

# Arkansas Energy Office

## Weatherization Subgrantee Operations Manual



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# Table of Contents

<b>Section 1 – Subgrantee Overview</b>	<b>8</b>
I. SERVICE AREA: ORGANIZATION NETWORK OF LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM (WAP) SUBGRANTEES	8
A. Weatherization Personnel	8
B. Executive Directors and Board Chairs/Presidents	9
II. SUBGRANTEE SELECTION	9
A. Pre-Award Solicitation	9
B. Policy and Procedures	9
C. Post-Award Probation Period	11
III. COMMUNICATION BETWEEN SUBGRANTEES AND STATE	12
IV. SUBGRANTEE PARTICIPATION IN FAIR HEARINGS	13
V. ETHICAL STANDARDS	16
VI. FRAUD, WASTE & ABUSE	17
<b>Section 2 – Client Services</b>	<b>20</b>
I. CLIENT SOLICITATION	20
II. CLIENT ELIGIBILITY	21
A. Income	24
B. Priority Points	25
III. DWELLING CHARACTERISTICS	27
A. Dwelling Eligibility	27
B. Rental Properties	31
C. Special Requirements for Multifamily Buildings	32
IV. Status of Home	36
A. Home in Progress	36
B. Completed Home	36
C. Contractor Responsibilities	38
D. Amended Home	38
E. Reporting Requirements (WAP 04)	38
V. COORDINATED WORK	39
<b>Section 3 - Reports and Record-Keeping</b>	<b>40</b>
I. CLIENT FILE REQUIREMENTS	40
A. Document and Record Disposition	40
B. Privacy of Recipients of Services	40
C. Client File Content	40
II. REQUIRED FORMS AND DOCUMENTATION	42
A. The Application Form (WAP 02)	42
B. Proof of Age of Home	42
C. Invoices, Bills for Materials, and Labor Charges	42
D. Proof of Income	42
E. Lessor Agreement (WAP 17)	42
F. Work-Order/Change Notices	43
G. Pictures	43
H. Required ECOS Forms/Documents	43
<b>Section 4 – Financial Management</b>	<b>45</b>
I. DEFINITIONS	45
II. BUDGET	46
A. Parts of the Grant Application	46
B. Budget Categories	46
C. Carry-over	51
D. Cost Limits	51

III.	FUNDING .....	54
A.	Advance Funding .....	54
B.	Reimbursement .....	56
C.	Weatherization Invoice Process.....	57
IV.	REPORTING.....	60
V.	PROGRAM INCOME.....	61
VI.	FEE-FOR-SERVICE-WAP RELATED INITIATIVES .....	63
VII.	BRAIDING ACTIVITIES .....	64
A.	Partnerships .....	64
B.	Buy Down .....	64
VIII.	ASSET MANAGEMENT .....	66
A.	Inventory.....	66
B.	Disposal of Surplus/Salvage Weatherization Materials and Equipment .....	67
C.	Equipment .....	69
D.	Use of Weatherization Inventory by other Units of the Subgrantee Agency.....	70
IX.	SALE OF WEATHERIZATION MATERIALS.....	71
X.	CLOSEOUT OF WEATHERIZATION PROGRAM YEAR.....	72
XI.	FINAL REPORTS AND AUDIT .....	73
A.	Final Reports .....	73
B.	Audits .....	73
<b>Section 5 – Procurement</b>	.....	<b>74</b>
I.	SMALL, MINORITY, AND WOMEN-OWNED BUSINESS ENTERPRISES.....	75
A.	Purpose.....	75
B.	Focus.....	76
C.	Goal .....	76
D.	Assurances .....	76
II.	PROCUREMENT OF BUILDING INSULATION PRODUCTS CONTAINING RECOVERED MATERIALS .....	77
III.	PROCUREMENT, LEASING AND RECORDS MANAGEMENT .....	78
A.	Vehicle and Equipment Purchase Guidelines.....	78
B.	Leasing .....	80
C.	Records Management.....	80
IV.	COMPETITIVE PROCUREMENT STANDARDS .....	82
A.	General Conditions.....	82
B.	Determining Procurement Method.....	83
C.	Development of the Procurement Document .....	84
V.	SOLICITATION .....	89
A.	Type of Procurement .....	89
B.	Ensuring Competition.....	89
C.	Pre-Bid and Pre-Quotation Bidders Conference.....	90
VI.	BID OPENING .....	92
A.	Public Opening .....	92
B.	Sole Source; Sole Response; and “No Bid” Response.....	92
C.	Corrections to the RFQs.....	92
D.	Preliminary Award.....	93
E.	Withdrawal of Bid After Bid Opening .....	93

VII.	BID EVALUATION AND AWARD .....	94
A.	Evaluation Criteria .....	94
B.	Responsiveness.....	95
C.	Responsibility.....	95
D.	Procurement Selection Committee.....	96
E.	Protests .....	96
VIII.	TELEPHONE BIDS.....	97
A.	Telephone Procurement .....	97
B.	Telephone Procurement for Heating Systems Contractors.....	97
IX.	CONTRACT MANAGEMENT.....	98
A.	When a RFQ Becomes a Contract .....	98
B.	Amendments to the Contract .....	98
C.	Breach of Contract .....	98
D.	Photocopy of Sealed Bid .....	98
X.	GUIDELINES FOR IMPLEMENTATION OF THE RECYCLED PRODUCTS IN INSULATION REQUIREMENT.....	99
A.	Who and What are Affected by the Regulation .....	99
B.	Agency Procurement Procedures for Recycled Materials .....	99
<b>Section 6 – Subgrantee Monitoring</b>	<b>.....</b>	<b>103</b>
I.	PROBLEM RESOLUTION .....	103
A.	Compliance & Program Management (Reporting) .....	103
B.	Technical (Workmanship) .....	103
C.	Fiscal Compliance .....	103
II.	STAFFING AND NOTIFICATION OF PERSONNEL.....	104
A.	Weatherization Personnel .....	104
B.	Executive Directors and Board Chairs/Presidents .....	104
III.	THIRD PARTY QCI MONITORING.....	105
IV.	MONITORING REVIEWS.....	108
A.	Subgrantee Desktop Reviews.....	108
B.	On-Site Monitoring.....	115
V.	AEO WAP MONITORING PROCEDURE .....	116
A.	Monitoring Visit Protocol.....	116
B.	Areas of Review .....	116
C.	Routine Program Evaluation Outline.....	116
D.	Field Test Detail.....	117
E.	Evaluation Tools and Equipment .....	118
F.	Reference Material .....	119
VI.	LEVELS OF AGENCY PERFORMANCE.....	119
A.	Stable Agency Performance .....	119
B.	Vulnerable Performance.....	121
C.	At Risk Performance .....	122
VII.	PERFORMANCE FINDINGS CORRECTION PROCESS .....	125
VIII.	TERMS FOR PROBATION OR DEFUNDING OR PENALTIES .....	126
IX.	PROCEDURES TO TERMINATE/DEFUND A WAP SUBGRANTEE.....	127

<b>Section 7 – Technical Standards and Best Practices</b>	<b>128</b>
I. EMPLOYEE/CONTRACTOR IDENTIFICATION	128
II. DEVELOPING A QUALITY WORK PLAN ASSESSING SUBGRANTEE CAPACITY	143
A. Identifying the Minimum Competencies Held by Subgrantee Staff	143
B. Establishing a Baseline	143
C. Evaluating Knowledge, Skills & Abilities (KSA)	144
D. Recommended Training Plan	144
E. Training & Technical Assistance	144
F. Post Assessment	145
III. CLIENT EDUCATION	147
A. Energy Savings Kit	147
B. Energy Savings Information	147
C. Health and Safety	147
D. Client Education Checklist	147
IV. ENERGY AUDIT	148
A. Energy Audit Procedural Checklist	148
B. Building Structure	152
C. Data Collection	153
D. General Heat Waste Measures	153
E. Air Infiltration/Sealing	153
F. Insulation	155
G. Programmable Thermostats	156
H. Compact Fluorescent Lights (CFL's)	156
I. Seal and Insulate Ducts	156
V. REPLACING MAJOR APPLIANCES/SYSTEMS	158
A. Heating and Cooling Systems	158
B. Refrigerators	165
C. Quality Assurance Inspection and Testing	172
D. Call Backs	175
VI. HEALTH & SAFETY	176
A. Heating, Ventilation and Air Conditioning (HVAC)	178
B. Appliances	185
C. General Building Structure	186
D. Physical Health & Safety (Client and Worker)	188
E. General Hazards Physical & Material	192
VII. INCIDENTAL REPAIRS	206
VIII. CAPITAL-INTENSIVE EFFICIENCY	208
IX. DENIAL/DEFERRAL/REFERRAL	209
A. Documentation	212
B. Withholding of Weatherization Services	213
C. Deferral Conditions	214
Appendix A: Reference Materials	215
Appendix B: Arkansas Weatherization Forms	216

# ACRONYMNS

AASIS	Arkansas Administrative Statewide Information System
ACPU	Average Cost per Dwelling Unit
ADEQ	Arkansas Department of Environmental Quality
AEDC	Arkansas Economic Development Commission
AEO	Arkansas Energy Office
AHERA	Asbestos Hazards Emergency Response Act
ANSI	American National Standards Institute
ARWAP	Arkansas Weatherization Assistance Program
ASHRAE	American Society of Heating, Refrigeration, and Air Conditioning Engineers
ASTM	American Society for Testing Materials
AWAP	Arkansas Weatherization Assistance Program
BCJOS	Building Check & Job Order Sheet
BPI	Building Performance Institute
CAA	Community Action Agency
CAZ	Combustion Appliance Zone
CDBG	Community Development Block Grant
CEU	Continuing Education Units
CFL	Compact Fluorescent Lights
CFM	Cubic Feet per Minute
CFR	Code of Federal Regulations
CI	Capital Intensive
CO	Carbon Monoxide
CPG	Comprehensive Procurement Guideline
DFA	Department of Finance & Administration
DOE	U.S. Department of Energy
DOEPO	DOE Project Officer
ECM	Energy Conservation Measure
ECOS	Energy Conservation Online System
EPA	Environmental Protection Agency
FIFO	First in, First Out
FR	Federal Register
GHW	General Heat Waste
H&S	Health & Safety
HCS	Hazard Communication Standard
HEP	Home Energy Professional
HHS	U.S. Department of Health and Human Services
HUD	Department of Housing & Urban Development
HVAC	Heating, Ventilation & Air Conditioning

## ACRONYMNS, Continued

IR	Incidental Repair
IREC	Interstate Renewable Energy Council
IRM	Incidental Repair Measure
JAI	Joseph Associates, Inc.
JTA	Job Task Analysis
JTPA	Job Training & Protection Act
KSA	Knowledge, Skills & Abilities
KTW	Knob-and-Tube Wiring
LIHEAP	Low Income Home Energy Assistance Program
LIHTC	Low Income Housing Tax Credit
LRRPP	Lead Renovation, Repair, and Painting
LSW	Lead Safe Weatherization
MF	Multifamily
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheets
MWBE	Minority or Women Owned Business Enterprise
NAECA	National Appliance Energy Conservation Act
NASCSP	National Association for State Community Services Programs
Network	Seven (7) agencies around the state providing Weatherization services
NFPA	National Fire Protection Association
NHPA	National Historic Preservation Act
NIOSH	National Institute for Occupational Safety and Health
NREL	National Renewable Energy Laboratory
OMB	Office of Management and Budget
OSHA	Occupational Safety & Health Administration
PAC	Policy Advisory Council
PM	Program Monitor
POI	Project Officer
POI	Pollution Occurrence Insurance
PY	Program Year
QA	Quality Assurance
QCI	Quality Control Inspector
QWP	Quality Work Plan
RESnet	Residential Energy Services Network
RFP	Request for Proposals
RRP	Renovation, Repair & Painting Program
SEP	State Energy Program
SHPO	State Historic Preservation Officer
SIR	Savings-to-Investment Ratio
SPF	Spray Polyurethane Foam

