed. The subrecipient Quality Control Inspector will verify that fan flow rates have been met based on design requirements.

Implementing ASHRAE 62.2 will not be required where acceptable indoor air quality already exists. Existing ventilation systems will not be updated if found to be adequate and in good operating condition.

Subrecipients will provide clients with information on function, use, and maintenance of ventilation systems and components. Subrecipients will provide a disclaimer that current ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.

14. ***Window and Door Replacement, Window Guards*** - Replacement, repair or installation of windows or doors is not an allowable Health and Safety cost, but may be allowed as an efficiency measure if justified by the NEAT or MHEA audit. If window and door replacement, repair or installation is limited in scope such as less than three (3) windows and only one (1) door. The measures may be included as infiltration reduction (NEAT) and general air sealing (MEHA) as long as the SIR is greater than one (1) for the measure.

15. ***Injury Prevention of Occupants and Weatherization Workers*** - Minor repairs may be done when weatherizing a home in order to prevent injury to weatherization workers and to occupants. These repairs may only be done to the extent of ensuring safety.

16. ***Occupational Safety and Health Administration (OSHA) and Crew Safety*** - Weatherization personnel must follow applicable OSHA standards and Safety Data Sheets (SDS) and take precautions to ensure the health and safety of themselves and other personnel. SDS must be posted wherever workers may be exposed to hazardous materials.

    Subrecipients must perform assessments to determine if crews are practicing and utilizing safe work practices and that all workers receive training specific to hazards that the worker can reasonably expect to encounter on a particular job site.

    1. Subrecipients are also required to have bi-monthly safety meetings.
    2. All auditors, crews, and contractors must use and understand the importance of Personal Protection Equipment (PPE).
    3. OSHA 10 training for all current weatherization personnel. OSHA 30 for all crew leaders is not required but considered a best practice.
    4. Confined spaces – such as crawl spaces and attics – are not designed for continuous occupancy and are difficult to exit in the event of an emergency. People working in confined spaces face life-threatening hazards including toxic substances, electrocutions, explosions, and asphyxiation. See 29 CFR 1926, Subpart AA from OSHA for details in addressing confined spaces. The subrecipient is required to have a written plan in place regarding confined spaces which is available upon request.

Agency	Address	Type of Organization	Tentative Allocation	Dwellings Expected	Source(s) of Labor	Congressional District(s)	Counties Served
Change, Inc.	3158 West Street, Weirton, WV 26062-4635	Community Action Agency	$137,126	22	In-House Crews & Contractors	1	Brooke, Hancock, Marshall, Ohio
Coalfield Community Action Partnership, Inc.	PO Box 1406, Williamson, WV 25661-1406	Community Action Agency	$280,204	45	In-House Crews	2 & 3	Boone, Clay, Kanawha, Mingo
Community Action of SE WV	307 Federal Street STE 323, Bluefield WV 24701-3007	Community Action Agency	$232,352	37	In-House Crews & Contractors	3	Mercer, Monroe, Raleigh, Summers
Community Resources, Inc	133 Rosemar RD STE 101, Parkersburg, WV 26104-7658	Community Action Agency	$298,297	48	In-House Crews	1 & 2	Calhoun, Doddridge, Gilmer, Jackson, Pleasants, Ritchie, Roane, Tyler, Wetzel, Wirt, Wood
Council of the Southern Mountains, Inc.	148 McDowell Street, Welch, WV 24801	Community Action Agency	$49,280	8	In-House Crews & Contractors	3	McDowell
Eastern WV Community Action Agency, Inc.	401 Maple Avenue, Moorefield, WV 26836-1044	Community Action Agency	$246,160	39	In-House Crews & Contractors	1&2	Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton
Mountain CAP of WV, Inc.	26 N Kanawha Street STE 201, Buckhannon, WV 26201	Community Action Agency	$115,224	18	In-House Crews	2 & 3	Braxton, Lewis, Upshur, Webster
MountainHeart Community Services, Inc.	PO Box 1509, Oceana, WV 24870-1509	Community Action Agency	$103,321	16	In-House Crews	3	Fayette, Wyoming
Nicholas CO Community Action Partnership, Inc.	1205 Broad Street, Summersville, WV 26651	Community Action Agency	$40,471	6	In-House Crews & Contractors	3	Nicholas
North Central WV Comm Action Assoc	1304 Goose Run Road, Fairmont, WV 26554	Community Action Agency	$515,412	86	In-House Crews	1, 2, & 3	Barbour, Greenbrier, Harrison, Marion, Monongalia, Pocahontas, Preston, Randolph, Taylor, Tucker
PRIDE Community Services, Inc.	PO Box 1346, Logan, WV 25601-1346	Community Action Agency	$56,184	9	In-House Crews	3	Logan
Southwestern Comm Action Council, Inc.	540 5th Avenue, Huntington, WV 25701-1991	Community Action Agency	$306,628	49	In-House Crews & Contractors	2 & 3	Cabell, Lincoln, Mason, Putnam, Wayne