## ACRONYMNS, Continued

SWS	Standard Work Specifications
T&TA	Training and Technical Assistance
US DHHS	US Department of Health & Human Services
USPS	United States Postal Service
VOC	Volatile Organic Compounds
WAP	Weatherization Program-Weatherization Assistance Program for Low-Income Persons
WAPTAC	Weatherization Assistance Program Technical Assistance Center
WIA	Workforce Investment Act
WPN	Weatherization Program Notice
WTC	Weatherization Training Center

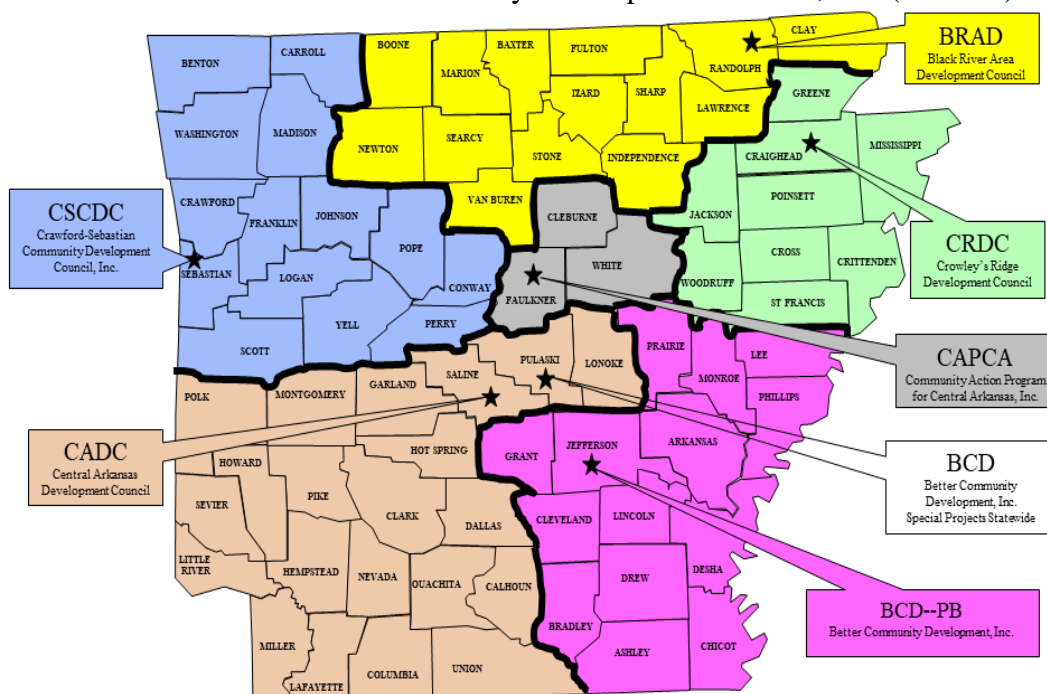


## Section 1 – Overview

**I. SERVICE AREA: ORGANIZATION NETWORK OF LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM (WAP) SUBGRANTEES**

### Existing Subgrantee Network

- Better Community Development, Inc. (BCD)
- Black River Area Development Corporation (BRAD)
- Central Arkansas Development Council (CADC)
- Community Action Program for Central Arkansas, Inc. (CAPCA)
- Crowley’s Ridge Development Council (CRDC)
- Crawford-Sebastian Community Development Council, Inc. (CSCDC)



### A. Weatherization Personnel

See 10 CFR Part  
440.15(ii-iv)

Weatherization Assistance Program (WAP) Subgrantees are required to maintain staffing sufficient to utilize allocated funding and meet client service goals for the program as set forth in all grant agreements.

An official letter must be submitted to the Arkansas Energy Office (AEO) of any weatherization personnel that have been hired, or have left employment, within fifteen (15) days of the hire or departure. Please provide name and title of employee.

**B. Executive Directors and Board Chairs/Presidents**

An official letter must be submitted to the AEO of any change in the Agency's Executive Director, Weatherization Director and Board Chair/President within fifteen (15) working days of appointment or departure. AEO also requests the mailing addresses of Board Chairs/Presidents where they prefer to receive mail (home or business). This should be different from the agency address.

## **II. SELECTION**

**A. Pre-Award Solicitation**

The AEO, as the Grantee, is mandated by 10 CFR 440.15 to ensure that each subgrantee is a Community Action Agency (CAA) or other public or nonprofit entity. If additional WAP subgrantees are deemed necessary, interested organizations will be solicited through a competitive Request for Proposals (RFP) issued by the AEO.

**B. Policy and Procedures**

Subgrantees are required to abide by program regulations, including 10 CFR 440, 2 CFR 200 as amended by 2 CFR 910, Retrofitting Arkansas Standard Work Specification - Aligned Field Guide, 168-00-17 Ark. Code R. § 3 "V.5.2 Energy Audit Procedures" for multifamily housing complexes, ASHRAE 62.2-2016, and this Subgrantee Operations Manual in administering the program.

**1. Required Documentation**

An organization must submit a detailed plan describing how it will operate the program. It must also meet basic program requirements to qualify as a potential candidate. The basic criteria include, but are not limited to:

- Proof of adequate bonding;
- Proof of adequate liability insurance or ability to secure adequate insurance;
- Completed Certificate Regarding Debarment, Suspension and Other Responsibility Matters, and Drug-Free Workplace Requirements;
- Signed lobbying disclaimer form;
- The organization's Articles of Incorporation, its organizational chart and names of persons authorized to sign on its behalf;
- Certificate of good standing from the Arkansas Secretary of State's Office and documentation supporting its legal status;
- Credit references and proof of financial solvency.

See Updated  
Subgrantee Selection  
Guidance (WPN 11-  
14 Effective  
September 19, 2011)

See 10 CFR Part 440,  
"Weatherization  
Assistance for Low-  
Income Persons."

## 2. Evaluation Criteria

### a. Weatherization/Renovation Experience

- Number of years of experience in weatherization and/or renovation activities; and descriptions of work completed;
- Performance records: Number of single family homes completed and documentation of successful completion;
- Number, qualifications and experience of staff in rating energy conservation measures and/or residential weatherization/renovation activities.

### b. Program Management Experience

- Description and number of years of management experience of the organization;
- Qualifications and experience of management staff;
- Contract/subcontract management experience;
- Ability to secure volunteers and/or public service employment workers in accordance with the Workforce Investment Act (WIA) formally known as the Job Training and Protection Act (JTPA), if such employees are available.

### c. Fiscal Accountability

Agency's ability to demonstrate sound fiscal and accounting procedures, including:

- Methods for tracking income, expenditures, disbursements;
- Audit review process, results of past fiscal audits, if applicable;
- Accounting software in use, if applicable;
- Separation of duties which promotes checks and balances in the internal accounting system.

### d. Client Outreach

- Past experience or documented ability of the organization in areas of outreach, educating the public about its program services, and identifying clients.

### e. Assisting Low-Income Populations

- Agency's record in assisting low-income families in the planned service area.

### f. Organization Capacity

- Ability to provide sufficient resources to the WAP including, but not limited to: administrative support, personnel, office space, equipment, supplies, tools, and other related assets.

g. Supplemental Funds

- Ability to use non-WAP funds in conjunction with WAP funds in servicing eligible homes. Supplemental funds can be used to implement renovation both for WAP eligible and non-WAP eligible energy conservation measures.

3. **Requirements for a Public Hearing**

The AEO will evaluate all proposals, make a preliminary selection, and hold a public hearing. After reviewing comments from the public hearing, a final decision based on the results will be announced. The federal funding source (Department of Energy) has final decision making authority in this selection process.

C. **Post-Award Probation Period**

An organization selected to provide weatherization services in a defined area of Arkansas will be placed on a six-month probation review period by AEO. Probation periods may be extended at the discretion of the AEO. The organization must document eligibility of clients, homes weatherized, and average cost of weatherized homes based on production and client service goals established in the Grant Agreement.

Definition: An eligible client is one who has requested WAP services and has been “certified eligible,” which means the Client (1) is income-eligible, (2) has not been previously serviced through the WAP (verified through existing records, unless he or she is eligible for re-weatherization), (3) has a viable project, and (4) resides in the area to be served.

### III. COMMUNICATION BETWEEN SUBGRANTEES AND STATE

Subgrantee agencies should feel free to communicate with the state regarding any problems or issues that arise regarding program plans or implementation.

#### Weatherization Staff:

McCoy, Subrena	Program Manager	<a href="mailto:mccoy@adeq.state.ar.us">mccoy@adeq.state.ar.us</a>	501-682-7694
Roman, Candy	Energy Program Coordinator	<a href="mailto:roman@adeq.state.ar.us">roman@adeq.state.ar.us</a>	501-682-8067
Arick, Heather	Administrative Program Monitor	<a href="mailto:arick@adeq.state.ar.us">arick@adeq.state.ar.us</a>	501-682-0900
Ryan, Wendy	Technical Program Monitor	<a href="mailto:ryan.wendy@adeq.state.ar.us">ryan.wendy@adeq.state.ar.us</a>	501-813-4775
Kelley, Angela	Financial Program Monitor	<a href="mailto:kelley@adeq.state.ar.us">kelley@adeq.state.ar.us</a>	501-681-7382

The AEO has divided program monitors into specialized roles (technical, administrative and fiscal). Each monitor conducts monthly desktop reviews on 100% of completed jobs in order to determine program compliance. Based on review results, monitors will submit to subgrantees a list of deficiencies (if applicable) which must be addressed in order for the subgrantee to be reimbursed.

If the subgrantee requires clarification or is seeking guidance, contact the reviewing monitor as the first point of contact. Following this process will help expedite the process. The outlined chain of command is below.

For technical matters, contact your assigned technical program monitor. If matters cannot be resolved contact the WAP Program Manager, if the issue(s) are still unresolved contact the Senior Manager.

For administrative matters, contact your assigned administrative program monitor. If matters cannot be resolved contact the WAP Program Manager, if the issue(s) are still unresolved contact the AEO Senior Manager.

For fiscal matters, contact the financial monitor. If matters cannot be resolved contact the AEO Senior Operations Manager, if the issue(s) are still unresolved contact the WAP Program Manager or AEO Senior Manager.

#### Written Communication

If Subgrantee's WAP and/or agency staff are resolving deficiencies found during the review process, once resolved **immediately** report to the appropriate WAP program monitor of resolution via email. Failure to contact the program monitor could result in reimbursement delays.

## **IV. SUBGRANTEE PARTICIPATION IN FAIR HEARINGS**

AEO's policy for hearings is based on 42 U.S. Code § 8624(b)(13), also known as WAP Assurance 13, which requires that Grantees (AEO) "provide an opportunity for a fair administrative hearing to individuals whose claims for assistance... are denied or are not acted upon with reasonable promptness."

Based on Assurance 13, AEO acknowledges that the following are reasons that applicants can file an appeal:

- The household is determined ineligible for services;
- The benefit amount is less than anticipated; or
- The benefit is delayed because the Subgrantee did not process the application in a timely manner as required by this policy manual.

During any phase of the complaint/appeals process, the applicant may designate a representative to assist him/her. The applicant's written statement, including on the Request for Appeal Hearing form, will be sufficient to designate a representative to speak for him/her. Upon request for legal counsel, the Subgrantee will refer applicants to Legal Aid, Arkansas Legal Services ([www.arlegalservices.org](http://www.arlegalservices.org)), or other resources within the community.

### **NOTIFICATION OF RIGHT TO APPEAL**

Subgrantees must ensure that applicants are made aware of the appeals and hearing process by various means, including:

- Providing onsite postings of the appeals and hearing process;
- Verbally conveying the process to the applicant at the time of application;
- Providing the information in other languages spoken by applicants if necessary;
- Ensuring that the hearings information is included with the application as well as any other effective place such as the agency website.

The Subgrantee must also inform the applicant that a complaint may be submitted in writing to the Subgrantee within thirty (30) calendar days of receiving notification of a decision about the application.

A formal appeal is submitted to the Subgrantee or to AEO in writing using the Request for Appeals form, or by written statement that includes an explanation of the action(s) taken by the applicant and by the Subgrantee concerning the application. If received by the Subgrantee, the appeal will be sent by the Subgrantee to AEO within five (5) business days.

### **PHASES OF A COMPLAINT AND APPEAL**

It is AEO's intent that any complaint will be dealt with promptly in order to provide a resolution as quickly as possible so that benefits are forthcoming if the applicant is deemed eligible. A formal appeal hearing is considered the last resort after all other efforts to resolve the complaint have been exhausted. A formal request for a hearing will be initially treated as a complaint in order to provide an opportunity for the issue to be resolved expeditiously and so allow any benefits to be paid promptly, if applicable.

## COMPLAINT

When AEO receives a complaint (including a formal request for a hearing), AEO will contact the Subgrantee where the applicant submitted the WAP application. AEO will provide all information received from the applicant and ask the Subgrantee to follow up by contacting the applicant. AEO requires that the Subgrantee notify AEO of the resolution of the complaint within ten (10) business days of receiving the complaint. When an applicant contacts the Subgrantee directly, the Subgrantee will handle the complaint by reviewing and attempting to resolve the issue according to policy. During this process, AEO is available to consult with the Subgrantee about any policy questions.

If the Subgrantee is unable to arrive at a resolution with the applicant, the complaint will be sent to AEO, including documentation of phone calls and electronic and mailed correspondence, and all other documents relating to the complaint, such as:

- Case file documents (e.g., application, eligibility documents, deferral form, work order);
- Actions the Subgrantee took on the complaint, including any and all documented communication (email or otherwise);
- All Documents the Subgrantee used to make a decision; and
- The decision the Subgrantee made.

The AEO WAP Manager or designated representative will review the issues raised by the applicant and all documentation provided. AEO will present the resolution in writing to the applicant and the Subgrantee within ten (10) business days of receiving the complaint. AEO will provide information regarding a request for a Fair Administrative Hearing and inform the applicant that the request for a hearing must be received by AEO no later than thirty (30) calendar days from the date of disposition in question.

## APPEAL REVIEWED BY AEO

An appeal or request for a hearing in writing must be submitted to AEO by email to [help-energy@adeq.state.ar.us](mailto:help-energy@adeq.state.ar.us) or by mail to:

Arkansas Dept. of Energy & Environment  
Attention: AEO / WAP Appeals  
5301 Northshore Drive,  
North Little Rock, AR 72118

Once AEO receives a request for a Fair Administrative Hearing, a pre-hearing resolution conference will be scheduled. This conference will be conducted by AEO staff less involved with the initial eligibility decision. AEO staff will review all documents provided and speak to the applicant/representative and Subgrantee staff, as needed. If no formal withdrawal is made during this call, the following will be determined:

- 1) Set the deadline for how long the parties have for discovery and how long they have to give those documents to the Administrative Hearing Officer (AHO) as exhibits;
- 2) Set a time and date for the hearing;
- 3) Set the location (which could include Zoom, telephone or in person, COVID and other factors permitting); and

- 4) The Subgrantee and applicant's rights to representation, Discovery, present witnesses, present other evidence, and the right to cross examination.

The applicant can withdraw his/her request for hearing at this time. AEO should verify that the applicant wants to continue.

#### FAIR ADMINISTRATIVE HEARING

The fair hearing will proceed as follows:

- The applicant will state the reason for their request for a hearing;
- The applicant will present evidence and witnesses;
- Subgrantee will state the reason for its decision;
- Subgrantee will present evidence and witnesses; and
- Administrative Hearing Officer will issue the final administrative decision on the case.

The Administrative Hearing Officer will inform the parties in writing of the final decision within ten (10) business days of the hearing. The document will include the reason for the decision supported by applicable policies, rules, and laws.

#### WITHDRAWAL FROM FORMAL HEARING

The applicant may withdraw a request for a hearing any time by completing a signed statement that indicates the reason for the withdrawal. Applicants may submit their withdrawal requests to AEO by email to [energy@adeq.state.ar.us](mailto:energy@adeq.state.ar.us) or by mail to:

Arkansas Dept. of Energy & Environment  
Attention: AEO / WAP Appeals  
5301 Northshore Drive,  
North Little Rock, AR 72118



## **V. ETHICAL STANDARDS**

The purpose of the following Code of Ethics is to promote honest and ethical conduct and compliance with the policies of AEO and the WAP, particularly as related to the preparation and maintenance of financial reports, invoices, Advance Funds requests, and in recording and reporting program information.

Officers, Directors and employees will seek to report all information accurately and honestly, and as otherwise required by applicable reporting requirements.

Officers, Directors and employees agree to disclose unethical, dishonest, fraudulent and illegal behavior, or the violation of AEO policies and procedures, directly to AEO management. Reporters will be protected under Arkansas Whistle-Blower Act § 21-1-601. Violation of this Code of Ethics could result in loss of funds.

## VI. FRAUD, WASTE & ABUSE

### Recommended Practice on Fraud, Waste, and Abuse

#### 1.0 Guidelines

These Fraud, Waste, and Abuse Guidelines as found under DOE Order 221.1B, *“Reporting Fraud, Waste, and Abuse to the Office of Inspector General,”* were established to provide guidance to AEO Subgrantee employees who observe, have knowledge of, or suspect that fraud, waste, or abuse of public funds is occurring or has occurred. It is the intent of this guideline to promote awareness of the potential for fraud, waste, and abuse and to provide guidance to ensure that incidents of this nature are handled appropriately.

#### 2.0 Definitions

2.1 **Fraud** – Any intentional act or omission designed to deceive, resulting in a loss to an individual or entity and a gain for the perpetrator.

General Examples:

- Theft or misuse of money, equipment, supplies and/or other materials
- Falsifying financial records to conceal the theft of money or property
- Intentionally misrepresenting goods provided or services rendered or the cost of goods and services
- Soliciting or accepting a bribe or kickback
- Falsifying payroll information

Specific Examples:

- Billing for goods or services not rendered
- Billing for unnecessary goods or services
- Duplicate billing
- Performing inadequate inspection of properties to allow a contractor to get away with shoddy workmanship or non-performance
- Removing or using surplus construction supplies for personal use
- Maintaining fictitious clients, jobs, vendors, or employees
- Bid rigging: promising a contract to one party even though, for the sake of appearance, several other parties are invited to present a bid
- Underbidding a contract: bidding less than the amount the contract will actually cost to perform, then finding ways to recover the money that was lost in the underbid
- Scope creep: when the extent of a project is not properly defined, allowing uncontrolled growth
- Falsely posing as a Minority or Women-Owned Business Enterprise (MWBE), defined as a business owned by women, minorities, or service disabled veterans
- Paying a bribe to a Subgrantee or an employee of a Subgrantee in exchange for preferential treatment such as a contract award.

- 2.2 **Waste** – Using material or financial resources carelessly without regard to cost-effectiveness or necessity in program operations, including incurring unnecessary costs from inefficient or ineffective practices, systems, or controls.

General Examples:

- Purchasing unnecessary supplies, materials, and equipment
- Purchasing supplies without regard to cost
- Using supplies, materials, and equipment carelessly, resulting in unnecessary waste
- Failing to reuse or recycle major resources to reduce the generation of waste

- 2.3 **Abuse** – Intentional destruction, diversion, manipulation, maltreatment, or misuse of resources; extravagant or excessive use as to abuse one's position or authority. Abuse can occur in financial or non-financial settings.

General Examples:

- Making procurement or vendor selections that are contrary to existing policies or are unnecessarily extravagant or expensive
- Receiving favor for awarding contracts to certain vendors
- Using one's position for personal gain or to gain an advantage over another
- Failing to report damage to equipment or property
- Creating unneeded overtime
- Requesting staff to perform personal errands or work tasks for a supervisor or manager
- Choosing travel arrangements that are contrary to existing travel policies or are unnecessarily extravagant or expensive

Additional Example Specific to the WAP:

- Using State or Federal funds or equipment for non-State or Federal purposes

### 3.0 **Suggested Procedures**

- 3.1 A Subgrantee employee who observes, has knowledge of, or suspects that fraud, waste, or abuse is occurring or has occurred, and does **not** desire anonymity, should:

- a) Immediately report the incident to the appropriate WAP State Program Manager **in person or by phone**. The WAP State Program Manager will be responsible for notifying the Director of the Arkansas Energy Office who will in turn notify the Director of the Department of Finance and Administration, Office of Accounting, Internal Audit Section, or his/her designee, in person or by phone of the suspected activity.
- b) The employee should be prepared to provide the following information verbally or in writing, to the extent known, regarding the incident:
  - a. Who was involved? (Names and phone numbers, if available)
  - b. What happened? (Summary of events, additional sources of evidence)
  - c. When did it happen? (Date, time, frequency)
  - d. Where did it happen? (Location, city, state)

- e. What was the cost involved? (Estimated loss to the government, gain to violator)
    - f. How did it happen? (What scheme was used)
    - g. Who else is aware of the incident, to your knowledge? (Names and phone numbers, if available)
    - h. What is the source of the information? (Personal observation, employee complaint, monitoring results)
  - c) Follow any instructions provided by AEO management and the DFA Director of Internal Audit, or his/her designee, regarding “Next Steps” in the investigation.
- 3.2 A Subgrantee employee who observes, has knowledge of, or suspects that fraud, waste, or abuse is occurring or has occurred, and **wishes to remain anonymous**, should:
- a) Immediately report the incident to DFA’s Fraud \* Waste \* Abuse Hotline, which can be accessed via Department of Finance and Administration (DFA) website **or** contact the DFA Internal Audit Section at 501-682-0370 or 800-952-8248

The employee, though anonymous, must be willing to share specific information regarding the incident. The employee should be prepared to provide the following information, to the extent known, regarding the incident as specified in Sec. 1. VI. 3.1 above.

#### 4.0 **Confidentiality**

- 4.1 Subgrantee employees who are aware of any fraud, waste, or abuse are discouraged from discussing the case, facts, suspicions, or allegations with anyone outside the organization **or** with anyone within the organization who does not have a legitimate need to know.
- 4.2 Until an incident is fully investigated and resolved, it is critical to refrain from discussing it with the individual(s) suspected of fraud or anyone not directly involved in the investigation to avoid alerting the individual(s) that an investigation is under way and to minimize the impact of any mistaken accusations.
- 4.3 Any inquiries from the suspected individual(s) or their attorneys or representatives should be directed to AEO Management or DFA Internal Audit.
  - a) The proper response to such an inquiry is: “I am not at liberty to discuss this matter.”
  - b) Under no circumstances should any reference be made to what a person is known to have done or suspected of doing.
  - c) No promises of any kind should be made.
- 4.4 No Subgrantee employee should contact the suspected individual(s).