DOE, DHHR, Utilities (as applicable) v.10.2014

Energy Conservation Measure	*Direct material for Energy Conservation Measure*	*Ancillary Items* (Cost must be included in SIR for associated individual ECM)	*Incidental Repair Measure (IRM)* (Cost must be included in SIR for whole unit package of ECM)	*Health & Safety Measure* (Separate cost justification, not included in SIR)
Heating	heating system clean/tune	black pipe	drywall	barometric damper
	heating system repair	black pipe fittings	lumber	black pipe
	heating system replacement	barometric damper	paneling	black pipe fittings
	heat pump replacement	breaker	plywood	blower motor
		coil cleaner		breaker
		condensate pump		B-vent & Accessories
		cottage stands		coil cleaner
		drywall		condensate pump
		filter grills		contactor
		floor register		electric heat strip
		furnace filter		electrical disconnect
		metal flex tape		fan switch
		mounting brackets		filter grills
		mounting pad		flexible gas line
		oil filter		floor registers
		pvc pipe		fuel filter canister
		sheet metal one sheet or less		furnace filters
		strapping		heat chamber
		thermostat		heat shield
		wire		heat shield insulators
				heat tape (condensate line)
				heating system repair
				heating system replacement
				knob & tube wiring (minor repair)
				louvered door
				limit
				oil filters
				oil nozzles
				pipe insulation (condensate line)
				pvc pipe
				stove pipe & accessories
				thermocouple
				thermostat
				transfer grille
				transformer
				wire
Air Conditioning	cooling system replacement	freon	drywall	a-coil
		furnace filter	lumber	air filters
		line set	plywood	blower motor
		metal duct tape		breaker
		mounting pad		contactors
		sheet metal		diffusers
		straps		electrical disconnect
		thermostat		filter grill
		thermostat wire		freon
		zip ties		heating element
				line set
				thermostat
				thermostat wire
				transformer
				wire

Energy Conservation Measure	*Direct material for Energy Conservation Measure*	*Ancillary Items* **(Cost must be included in SIR for associated individual ECM)**	*Incidental Repair Measure (IRM)* **(Cost must be included in SIR for whole unit package of ECM)**	*Health & Safety Measure* **(Separate cost justification, not included in SIR)**
Duct Sealing	2-part foam	mesh tape	s-strap	2-part foam
	flex duct	metal duct tape		flex duct
	mastic	silicone caulk		mastic
	sheet metal	zip ties		sheet metal
Duct Insulation	2-part foam	mesh tape		
	flex duct	metal duct tape		
	foil faced duct wrap	staples		
	vinyl duct wrap	vinyl duct tape		
		zip ties		
Attic Insulation	attich hatch (ONLY when insulation is required)	ceiling plugs	attic vents (ONLY when insulation is installed)	minor roof repair of leaking roof that may create moisture/mold issue in attic insulation
	cellulose	dam materials	caulking (MH guttering ONLY when insulation is installed side lift method)	
	fiberglass	drywall (can lights)	flashing	
		roof coating	MH guttering (ONLY when insulation is installed side life method)	knob & tube wiring (minor repair)
		hinges	roll roofing	
		latches	roof coating (ONLY when isulation is required)	
		insulation		
		flashing		
		high-temp silicone sealant		
		insul-shield		
Dense Pack	cellulose	chair railing	primer/sealer	knob & tube wiring
		dry wall compound	roof coating (ONLY when insulation is required)	minor roof repair of leaking roof that may create moisture/mold issue in new wall insulation
		plywood (<1 sheet)		
		sealing high/low openings in balloon framing		
		sheet rock (<1 sheet)		
		wall plugs		
Non-Dense Pack	fiberglass	4" inspection port	flashing	
		wall plugs	MH guttering (ONLY when insulation is installed side life method)	
			primer/sealer	
			roof coating (ONLY when insulation is required)	
Floor Treatment	fiberglass (batt)	adhesive spray	belly repair (when insulation is required)	knob & tube wiring (minor repair)
	fiberglass (blown)	belly repair of insulation access holes (including belly patch, board, tape)	vapor barrier (when floor is insulated)	plumbing leak repair
	rigid foam board		vapor barrier ballast (when floor is insulated)	
	2 part foam	insulation support rods	vapor barrier seam tape (when floor is insulated)	
	dense pack cellulose	netting		
		pipe wrap (only when floor insulated)		

Energy Conservation Measure	*Direct material for Energy Conservation Measure*	*Ancillary Items* (Cost must be included in SIR for associated individual ECM)	*Incidental Repair Measure (IRM)* (Cost must be included in SIR for whole unit package of ECM)	*Health & Safety Measure* (Separate cost justification, not included in SIR)
Window Replacement	window replacement	caulk	lumber	
		drywall	j channel	
		fasteners	coil stock	
		paneling		
		rope caulk		
		shims		
		trim		
		stops		
Door Replacement	door replacement	caulk	lumber	
		drywall		
		fasteners		
		hinges		
		knobs		
		paneling		
		primer/sealer		
		stops		
		trim		
General Air Infiltration	2 part foam (canister)	caulk	lumber-framing	
	attic hatch	ac cover	door hinges	
	belly repair (when no insulation is required)	drywall	door latches	
	caulk	hinges	lumber-trim	
	chimney draft stopper	insulation	plywood (more than one piece for air sealing)	
	door replacement	latches	primer/sealer	
	door sweeps	locks	sheetrock (more than one piece for air sealing)	
	door weatherstrips	mastic	window stop	
	duct sealing	mesh tape		
	foam (cans)	metal duct tape		
	foam sealant (cans)	rope caulk		
	foam sheets	window stop		
	glass			
	mastic			
	plywood (one piece)			
	sheetrock (one piece)			
	thresholds			
	vent termination cap			
	window replacement			
	window weatherstrips			

Energy Conservation Measure	*Direct material for Energy Conservation Measure*	*Ancillary Items* (Cost must be included in SIR for associated individual ECM)	*Incidental Repair Measure (IRM)* (Cost must be included in SIR for whole unit package of ECM)	*Health & Safety Measure* (Separate cost justification, not included in SIR)
Energy Improvement	cfl bulb-flood/recessed	water heater staps	light fixture	replace hazardous light fixture or socket
	cfl bulb-specialty	water heater tape	light socket	water heater discharge pipe
	cfl bulb-standard			water leak repair
	cool roof coating			water heater replacement
	door replacement			
	faucet aerator-bathroom			
	faucet aerator-kitchen			
	faucet aerator-other			
	low-flow showerhead			
	low-flow showerhead-handheld			
	refrigerator replacement			
	water heater jacket			
	water heater pw (1st 6ft only, h&c at wh)			
	water heater replacement			
	water heater top			
	window replacement			
Other Health & Safety				4 mil plastic (clear)
				6 mil plastic
				blue painters tape
				breakers
				B-vent & accesseries
				caz resolution materials
				co detector
				co/smoke detector
				dehumidifier
				dryer vent kit
				duct tape
				electrical panel box
				exhaust vents/fans
				fan controller
				guttering and accessories
				kitchen range hood kit
				make-up air fan
				lead check swabs
				roof coating
				smoke detectors
				sump pump
				tack mats
				vapor barrier
				vapor barrier ballast
				vapor barrier seam tape
				venting
				water heater discharge pipe
				water heater replacement