## **Section 2 – Client Services**

### **I. CLIENT SOLICITATION**

Each Subgrantee will publicize the WAP within its geographic area with special attention given to the recruitment of DOE priority groups (low-income, elderly, individuals with disabilities, households with children, high energy burden and high energy users households through:

- Coordination with Low Income Home Energy Assistance Program (LIHEAP), to receive referrals.
- Public outreach through presentations to local civic groups, churches, schools, and others;

Publicity and recruitment are not required or recommended when already eligible clients must wait one year or more due to numbers on the county waiting list. Coordination with LIHEAP is an ongoing requirement.

## II. CLIENT ELIGIBILITY AND SELECTION

See 2021 Federal Poverty Guidelines and Definition of Income (WPN 21-3, Effective February 10, 2021)

Arkansas adheres to the Department of Energy income guidelines, which are updated each year. The annual revisions of poverty income guidelines are published in the Federal Register in February. The AEO will issue a letter of notification to each Subgrantee when the revisions are made available with the effective date to begin using revised guidelines.

New income guidelines will be updated in ECOS beginning July 1<sup>st</sup> of every new program year.

A Subgrantee is encouraged to serve clients whose names appear on Low-Income Home Energy Assistance Program (LIHEAP) lists with LIHEAP funds. LIHEAP clients who are referred to WAP automatically meet the weatherization income guidelines.

If a Subgrantee has accumulated a waiting list of clients in excess of two (2) years, the Subgrantee may submit a request to AEO to suspend the taking of applications until that list has been reduced down to one (1) year.

### A. INCOME

Income eligibility is the basic determinant for Weatherization services. Each applicant's income must be reviewed and determination made if the household is at or below 200% of poverty level as defined by DOE and therefore eligible for WAP. Each applicant must be notified promptly of eligibility or ineligibility. All income documentation must be copied and kept in the client file for proof of eligibility. Income must be determined for all individuals living in the household. Income is defined as cash receipts earned and/or received by the applicant (before taxes are deducted) during one calendar year.

#### 1. Cash Receipts

Cash Receipts include the following:

- a. money, wages, and salaries **before** any deductions (gross);
- b. net receipts from non-farm or farm self-employment (receipts from a person's own business or from an owned or rented farm after deductions for business or farm expenses);
- c. regular payments from social security, railroad retirement, unemployment compensation, strike benefits from union funds, worker's compensation, veteran's payments, training stipends, alimony, and military family allotments;
- d. private pensions, government employee pensions (including military retirement pay), and regular insurance or annuity payments;
- e. dividends and/or interest;
- f. net rental income and net royalties;
- g. periodic receipts from estates or trusts; and
- h. net gambling or lottery winnings.

2. **Income Exclusions:** The following income exclusions are **not** considered as part of household income when determining eligibility for Weatherization.

- a. capital gains;
- b. any assets drawn down as withdrawals from a bank;
- c. money received from the sale of a property, house, or car;
- d. one-time payments from a welfare agency to a family or person who is in temporary financial difficulty;
- e. tax refunds;
- f. gifts, loans, or lump-sum inheritances;
- g. college scholarships;
- h. one-time insurance payments, or compensation for injury;
- i. non-cash benefits, such as the employer-paid or union-paid portion of health insurance;
- j. employee fringe benefits, food or housing received in lieu of wages;
- k. the value of food and fuel produced and consumed on farms;
- l. the imputed value of rent from owner-occupied non-farm or farm housing;
- m. Depreciation for farm or business assets;
- n. Federal non-cash benefit programs such as Medicare, Medicaid, Food Stamps, school lunches, and housing assistance;
- o. Combat zone pay to the military;
- p. Child Support, as defined below in Section 3;
- q. Reverse mortgages; and
- r. Payments for care of Foster Children.

### 3. Child Support

Child support payments, whether received by or paid by the household member, are **not** considered sources of income to be added to the income or deducted from the income for the purpose of determining applicant eligibility.

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

#### 4. Categorical Eligibility

Households receiving cash assistance from Title IV (TANF or federal payments for Foster Care or Adoption Assistance) or Title XVI (SSI) of the Social Security Act during the 12-month period preceding the determination of eligibility are automatically eligible for the Weatherization program.

For verification of TANF benefits, contact Customer Service at 1-800-482-8988 or 501-682-8993 or the local DHS county office.

#### 5. Zero Income/Self-Certification of Income

*See 10 CFR Part 440.16,  
Minimum Program  
Requirements*

After all avenues of documenting income are exhausted, certification is allowable. Evidence of all attempts to obtain income verification must be kept in client's file. At a minimum, Subgrantees must check with DHS and unemployment offices to obtain verification of zero income, if available. In addition, Subgrantees may request a copy of the client's income tax return for the most recent tax year to verify income eligibility.

**Zero Income Certification:** Clients who claim zero income must either provide two (2) notarized statements from individuals who are familiar with their situation stating that client has no income or verification from DHS.

**Self-Certification:** After all other avenues of documenting income eligibility are exhausted, self-certification is allowable. However, evidence of the various attempts at proving eligibility must be contained in the client file.

In addition, any client claiming zero-income must include notarized statement signed by the potential applicant indicating that the applicant has no other proof of income.

#### 6. Proof of Income and Proof of Eligibility

Subgrantees are reminded that proof of income and any associated documentation must be kept in the client file. Income eligibility calculations must also be in client files.

**Availability of Supporting Documentation:** For purposes of review and audit, each client file must contain an application from the client that contains the required demographics and income for the entire family living in the residence. The client file must also contain evidence provided by the Subgrantee that the client is eligible to receive Weatherization Assistance Program (WAP) services. This evidence may include, but is not limited to, a memorandum from a third-party certification office stipulating the income levels of the family or source documentation for each income source listed on the application. These documents can be stored electronically or retained in hard copy for each client.

**Eligibility Determined by Outside Agency/Program:** If income eligibility is determined by an outside agency or program, i.e., LIHEAP or the U.S. Department of Housing and Urban Development (HUD), any document used to determine eligibility, such as a copy of the LIHEAP eligibility or a copy of the HUD building list, will suffice as evidence of client eligibility. This document and any related documents must be retained in the client file.



## 7. Annualization of Income

Where an applicant receives income verification for a portion of the applicable tax year, their partial income may be annualized to determine eligibility.

The method of calculating annualized income, as determined by AEO, is as follows:

- a. If the applicant is paid the same amount weekly, multiply the weekly amount by 4.333. This calculation gives you the monthly income to be multiplied by 12.
- b. If the applicant is paid the same amount bi-weekly, multiply the bi-weekly amount by 2.165. This calculation gives you the monthly income to be multiplied by 12.
- c. A person whose income varies from paycheck to paycheck should provide a minimum of one month's pay in order to annualize income. More paychecks are desirable.

## 8. Re-certification

Each client's income must be re-certified when eligibility lapses due to the length of time the applicant was waiting to receive Weatherization services. Re-certification of eligibility must occur at least every twelve (12) months after initial determination of eligibility until selected for weatherization. The application eligibility expires twelve (12) months from certification date if work on dwelling unit has not been initiated. The Grantee must outline the method of determining in their Annual Plan for approval by DOE.

### B. PRIORITY POINTS

*See 10 CFR Part 440.16  
(b), Minimum Program  
Requirements*

The Subgrantee's waiting list must be maintained by assigning points for DOE categories of priority for service. There will be one (1) waiting list for DOE and LIHEAP weatherization. Priority Points are awarded to eligible applicant households based on:

1. At least one (1) member of the household is elderly (age 60 or older). (1 point)
2. At least one member of the household is disabled. (1 point)
  - A Client that is considered disabled qualifies a residence for weatherization assistance.
  - To qualify as disabled, the person must be a recipient of Rehabilitation Services, receive Social Security disability, Veterans disability or services under the Developmental Disabilities Act.

- Disability from a private source must be in addition to or as a settlement with Federal or state disability.
  - A person receiving Social Security prior to age 62 is considered disabled because the minimum retirement age is 62.
  - Client statement is not acceptable proof of disability.
  - A notarized statement from someone who knows that the client received qualifying disability benefits prior to reaching retirement age may be used as proof that an elderly person is also disabled, in the absence of other proof.
3. At least one member of the household is a child (under the age of 19). (1 point)
  4. The household experiences a high energy burden. (1 point)

A household spending six percent (6%) or more of their income on heating and cooling is defined as having a high energy burden. To calculate the household's energy burden:

- a. Add the client's heating and cooling utility bills (gas, electric, fuel oil) for the past twelve (12) months;
- b. Use client's annualized income documentation (obtained during the client intake process);
- c. Divide the sum of utility bills by the annualized income and multiply by 100 to determine the percent burden.

5. The household is a high energy user. (1 point)

A household whose electricity bill is ten cents (10¢) or more per square foot is defined as a high energy user. To calculate, take the highest summer electric bill. Divide by conditioned square footage of the house.

#### **Lists by County:**

AEO allows the use of separate priority lists by county to give subgrantees flexibility when scheduling work crews and assigning contractors. This policy minimizes travel distances and maximizes available work hours and worker efficiency. However, a subgrantee serving two (2) or more counties may not work exclusively in one county for more than one month. The Subgrantee's goal should be to serve each county in proportion to the number of units planned for that county and to prioritize counties based on the number of priority points assigned to top applicants on each county list.

A copy of each county priority list must be printed monthly and kept on file. Each county list should contain notes, e.g., attempts to contact clients and other information pertinent to selection of clients.

Clients with equal number of priority points or no priority points must be selected on the basis of application dates, with clients waiting the longest on the list being selected first.

**Braiding Opportunities:**

It is permissible to pull a client from the priority list out of order to engage with a braiding opportunity from a source outside the weatherization program, if the following guidelines are followed:

- Client is part of a group with an equal number of points at or near the top of the list, and
- Braiding opportunity is rare, and
- Subgrantee can defend the selection of client for braiding over other clients on the list.

There is no braiding opportunity based on client buy-in to the cost of weatherization services. Clients may **not** pay anything toward the cost of weatherization services they receive.

Landlord contributions may not be accepted for single-family weatherization and are not considered to be a braiding opportunity; rental property must be selected for weatherization based on tenant applicant priorities.

### III. DWELLING CHARACTERISTICS

- A. **Dwelling Eligibility**—A dwelling unit shall be eligible for weatherization assistance if it is occupied by a family unit whose income is at or below 200% of poverty level or which contains a member who has received cash assistance under Title IV or XVI of the Social Security Act or applicable state or local law at any time during the twelve (12) month period preceding determination of eligibility for WAP.

1. **Single Family: Site Built or Manufactured Mobile Housing (including mobile homes)**

See *Multifamily Weatherization (WPN 16-5, Effective May 5, 2016)*

For weatherization purposes, a duplex, three-unit, four-unit, or building with more than five (5) units is considered multifamily.

Renter-occupied units must have a signed landlord agreement (WAP 38) prior to beginning the weatherization process. Evaluation of possible undue enhancement of rental property requiring landlord contribution must be made prior to weatherization. Landlord contribution may be required if capital expenditures such as replacement of a refrigerator, water heater, or heating or cooling system is included as part of the energy audit. AEO approval to install these items on rental units is required. (Note to discuss if no longer applicable)

2. **Travel Trailers**

Travel Trailers are allowed as an eligible dwelling unit if two (2) of the following apply:

- Axles are removed;
- A permanent residential address (not a P.O. box) has been assigned to the unit by the US Postal Service; and
- Electric and water utility services are established.