Miscellaneous Materials
corrugated fasteners
duct mastic tape
duct tape
electrical tape
glue
high temperature caulk
insulation hangers
joint compound
junction box markers
linseed oil
masking tape
metal strapping
mortar mix
nails-all types
paint
pipe dope
plastic window shims
push points
rivets
roof tar
screws-all types
sidewall and ceiling plugs
staples
tie wire
turn locks
window snap fasteners
wirenuts
wood preservative

APCO DSM

v. 6.2014

Energy Conservation Measure (ECM)	*Direct material for Energy Conservation Measure*	*APCO DSM Reimbursement Measure*	*maximum*	*per*
Energy Audit		DSM energy audit	$ 200.00	ea
Heating	ancillary items	DSM discretionary items	$ 200.00	ea
	heating system repair			
	clean/tune	DSM clean/tune electric furnace	$ 100.00	ea
		DSM clean/tune heat pump	$ 250.00	ea
	heat pump replacement	DSM heat pump replacement	$ 2,500.00	ea
Duct Sealing	ancillary items	DSM duct sealing reduction	$ 100.00	ea
	2-part foam			
	flex duct			
	mastic			
	sheet metal			
Duct Insulation	ancillary items	DSM duct insulation	$ 6.00	sf
	2-part foam			
	flex duct			
	foil faced duct wrap			
	vinyl duct wrap			
Attic Insulation	cellulose	DSM R28 existing, R10 added	$ 0.50	sf
	fiberglass	DSM R19 existing, R19 added	$ 0.75	sf
	ancillary items	DSM R11 existing, R27 added	$ 1.08	sf
		DSM no existing insulation	$ 1.45	sf
		DSM roof vents	$ 70.00	ea
		DSM MH attic R15 blown FG4"	$ 0.92	sf
		DSM MH attic R23 blown FG6"	$ 1.10	sf
		DSM MH attic R30 blown FG8"	$ 1.27	sf
		DSM MH attic R38 blown FG10"	$ 1.44	sf
		DSM MH attic R45 blown FG12"	$ 1.60	sf

Energy Conservation Measure (ECM)	*Direct material for Energy Conservation Measure*	*APCO DSM Reimbursement Measure*	*maximum*	*per*
Dense Pack	ancillary items	DSM insulation w/framed siding	$ 1.33	sf
	cellulose	DSM insulation w/brick veneer	$ 2.13	sf
		DSM MH R11 FG batt	$ 0.55	sf
		DSM MH R13 FG blown	$ 0.83	sf
Floor Treatment	ancillary items	DSM band joist measures	$ 0.75	sf
	fiberglass (batt)	DSM foundation wall measures	$ 1.58	sf
	fiberglass (blown)	DSM MH floor R15 blown FG4"	$ 0.92	sf
	rigid foam board	DSM MH floor R23 blown FG6"	$ 1.10	sf
		DSM MH floor R30 blown FG8"	$ 1.27	sf
		DSM MH floor R38 blown FG10"	$ 1.44	sf
		DSM MH floor R45 blown FG12"	$ 1.60	sf
		DSM MH belly patch	$ 0.46	sf
		DSM poly vapor retarder	$ 0.28	sf
		DSM closable foundation vents	$ 38.73	ea
General Air Infiltration	2 part foam (canister)	DSM BD air sealing measures	$1,000.00 max for all air sealing measures	
	ancillary items			
	attic hatch			
	belly repair (when no insulation is required)			
	caulk			
	door replacement			
	door sweeps			
	door weatherstrips			
	duct sealing			
	foam (cans)			
	foam sealant (cans)			
	foam sheets			
	glass			
	plywood (one piece)			
	sheetrock (one piece)			
	thresholds			
	window replacement			
	window weatherstrips			
	window replacement	MH rigid interior storm window	$6.00	sf