3. **Re-weatherized Units**

See *10 CFR Part 440, 18 (f)(2)(ii), Allowable Expenditures*

According to federal regulations, homes previously weatherized on or before September 30, 1994 are eligible to be re-weatherized. Homes weatherized under this provision are counted as homes completed and should also be reported as re-weatherized on the monthly report. Re-weatherized units are not counted in other categories of data collection. LIHEAP funds should be considered to re-weatherize houses if previous weatherization cannot be determined or if re-weatherization is warranted.

To make the determination as to whether a unit has been previously weatherized:

- Ask client if house has been weatherized and how long client has lived there.
- Check agency's client data base(s).
- Check with agency which previously provided weatherization services to determine if current WAP provider has been the sole WAP provider since September 30, 1994.

The above steps must be taken prior to finding the client eligible and placement on the waiting list.

Check for the presence of any of the following measures in the home prior to conducting energy audit:

- Insulation (see tag for insulation date);
- New windows;
- New refrigerator, water heater, HVAC (determine date, if possible);
- Extensive caulking, door sweeps, and other air sealing measures;
- Health and Safety measures such as CO and smoke alarms, ASHRAE fans.

If auditor sees evidence that home has previously been weatherized, document existing measures with pictures, discuss with client, and include in denial letter.

#### 4. **Multifamily**

See *Multifamily Weatherization* (WPN 16-5, Effective May 5, 2016)

Multifamily dwellings that receive WAP services must use the following guidance:

- Single-family unit cost limitations apply to each unit in a Multifamily complex;
- Total cost may not exceed the projected Arkansas average cost per unit multiplied by the total number of eligible units;
- A unit cost waiver will not be granted;
- Fifty percent (50%) of residents living in a duplex or four-unit building must be WAP eligible;
- Sixty-six percent (66%) of residents living in other Multifamily complexes other than those listed above must be WAP eligible.

Income qualified public housing, assisted housing, and Low Income Housing Tax Credit (LIHTC) properties may be eligible recipients of WAP services. The state and/or the local Subgrantee retain the authority to set priorities for the use of WAP funds in their service area. Funding for individual projects will be a function of DOE priorities and funding availability. Multifamily weatherization will be done in each Congressional District so that no area of the state is shown preference.

Multifamily complexes chosen for weatherization must have client direct-pay heating and cooling utilities. Complexes where tenants do not pay any utility bills are not eligible for Weatherization services in Arkansas at the present time. Each complex chosen for weatherization must be evaluated to ensure that planned ECM & H&S measures do not provide undue enhancement to the property. Landlord contribution may be required.

AEO approval must be obtained prior to auditing a complex and prior to weatherizing a complex. AEO will request DOE approval prior to granting its approval.

### **Weatherizing Shelters**

*See 10 CFR Part 440.3, Definitions*

A shelter is considered multifamily. A shelter is a dwelling unit or units whose principal purpose is to temporarily house individuals who may or may not be related to one another and who are not living in nursing homes, prisons, or similar institutional care facilities.

Subgrantees are authorized to weatherize shelters for the homeless, group homes or homes providing transitional living if the buildings are owned or rented by a not-for-profit agency and are used exclusively to provide temporary living quarters as defined above. To calculate the number of units in a shelter, use either of the following methods:

*See Multifamily Weatherization (WPN 16-5, Effective May 5, 2016)*

- **Square Footage:** Divide the total square footage of conditioned living space by 800 and round to the nearest whole number. To determine allowable expenditures, multiply the rounded number by current Arkansas projected average cost per unit.
- **Each Floor:** Count each floor as a separate dwelling unit.

In selecting shelters for weatherization, priority will be given to those housing clients who meet DOE priorities: elderly persons, persons with disabilities, and children.

## **5. Historic Preservation**

*See Programmatic Agreement between Arkansas Energy Office, Arkansas SHPO and Department of Energy (Effective August 2020)*

*Historic Preservation Implementation (WPN 10-12, Effective February 11, 2010)*

Prior to the expenditure of federal funds to weatherize any home, Subgrantees are required to comply with Section 106 of the National Historic Preservation Act (NHPA). Section 106 applies to historic properties or sites that are listed on or eligible for listing on the National Register of Historic Places. In order to fulfill the requirements of Section 106, the Subgrantee must contact the State Historic Preservation Officer (SHPO) to coordinate the Section 106 review as set forth in 36 CFR Part 800 and consistent with DOE's 2009 Letter of Delegation of Authority.

Subgrantees are required to obtain/verify the year built for all homes prior to weatherization (typically records are located with the county assessor's office)

and follow the protocol listed below prior to weatherizing a home that is fifty (50) years old or older.

- Review Arkansas State Historic Preservation Programmatic Agreement (SHOP PA) for exemptions. If determined to be exempt, document the undertaking as an exemption on the Monthly Production Report (WAP 04) under the appropriate category (2a, 2b, or 2c).

### **Historic Preservation Exemption**

The United States Department of Energy (DOE), the Arkansas Department of Energy & Environment Division of Environmental Quality, and the Arkansas State Historic Preservation Office developed a SHPO Programmatic Agreement (PA) which governs how the Arkansas Weatherization Assistance Program will comply with DOE's Section 106 requirements. The execution of the PA applies to the undertaking of weatherization and provides the historic preservation review process.

Appendix A of the PA lists those retrofitting measures which are exempt from seeking approval from SHPO before proceeding. Subgrantees shall **not** submit to the SHPO those undertakings in accordance with Appendix A as they do not have the potential to cause effects on historic properties even when historic properties may be present.

Subgrantees should keep a hard copy of file records for a period of three (3) years from project completion and make them available for review if requested by DOE or the SHPO.

SHPO review and protocols should be applied on properties that are **at least** 50 years old.

If the undertaking is not exempt, do the following:

- Take a picture of the front and rear of the home;
- Draft a cover letter requesting permission to weatherize, give the address of the home and enclose an ECOS audit printout, work order and pictures;
- Letters should be mailed to: Arkansas Historic Preservation Program, Mr. George Burson, Attention Section 106 Review and Compliance Staff, 1100 North Street, Little Rock, Arkansas 72201.

The SHPO has thirty (30) days to review the information and render a decision as to whether or not the measures will change the historic nature of the property. Wait time for a response is usually less than thirty (30) days.

## 6. Disaster Relief

Generally, most states have within their respective governmental structure an active Disaster Relief Office whose primary purpose is to address disaster emergencies through a general Disaster Response Plan. When disasters strike, these offices enact their response plans which include an aggressive effort to identify and secure any resources that may be available to assist in the relief. WAP has a very limited role in any disaster response plan. The use of DOE WAP funds is limited to eligible weatherization activities and the purchase and delivery of weatherization materials.

Use of DOE WAP Funds to address disaster related hazards:

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 and,
- The cost of eliminating health and safety hazards, elimination of which is necessary before the installation of weatherization materials,
- To the extent that the services are in support of eligible weatherization (or permissible re-weatherization) work, such expenditure would be allowable. For example, debris removal at a dwelling unit so that the unit can be weatherized would be an allowable cost. Debris removal from a dwelling unit that is not to be weatherized would not be an allowable cost. Please note that average cost for weatherizing a unit continues to apply.
- 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, weatherization vehicles, or protection of local agency 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 found in 10 CFR Part 600.134 .

See 10 CFR 440.18,  
Allowable  
Expenditures

See Revised Guidance  
on Weatherization  
Disaster Planning and  
Relief (WPN 12-7,  
Effective March 5,  
2012)

### B. Rental Properties – Additional Information

See Program Year  
Weatherization Grant  
Application (WPN 21-  
1, Effective December  
4, 2020)

Weatherization of buildings in the public housing market provides greater opportunities for subgrantees to serve even more low-income persons in their communities. The final rule published on December 4, 2021, reduces the procedural obstacles to determining the eligibility of such buildings.

Single family dwellings that are under rent-to-own contracts are still considered rental property. If the deed holder is different from the applicant, a Lessor Agreement (WAP 17) is required. If the homeowner has deeded the property to her/his child/children with the stipulation that he/she reside there until death, a Homeowner Agreement (WAP 18) is required unless the applicant is on the deed as well.

See Multifamily  
Weatherization (WPN  
16-5, Effective May  
5, 2016)



Prior to weatherizing a single family rental property, the Subgrantee must obtain the permission of the owner in writing using the Lessor Agreement.

Weatherizing a multifamily complex (more than four (4) units) requires pre-planning and must be included in the grant application to AEO. The plan to weatherize a multifamily complex must include a detailed plan identifying the development and its location, financial braiding plan, and owner contributions, along with a separate budget. The Subgrantee is also advised that a multifamily energy audit must be obtained by a third-party.

## 2. Preventive Enforcement

AEO requires that Lessor/Rental Plan Agreements be included in each client file. This protects the agency, tenant, and property owner against attempts to violate the terms of the agreement.

### C. Special Requirements for Multifamily Buildings

#### 1. Final Rule

##### What the Final Rule Does:

*See Multifamily Weatherization (WPN 16-5, Effective May 5, 2016)*

DOE has available lists of properties supplied by HUD, LIHTC, and USDA. Properties identified on these lists have been determined to meet certain income eligibility criteria under WAP. The lists will reduce the review and verification necessary to weatherize the identified buildings through WAP.

*See 10 CFR 440.22, Eligible Dwelling Units*

;  
The buildings identified on the lists must still meet all other applicable eligibility requirements.

##### What the Final Rule Does Not do:

The final rule does **not** result in automatic eligibility for the identified buildings. As indicated above, the final rule only addresses a subset of eligibility requirements.

*See 10 CFR 440.1, Purpose and Scope*

The final rule does **not** establish a priority for the weatherization of the identified buildings. Weatherization priority ought to be given to those who meet the requirements of 42 USC 6861(b) and Sec. 2. II of this manual.

A building containing rental units may be weatherized if it is in compliance with client income criteria and:

- The Subgrantee has written permission from the owner or his agent. Such written permission shall consist of a Rental Agreement Form that requires the owner to agree to certain conditions. This agreement must be kept permanently in the file of the Client whose unit is weatherized.

- Not less than sixty-six percent (66%), fifty percent (50%) for duplexes, and four-unit buildings, and certain eligible types of large multifamily buildings of the dwelling units in the building:
  - Are eligible dwelling units; OR
  - Will become eligible dwelling units within 180 days under a local government, state, or federal program for rehabilitating building or making similar improvements to the building.
  - The amount of funds available for a building is equal to the number of households who qualify.
  - Utility usage must be collected, (100% is not required.) Contract with building owner is not necessary.
  - A multifamily audit approved by DOE is required.
  - An energy audit is not required for every unit, a representative sample of units in each building is sufficient to find leakage points. Apply sample findings to all units in the building. Sealing each unit from others is important.
  - Buildings in the complex which are less than 10,000 square feet must be audited as a whole.

*See Multifamily Weatherization (WPN 16-5, Effective May 5, 2016)*

All large multifamily buildings must meet the requirement that at least sixty-six percent (66%) of the units are occupied by income-eligible persons.

Prior to work taking place on a unit the Subgrantee must:

- Have the landlord complete the Rental Agreement Form that states that the rent will not be increased solely because of the WAP service that has been provided;
- Not unduly or excessively enhance the value of large multifamily structures. A cost analysis shall be performed as required in the Arkansas WAP State Plan in section V.4.