Energy Conservation Measure (ECM)	*Direct material for Energy Conservation Measure*	*APCO DSM Reimbursement Measure*	*maximum*	*per*
Incidental Repair	roof coating (ONLY when insulation is required)	DSM MH roof coating	$ 0.33	sf
		DSM MH roof patch	$ 0.64	sf
Energy Improvement	refrigerator replacement	DSM refrigerator 15 cf top freezer	$ 539.00	ea
		DSM refrigerator 18 cf top freezer	$ 629.00	ea
		DSM refrigerator 18.5 cf bottom freezer	$ 889.00	ea
		DSM refrigerator 19 cf top freezer	$ 719.00	ea
		DSM refrigerator 21 cf top freezer	$ 854.00	ea
		DSM refrigerator 22 cf side by side	$ 1,111.00	ea
	freezer replacement	DSM freezer 15 cf upright	$ 582.00	ea
		DSM freezer 18 cf upright	$ 599.00	ea
		DSM freezer 20 cf upright	$ 649.00	ea
		DSM freezer 15 cf chest	$ 454.00	ea
		DSM freezer 18 cf chest	$ 557.00	ea
		DSM freezer 22 cf chest	$ 614.00	ea
	cfl bulb-standard	DSM 13w cfl	$ 2.00	ea
	cfl bulb-specialty	DSM 23w cfl	$ 2.50	ea
	cfl bulb-flood/recessed	DSM 23w floodlight	$ 12.00	ea
	water heater jacket/top	DSM DWH tank wrap >52 gal	$ 35.00	ea
	water heater jacket/top	DSM DWH tank wrap <52 gal	$ 25.00	ea
	water heater pw (1st 6ft only, h&c	DSM DWH R3.25 pipe insulation	$ 0.68	lf
	low-flow showerhead	DSM fl showerhead	$ 15.00	ea
	faucet aerator-other	DSM faucet aerator - w/shutoff	$ 6.00	ea
		DSM faucet aerator - w/o shutoff	$ 3.00	ea
	water heater jacket/top	DSM lower DWH tank temperature	$ 7.00	ea
	water heater replacement	DSM DWH tank replacement	100% cost	ea
	window air conditioner replacemer	DSM window ac replacement	100% cost	ea
Health & Safety	heat pump replacement	DSM HS heat pump replacement	$ 2,500.00	ea
	electrical upgrade	DSM electrical service entrance upgrade	$ 1,500.00	ea
		DSM electrical grounding upgrade	$ 1,500.00	ea
		DSM electrical panel box upgrade	$ 1,500.00	ea
		DSM electrical knob and tube wiring upgrade	$ 1,500.00	ea
		DSM electrical upgrade requiring approval	$ 1,500.00	ea
		DSM electrical upgrade inspection	$ 95.00	ea
		DSM GFI outlet	$ 75.00	ea
		DSM window AC outlet	$ 175.00	ea
		DSM window AC outlet - 2nd floor	$ 150.00	ea
	exhaust vent/fan	DSM bathroom fan vent	$ 225.00	ea
		DSM kitchen exhaust fan/vent	$ 300.00	ea
		DSM ASHRAE ventilation fan	$ 250.00	ea

First Energy Low-Income Check-up Audit Program	
Energy Conservation Measure (ECM)	***Direct material for Energy Conservation Measure***
Energy Improvement	energy audit-baseload-mf
	energy audit-baseload-sf
	energy audit-electric water heat-mf
	energy audit-electric water heat-sf
	energy audit-no show/unable to serve
	refrigerator testing
	solicitation fee
	cfl bulb-specialty
	cfl bulb-flood/recessed
	cfl bulb-standard
	faucet aerator-kitchen
	faucet aerator-bathroom
	faucet aerator-other
	furnace whistle
	hot water pipe insulation
	led night light
	low-flow showerhead
	low-flow showerhead-handheld
	smart power strip

TrailCo	
Energy Conservation Measure (ECM)	***Direct material for Energy Conservation Measure***
Energy Improvement	ceiling fan replacement
	central air conditioner replacement
	clothes washer replacement
	dishwasher replacement
	freezer replacement
	window air conditioner replacement
Heating	high efficiency electric system
	thermostatic controlled baseboard system