## **2. Undue and/or Excessive Enhancement**

Undue enhancement is any work performed on a dwelling that cannot be expected to directly result in energy savings or the preservation of agency-installed Energy Conservation Measures (ECM). Allowable expenditures under the Weatherization Assistance Program provide energy conservation benefits. For example, repairs to a dwelling unit must be necessary to make the installation of weatherization materials effective. The energy audit will determine allowable ECM to be installed.

## **3. Contributions**

AEO recognizes a potential for owners of rental property to receive undue enhancement benefits since these properties are typically for profit and have a maintenance budget. Each multifamily complex must be evaluated for necessity of contribution by property owners.

*See Multifamily Weatherization (WPN 16-5, Effective May 5, 2016)*

*See 10 CFR 440.18(d), Allowable Expenditures*

Contributions received from the owner/landlord are not to be reported as Program Income and should be applied to the cost of the home being weatherized in order to reduce that home's weatherization expenditures.

#### **4. Dispute Resolution Procedures Involving Rental Units**

In the event the client believes the Lessor Agreement has been violated, he or she may notify the Subgrantee which weatherized the property. The Subgrantee must discuss the allegation with the landlord and point out obligations under the agreement. If the landlord does not agree to correct the alleged violation, the Subgrantee must defer to AEO. AEO will make all efforts to contact the landlord and resolve the complaint. If the situation cannot be resolved at the AEO level, AEO will advise the Subgrantee to request the Client/tenant to contact Arkansas Legal Services Partnership. A helpline has been established for this purpose.

Clients in all counties may call 8-800-9LAW AID (1-800-952-9243).

Craighead County Residents call: (870) 972-6411

Pulaski County Residents call: (501) 376-3423

Washington County Residents call: (479) 442-4204

The Subgrantee will be responsible for following up with the client to determine if the complaint was resolved. AEO must be notified by the Subgrantee when a resolution is reached.

#### **5. Resolving Client Complaints**

When AEO receives a client complaint, all efforts will be made to resolve the issue as quickly as possible. The person documenting the complaint will forward to program manager.

If the complaint is a non-technical issue, program manager will document complaint on the Client Complaint (WAP 55) form. The form will be submitted to subgrantee within one (1) business day. The subgrantee must follow-up with AEO within three (3) business days. Complaints that are non-technical will be discussed and a course of action will be developed on a case-by-case basis.

Below are the procedural steps for addressing technical complaints.

##### **Procedural Steps**

AEO will:

1. Document the complaint in detail on WAP 55;
2. Send a copy of the WAP 55 to Subgrantee within one (1) business day.

Subgrantee will:

1. Schedule a site visit within three (3) days of receiving WAP 55;

2. Conduct site visit (Auditor/Inspector and/or Weatherization Director) to write up assessment of complaint;
3. If re-work is **not** required, submit assessment (with supporting documents) to AEO within three (3) business days with explanation of how client education was provided;
4. If re-work **is** required, submit assessment (with supporting documents) to AEO within three (3) business days; include Corrective Action Plan;
5. Submit proof of re-works within three to five (3–5) business days after date of site visit.

## IV. STATUS OF HOME

### A. Home in Progress

A home in progress is a home for which at least one of the following applies:

- Installation of energy conservation measures (ECMs) has already commenced,
- Specialty items have been ordered that cannot be returned to the vendor.

### B. Completed Home

*See 10 CFR 440.16(g),  
Minimum Program  
Requirements*

*See Policy Regarding  
the Use of DOE  
Program Funds to  
Pay for Call-  
Back/Add-On Work  
After Reported to  
DOE as a Completed  
Unit (WPN 11-03  
effective December  
15, 2010)*

1. No dwelling unit may be reported as a completed unit until it meets the criteria below. A completed home, or unit, is one in which:
  - All ECM's have been installed according to the ECOS audit and work-orders, including any change orders, if applicable, and
  - A final inspection by a certified Quality Control Inspector documents approval of weatherization in accordance with WAP Standard Work Specifications (SWS) and in accordance with 10 CFR 440.

In the event that a dwelling cannot be entered for final inspection, the client file must contain documentation of why the final inspection was not completed under normal circumstances and that an alternate final completion was conducted and approved, in writing, by AEO. Multiple documented attempts must be made before the Weatherization Subgrantee can request an alternate final completion. At a minimum, **three (3) verifiable attempts** must be made to schedule a regular final inspection.

It is recommended that Weatherization Subgrantees, whenever possible, complete the final inspection process on the last day that contractors or crews will be in the dwelling, as this eliminates the need to gain access to the unit after services have been rendered.

2. Only certified QCIs can conduct a physical onsite inspection of each completed unit. QCI must inspect all installed measures as well as looking for additional retrofitting opportunities that may have been missed during the auditing phase. An inspection conducted via photographic documentation is not an acceptable alternative. A final inspection should look at the unit with fresh eyes to determine if:
  - All ECM's and H&S issues have been addressed by the audit,
  - All measures have been installed according to Arkansas SWS, and
  - All measurements (air flow tightness, air quality, etc.) are satisfactory post-weatherized.

Subgrantees that receive a Vulnerable or At-Risk technical rating will be shadowed by an AEO QCI who will observe the subgrantee QCI during final inspection to ensure compliance with requirements. Sanctions, such as one-month probation, will be imposed if any significant findings are identified during shadowing. During probation, subgrantees and contractors will be subject to the following:

- Additional shadowing of subgrantee QCI with on-site training by AEO;
- Shadowing of contractors whose work is deficient by AEO.

Any training in the field may populate topics for later state-wide training, if warranted.

In addition to this new process, AEO will continue to follow processes established in the Operations Manual for noncompliance and/or untimely submission of corrective actions. Appropriate sanctions will be administered.

3. In the event that a dwelling cannot be entered for final inspection, the client file must contain documentation of why the final inspection was not completed under normal circumstances and that an alternate final completion was conducted and approved, in writing, by AEO. Multiple documented attempts must be made before the Weatherization Subgrantee can request an alternate final completion. At a minimum, three (3) verifiable attempts must be made to schedule a regular final inspection.

An alternate final completion will be allowable in rare circumstances and only if the Weatherization Subgrantee can establish a justifiable reason for the request. This alternate final completion may include visual inspection with an infrared camera of the outside of the unit or other techniques as necessary to ensure that measures have been completed properly.

Before a dwelling with an alternate final completion can be counted as completed, the Weatherization Subgrantee must submit a written request for approval to the WAP Program Manager at AEO. The request should detail the specific circumstances relating to the issue and why access to the dwelling has been denied or is unavailable. All appropriate documentation, such as letters to the client, should be included with the request. AEO staff will respond in writing to approve or deny the request for an alternate final completion or to request additional information. Until the written approval from AEO is received, final claims cannot be submitted for the unit, nor can the dwelling be counted as completed.

4. Subsequent inspection by DOE, AEO or its authorized representative may result in disallowances or requirement of additional work. In each such case, reimbursement to AEO with nonfederal funds or payment for additional work with non-federal funds is required.

Homes may be reported as complete in one of two categories, (1) a home for which all cost-effective measures have been completed within cost guidelines, or (2) a home for which all cost-effective measures have not been completed because of a complication involving the homeowner or occupant. For example, a home will be reported as complete if the client (1) refused certain types of work dictated by the audit, (2) moved, (3) died and material costs were incurred before all work was finished, or (4) client refuses to allow Subgrantee to perform quality

assurance inspection. See Sec. 2. IV. B. 3. above for guidance on handling issues with final inspections.

If a WAP client refuses an Energy Conservation Measure, none of the ECMs with lower Savings-to-Interest Ratios may be installed. If an ECM, such as centralized heating to replace unvented space heaters, is mandatory for the weatherization to be completed, it must be installed first. Mandatory Health and Safety measures must also be installed prior to ECMs.

If at all possible, completion of WAP service will be attempted. However, if the new owners do not want the work to be completed, or the work cannot be finished, the home may still be counted as a completed house. If the home is reported and counted as a completed home on the Monthly Report, it is ineligible for weatherization services at a later date, even if all energy conservation measures identified during the energy audit were not performed.

### C. Contractor Responsibilities

See 10 CFR 440, Appendix A, Standards for Weatherization Materials

Subgrantees must ensure that all work will be performed in accordance with our DOE-approved Energy Audit procedures and all materials will be approved materials.

See Weatherization Assistance Program Monitoring Procedures (WPN 20-4, effective January 22, 2020)

- It is the Subgrantee's responsibility to perform all weatherization and health & safety work using DOE Standard Work Specifications (SWS) as found in *Retrofitting Arkansas: Standard Work Specification-Aligned Field Guide (2021)*. Work quality standards that align with the SWS must be followed for all work performed on client homes.
- All contractors of Subgrantees must be assigned the same contractual responsibility and acknowledge receipt of the referenced documents. Subgrantees must ensure that every completed home is inspected for compliance with these standards and require reworks when the work is judged unsatisfactory.

See Policy Regarding the Use of DOE Program Funds to Pay for Call-Back/Add-On Work After Reported to DOE as a Completed Unit (WPN 11-03 effective December 15, 2010)

### D. Amended Home

There is no longer any provision for "amended home." Once a home is reported as complete, any return to the home will be at the Subgrantee's expense, including returns required by a DOE or WAP monitor.

### E. Reporting Requirements (WAP 04)

See PY2019 Weatherization Grant Guidance (WPN 19-1 effective December 18, 2018)

AEO is required to collect accurate data about the homes reported as complete, and uses the Monthly Program Report (WAP 04) to collect this data for reporting to DOE and LIHEAP. A separate report for DOE and LIHEAP is in effect. These reports are due within three (3) days after technical review is approved and include data for all homes completed during the previous calendar month.



## V. COORDINATED WORK

Subgrantees may enter into agreements with outside funding sources and use WAP resources in order to provide more comprehensive assistance to WAP Clients. This is considered coordinated work. All such initiatives require written prior approval from the WAP Manager. These requests will be approved or disapproved on a case by case basis depending on the specific circumstances of each initiative. A letter must accompany the request for approval and state the following minimum terms and conditions:

- Nature of the Client base to be served (re-weatherization or first time served);
- Program that WAP is coordinating with (local department of social services, etc.);
- WAP funds invested by budget category (project, materials, labor, program support, other);
- Type of energy audit that will be used to identify the work;
- Size/scope of project initiative;
- Scope of work, range of investment anticipated to be provided to Clients; and
- Other information determined as relevant to project.

WAP resources (materials, tools, staff, etc.) may be used to perform coordinated work based upon approved energy audit. All costs incurred by WAP Subgrantees in accomplishing their portion of a coordinated work scope may be charged to WAP if the measures are allowable under DOE rules; however, all other costs must be charged to and paid by the outside funding source. If WAP resources are used to complete non-DOE allowed measures as part of a coordinated work scope, the outside funding source must be billed for these costs.

When reporting job costs, it is important to keep in mind the following: all funds expended in the course of providing services to WAP Clients must be evident on the material page in ECOS, and all funds expended by the coordinating agency are considered to be braided funds and are to be recorded as such.

Following are the conditions that must be met when performing coordinated work:

- A copy of any written agreement that the Subgrantee enters into with other funding sources for coordinated work must accompany the written request for prior approval to participate;
- All assisted Clients must meet WAP income eligibility guidelines;
- The building analysis and data collection processes of the Energy Audit described in Section 7 of this Manual must be used for the WAP portion of the work scope;
- All work – both work funded by WAP and work funded by other sources – must be performed in accordance with all WAP standards;
- Only costs incurred by implementing health and safety measures must be reported along with WAP-funded work as work completed with contract funds on the Monthly Progress Report and included in the Monthly Expenditure Report.

If WAP funds are used to pay for DOE approved measures, and the cost will be reimbursed by another funding source, the rules on coordinated work apply and the reimbursement of those funds is considered program income. See Section 4.V for more information regarding program income.



## Section 3 – Reports and Record-Keeping

### I. CLIENT FILE REQUIREMENTS

#### A. Document and Record Disposition

See PY 2019  
Weatherization Grant  
Guidance (WPN 19-1  
effective December 18,  
2018)

Subgrantees must maintain paper copies of documents and records for three (3) years after AEO submits and receives approval for the last financial report of the grant period. Electronic records must be maintained on readable media. The schedule should permit unneeded records to be destroyed or discarded, while assuring that all records necessary for client services, potential litigation, or audits are retained.

Financial records, supporting documents, statistical records, client files and all other records pertinent to the subgrant are covered by these requirements;

- If any litigation, claim or audit has not been fully resolved before the expiration of the three (3) year retention period, all relevant records shall be retained until one (1) year after resolution;
- When records and materials are to be discarded, they must be destroyed by burning or shredding in order to maintain confidentiality of client information;
- Records, such as data forms, policy issuances, etc., which do not contain client names or information traceable to a client, may be discarded as the eligible entity deems best.

Eligible entities shall provide AEO and/or its authorized representative access to all books, records, documents, and compilations of data relating to AEO programs.

See Weatherization  
Guidance on Maintaining  
the Privacy of Recipients of  
Services (WPN 10-08,  
Effective February 1, 2010)

#### B. Privacy of Recipients of Services

Subgrantees, as recipients of federal funds, are required to adhere to the transparency requirements placed on government financial assistance programs. However, clients are entitled to a measure of privacy.

See 2 CFR 200.334(f),  
Retention  
Requirements for  
Records

DOE would be legally required, pursuant to 5 U.S.C. 552(b)(6) of the Freedom of Information Act, to keep confidential any specifically identifying information related to an individual's eligibility application for WAP, or the individual's participation in WAP, such as name, address, or income information. Thus, states and local Subgrantees should extend that same protection to their client records for WAP. States may release information about recipients in the aggregate which does not identify specific individuals. For example, information on the number of recipients in a county, city, or a zip code does not compromise the privacy of the recipients.

#### C. Client File Content

The AEO has standardized all forms that are required to be submitted monthly to assist with reporting, tracking, data retention, etc.

The purpose of this section is to inform Subgrantees of specific documentation to be maintained in each Client file. This section also provides general guidance to Subgrantees on how to comply with requirements specified in 10 CFR 440.16(g) on reporting completed homes. The State and each WAP Subgrantee receiving federal financial assistance will keep records and make reports as required by 10 CFR Part 440.24 and 10 CFR Part 440.25. All documents must be signed, dated, and legible.

Each Client file must contain the following documents.

Part 1:

- Application for weatherization with priority points entered (WAP 02).
- ECOS *Priority List* printout.
- Proof of income (WAP 20 is sample letter to request proof of income).
- Re-verification of income, if applicable.
- Letter/Notice of Action informing Client of eligibility/ineligibility and waiting list procedures (WAP 20 is an example).
- Notification of right to a fair hearing (WAP 23) [Sent to Client with Letter/Notice of Action].
- Lessor Agreement, if rental unit (WAP 17) or Owner Agreement (WAP 18).
- ECOS *Building Info* Printout. (i.e., for Proof of Age of Home).
- Historic Preservation approval request letter and SHPO response (if applicable).
- ECOS *Waiver* printout (if applicable).

Part 2:

- Client Education checklist (WAP 13).
- Health & Safety checklist (WAP 10).
- Lead-Safe Renovation documentation and checklist (WAP 26), if applicable.

Part 3:

- ECOS Jobs Result printout.
- ECOS *Space Details* printout from the Audit section. (re: Diagram of unit). In addition, hand drawn diagrams can be uploaded into the *Files* section.
- ECOS *Infiltration* printout from the Audit section.
- ECOS audit input data from *Audit Summary* section.

Part 4:

- ECOS *Material Cost* printout.
- ECOS *Job Analysis* printout.
- ECOS *Work Order* printout.
- Work-Order change notices, if applicable.
- Materials taken from inventory.
- Invoices, bills for materials.
- Invoices, bills for labor charges, if applicable.

Part 5:

- Final Inspection form (WAP 08).
- ECOS Inspection Final Summary.
- Client Response form (WAP 09).

Part 6:

- Before pictures.
- After pictures.
- Printing pictures is not needed if a memory card or reference to electronic file is noted in the client file as an alternative. Electronic file/memory card must be easily accessible by client name (or other identifier) and contain pictures that are clearly labeled and dated.

## II. REQUIRED FORMS AND DOCUMENTATION

### A. The Application Form (WAP 02)

The latest version of Client Application Form (WAP 02) must be used by all Subgrantees. *No white out is allowed on application.* A single line may be used to cross out original information and different information entered and initialed. Changes that will not fit in available space may be noted on a separate page attached to the application.

### B. Proof of Age of Home

See PY 2010 Historic  
Preservation  
Implementation (WPN  
10-12 effective  
February 11, 2010)

If a home is known or suspected to be fifty (50) years or older, Subgrantees should obtain documentation of the home's age by consulting local county property records. If the client is unsure of the age of the home, a print out from the county assessor/online database will be considered sufficient documentation. Supplemental documentation provided by the client may also be accepted.

### C. Invoices, Bills for Materials, and Labor Charges

Copies of all invoices, bills for material, and labor charges must be maintained in each Client file with the charges indicated. Invoices should be itemized to the extent practical to identify the various materials and labor charges. A "pulled from inventory" list with prices is also required.

### D. Proof of Income

See PY 2019  
Weatherization  
Grant Guidance  
(WPN 19-1 effective  
December 18, 2018)

Proof of income is required at the time of application and must be re-verified if the application is more than thirty (30) days old at the time it is selected from the priority list. If the Subgrantee fails to re-verify income and the Client proves to be ineligible at the time of weatherization, then the Subgrantee is required to reimburse AEO the total cost of the home's weatherization from non-federal funds.

The AEO requires that current income documentation information to be copied and kept in the Client file. All household income for wage earners must be re-verified thirty (30) days prior to the Client receiving weatherization services. All Social Security, SSI, and other disability benefits or pensions that are subject to change on a yearly basis must be re-verified *twelve (12) months after initial determination of eligibility* until selected for weatherization.

The Social Security website announces the cost of living increase for benefits each year. If the client does not have an updated Benefits Determination letter, then this information can replace the required letter from Social Security when re-verifying income eligibility in 2021 and thereafter. The Client can also access My Social Security Account online to view his/her own cost of living adjustment letter and provide it to the Subgrantee.

A place is provided on the reverse side of the Client application (WAP 02) to record income calculations, updated income, and household information. The Client application must be completed to show that the Client maintains income eligibility per household size. Clients who claim zero income must provide notarized statements attesting to their lack of income which must also be kept in the Client file.

### E. Lessor Agreement (WAP 17)

This form provides authorization from the property owner for weatherization work to be done on their property. A Lessor Agreement is required for all rental property.

Lease-to-Own arrangements also require a lessor agreement unless the property has been transferred to Client and Client's name is on the deed.

#### F. Work-Order/Change Notices

See PY 2010 Historic Preservation Implementation (WPN 10-12 effective February 11, 2010)

Each agency must use Energy Conservation Online System (ECOS) to develop a work order to describe the approved work in sufficient detail for the work crew to follow in performing weatherization.

A work order/change notice in ECOS is also required to make changes, additions, or deletions to the job.

Agency staff in charge of the job and the contractor (if applicable) should sign and date work orders and any change notices.

#### G. Pictures

A greater number of pictures **does not** equal greater compliance. To comply with the requirement for before and after pictures, select from among available pictures those that best illustrate the energy conservation and health and safety deficiencies of the house before weatherization and the ECM and H&S measures installed after. Please include progress pictures of safe work practices and attic air sealing, if applicable.

#### H. Required ECOS Forms/Documents

The table below lists the required ECOS forms/documents uploaded by Subgrantees for monthly monitored reviews. Subgrantees have access to this table as a fillable checklist in ECOS to use during form uploading. All subgrantees are required to use this checklist and upload it into ECOS after completion of each weatherization job during a probationary period.

TABLE 1: REQUIRED ECOS FORMS/DOCUMENTS		
Name of Document	Format	Suggested File Name
Household Forms and Attachments		
WAP Application	WAP 02	Client Application
Proof of Income	PDF	Income Verification
Auditor's Forms & Attachments		
Utility Bills	PDF	Utility Bills
Letter/Notice of Action	PDF	Letter/Notice of Action
Proof of Age of Home	PDF	Home's Age
Historic Preservation request Letter/SHPO Response (if applicable)	PDF	SHPO
Health & Safety Checklist	WAP 10	H&S
Client Education Checklist	WAP 13	Client Education
Lessor Agreement (if applicable)	WAP 17	Lessor Agreement
Lead Safe Checklist	WAP 26	Lead
Deferral Form (if applicable)	WAP 35	Deferral
Pre-WAP Pix	JPG or PDF	Before Pictures
Auditor's Comments	PDF	Auditor's Comments
RED/ASHRAE Calculations*	PDF	ASHRAE

HVAC Evaluation & Replacement (for H&S replacements) (if applicable)	PDF	Heating/Cooling
Inspector's Forms & Attachments		
Quality Control Inspection	WAP 08	Final Inspection
Client Response	WAP 09	Client Response
Health & Safety Checklist	WAP 10	H&S
Post WAP Pix	JPG or PDF	After Pictures
Inspector Comments	PDF	Inspector's Comments
RED/ASHRAE Calculations*	PDF	AHSRAE
Other Attachments, as applicable		
Inventory Materials List	PDF	Inventory Materials
Invoices (receipts/PO for materials)	PDF	Invoices
Contractor Contracts	PDF	Contracts
Fuel Switch Justification	PDF	Fuel Switch
Fuel Switch Analysis	PDF	Fuel Switch Analysis

\*Please Note: WAP 11 has been eliminated. Please make sure pressure pan readings are being captured in ECOS on the Infiltration tab and in the final inspection, including the supply and return numbers.

## Section 4 – Financial Management

The objective of the Financial Management Section of this Manual is to outline the fiscal policy of AEO for managing Arkansas' Weatherization Assistance Program formula grant.

### I. DEFINITIONS

**Beginning Agency Fund Balance:** The funds an agency has at the beginning of the program that were carried forward from the previous program year.

**Agency Fund Balance:** The beginning agency fund balance (cash plus inventory) plus reimbursements, minus the agency's reimbursable expenditures.

**Reimbursable Expenditure:** Allowable costs incurred by the agency within the specified program year.

**Grant Balance:** The total agency grant amount, minus reimbursable expenditures.

## II. BUDGET

### A. Parts of the Grant Application

#### 1. Annual Application

In order to execute a grant agreement, AEO requires the following information:

*See 2 CFR 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*

- Grant Agreement cover page with funding allocation and expectation for units weatherized signed in duplicate by Executive Director;
- Line Item Budget – DOE WAP 21 and LIHEAP WAP 21;
- Budget Justification – Including staff positions and salaries. Each line showing percent funded by each grant which should be part of the agency's cost allocation plan;
- Weatherization Plan – (WAP 22);
- Training Plan (WAP 40) which lists training needs of weatherization staff and subcontractors. (Subcontractors must sign a retention agreement (WAP 24), pledging to continue working for the duration of contract period in order to receive training paid for by the Subgrantee);
- Braiding Plan will include, but is not limited to, specific planned activities; targeted partners (e.g., landlords, utilities, other agencies); and estimated outcomes, including dollar amounts;
- Terms and Conditions signed by Executive Director in duplicate on the last page;
- Application for Federal Assistance SF-424, signed by Executive Director;
- Disclosure of Lobbying Activities SF LLL (rev 7-97), signed by Executive Director;
- Contract and Grant Disclosure and Certification Form, signed by Executive Director.

#### 2. Revisions

Budget revisions are allowed in certain circumstances and must be approved by AEO. Changes in the production schedule are considered as changes in the scope of work and require prior written approval by AEO.

*See 2 CFR 200.308, Revision of Budget and Program Plans*

### B. Budget Categories

*See PY 2019 Weatherization Grant Guidance (WPN 19-1. Effective December 18, 2018*

#### 1. Administration Costs

Allowable Administrative costs include, but are not limited to, federally approved indirect costs, administrative staff, accounting staff, office space and utilities, telephone, postage, printing, payroll processing, and/or lease of office machines. Half of administration funds provided by DOE are granted to the subgrantee. Subgrantees may apply to AEO to use up to an additional five percent (5%) in administrative funds if the DOE grant award is less than \$350,000. The criteria AEO will use to evaluate requests for additional administrative fund requests are:

- 1) The agency has a federally approved administrative cost rate.
- 2) Financial audit cost exceeds amount allocated in this budget category.
- 3) Liability insurance cost.

The Administration allocation to each Subgrantee is capped, and Administration may not be transferred to other categories or supplemented with funds from other categories.

## 2. Financial Audit

See 10 CFR 440.23,  
Oversight, Training, and  
Technical Assistance

The WAP portion of the Subgrantee's single agency audit costs are not included as an administrative expense unless financial audit costs are included in the indirect cost pool of a negotiated approved, indirect cost rate. Arkansas permits a separate budget category for financial audits in order not to over-burden the limited Administration cost category.

If weatherization is one of several programs within an agency being audited, only the fair-share proportion of the overall financial audit costs should be charged to the DOE award.

## 3. Liability Insurance

See 2 CFR 200.310,  
Insurance Coverage

All Subgrantees must be covered by liability insurance. Liability insurance refers to policies that provide protection in case of personal injury or property damage resulting from the weatherization services. Liability insurance should be charged to the liability line item in the budget, which was created to ensure that such costs would not have to be charged to the administrative cost category.

The Liability insurance budget category is established to cover general agency liability insurance and does not include any vehicle related insurance. The insurance budget can be found in the current *Arkansas Weatherization Assistance Program State Plan*.

**Pollution Occurrence Insurance (POI)** to cover liability incurred by disturbance of lead based paint. AEO provides this insurance each year in one (1) policy for the network.

See 2 CFR 440.15

Subgrantees that employ private contractor labor for the performance of Weatherization services must ensure that each private contractor is adequately insured.

Additional insurance not included in the Liability Insurance line item should be budgeted in the appropriate category under Program Operations.

**Vehicular/Equipment Insurance** to protect program property from damage and loss. All vehicles (and equipment, where appropriate) must be covered by property loss and liability insurance. Vehicular/equipment insurance and property insurance are budgeted under Program Operations. Insurance coverage shall be carried in adequate amounts. Should the cost of the insurance exceed the value of the vehicle or equipment, replacement coverage need not be carried.



**Property Insurance** to cover replacement costs for all weatherization materials and tools owned by the program from damage and loss. The type and extent of coverage shall be monitored by AEO during monitoring visits.

#### 4. **Training and Technical Assistance (T&TA)**

See 2 CFR 200.473,  
Training and Education  
Costs

Funds in this category are designated for training to support weatherization activities and are intended to maintain or increase the efficiency, quality, and effectiveness of the Weatherization Assistance Program at all levels by maximizing energy savings, minimizing production costs, improving program management and crew/ contractor quality of work, and decreasing the potential for waste, fraud, and mismanagement.

This category is a separate allocation from DOE. The allocation to each Subgrantee is capped, and T&TA may not be transferred to other categories or supplemented with funds from other categories.

#### 5. **Program Operations**

See 10 CFR 440.18,  
Allowable Expenditures

Costs incurred for Program Operations are generally defined as the direct costs necessary to effect the weatherization of an eligible dwelling unit but not included in the material costs. While some of these categories could be charged as allowable administrative or T&TA costs – depending on the nature of the expense – they are almost always part of the ACPU calculation. Where there are costs that could be charged to other Budget Categories, it is the determination of AEO which category should be used. Many of these costs cannot be directly related to a specific dwelling unit - like vehicle and equipment maintenance or purchases of tools and equipment. When incurred, these total costs are amortized over the number of dwelling units completed during the contract period. For example, the cost of a blower door (\$4,500) could be amortized over the 150 homes completed during a contract period, resulting in a \$30 increase in the ACPU for the homes completed in that time frame. Program Operations costs may include but are not limited to the following:

- Materials listed in Appendix A or as approved in audit protocol;
- Materials purchased for incidental repairs as defined in 10 CFR 440;
- Transportation of weatherization materials, tools, equipment, and work crews to a storage site and to the site of weatherization work;
- Maintenance, operation, and insurance of vehicles used to transport weatherization materials;
- Maintenance of tools and equipment;
- Purchase or annual lease of tools, equipment, and vehicles;
  - All vehicle purchases shall receive prior DOE approval; any equipment \$5,000 or more shall also receive prior DOE approval. Subgrantees may not pre-pay leases that exceed the end of the grant period.

- The required fees related to building permits from local governments are allowable under this category;
- Employment of personnel directly related to the operation of the Program;
  - This category is defined for general consistency purposes such as:
    - weatherization coordinators' salary and fringe benefits spent in actual supervision of labor, client intake, recordkeeping, and other direct program functions;
    - clerical staff salary and fringe benefits spent in actual client intake and maintenance of client database and other direct program functions.
    - Storage of weatherization materials, tools, equipment, and weatherization vehicles.
    - Space rental. As with vehicles and equipment, Subgrantees may not pre-pay leases that exceed the end of the grant period.
    - Utility costs at storage only, i.e., heat, lights, and water.
    - Retrofitting storage facility.

Weatherization is a non-construction program, therefore no construction of buildings or acquisition of real estate can be charged to this grant. Improvements to a property that are not in direct relation to carrying out Weatherization-specific tasks may not be considered allowable under this grant (e.g., paving a parking lot of the storage area is not considered allowable, however, retrofitting a storage facility with appropriate shelving to accommodate supplies would be deemed allowable). Grantees should consult with their respective Project Officer and/or DOE Grants Management Specialist to clarify any areas of Grantee question or concern.

*See 10 CFR 440.19, Labor*

- Labor category expenditures are limited to:
  - Payments to employ labor or engage contractors including:
    - Payments to subcontractors;
    - Salaries and fringe benefits of crew members; and
    - Salaries and fringe benefits of crew leaders.
  - This category also includes auditors/assessors, quality control inspectors, field supervisors who are not installing materials, and warehouse personnel, such as inventory clerks, who are engaged in handling materials.
  - Because T&TA funds are limited, Subgrantees should charge the cost of training to the T&TA category and the employee's time for participation in the event under the labor category.

## 6. **Health and Safety - Optional Category (Recommended)**

See 10 CFR 440.16(h),  
Minimum Program  
Requirements, and  
440.18(c)(15), Allowable  
Expenditures

- Funds used to mitigate energy-related health and safety hazards, the elimination of which is necessary before, or because of, installation of weatherization materials. The health and safety cost category should include materials and labor, **not** training related to the implementation of health and safety.
- AEO will set health and safety expenditure limits for Subgrantees, providing justification to DOE by explaining the basis for setting these limits and providing related historical experience. It is possible these limits may vary depending upon conditions found in different geographical areas. These limits must be expressed as a percentage of the average cost per dwelling unit (ACPU). For example, if the average cost per dwelling is \$5,000, ten percent (10%) would equal an average of \$500 per dwelling unit for health and safety. These funds are to be expended by Subgrantees in direct weatherization activities.

Up to twenty-five percent (25%) of Program Operations can be used for mitigating health and safety concerns directly related to the weatherization of a building. DOE considers this percentage reasonable and Project Officers can approve this percentage with a sufficient explanation within the Health and Safety Plan outlining what the Grantee will address.

AEO recognizes that the abatement of some hazards or conditions will be beyond the scope of this program. Dwellings that contain such hazards will be deferred if the hazard or condition is likely to be aggravated by the weatherization process or cause harm to the residents and technicians working on the home. If conditions are found that endanger the occupants and are beyond the scope of the program, the Subgrantee must take whatever steps are necessary to alert the occupants and inform appropriate authorities. This information must be documented in the client file.

## 7. **Capital Intensive Efficiency (LIHEAP)**

Subject to availability, capital intensive funds are awarded to provide installation of heating and secondary space heaters not allowed by DOE. Maximum expenditure per unit is provided in the current *Arkansas Weatherization Assistance Program State Plan*. A subgrantee may request to exceed this limit for a unit by providing justification to the program monitor.

C. **Carry-over:** funds remaining unobligated at the end of a grant period.

See PY 2019  
Weatherization Grant  
Guidance (WPN 19-1  
Effective December 18,  
2018)

AEO manages carry-over funds based on DOE stipulations for their use and consideration of the needs of the network. Carry-over funds are included in the next program year application budget and approved by DOE. Therefore, Subgrantees having carry-over funds do not retain the right to spend these funds after the expiration of the grant period.

At the end of the current DOE three-year funding cycle, any unobligated funds will be retained by DOE and will not be available to Arkansas as carry-over funds.

D. **Cost Limits:**

1. **Average Cost per Unit**

See 10 CFR 440.18(a),  
Allowable expenditures

Each program year, DOE establishes a maximum average cost per unit which cannot be exceeded by any state. Arkansas Weatherization Assistance Program (AWAP) will adhere to DOE's ACPU every program year.

It is AEO's intent to manage appropriate energy audit determined spending on each unit within a range of plus or minus thirty-six percent ( $\pm 36\%$ ) of this projected average cost. Therefore, AEO will monitor monthly the average cost per unit for completed homes both at agency levels and state-wide.

At this time, waiver requests to exceed the DOE maximum average cost per unit are required. AEO reserves the right to change to amount in excess of which a waiver must be requested on a particular unit.

2. **Multifamily Dwellings**

AEO will not permit federal spending per unit in a multifamily project to exceed the projected average cost per unit.

3. **Incidental (Necessary) Repairs:**

See 10 CFR Part 440.22(d),  
Eligible Dwelling Units

See Incidental Repair  
Measure Guidance (WPN  
19-5, Effective September 6,  
2019)

Incidental repair measures (IRMs) are those minor repairs that are not part of an Energy Conservation Measure (ECM), but are necessary to protect a newly installed ECM.

The cost of IRMs must (1) be justified by written and photo documentation in the client file and (2) must be included in the SIR calculation of the total package of weatherization measures.

### III. FUNDING

Arkansas uses an online program management software called the Energy Conservation Online System (ECOS) to enter all jobs and billing information.

#### A. Advance Funding

Once a grant agreement (DOE and LIHEAP) is in place for the new program year, the Subgrantee may elect to request an advance. The purpose of the Advance is to meet the cash operating needs of the Subgrantee on an on-going basis while waiting on a reimbursement payment any time during the grant year. Expenditures equal to the Advance must be documented before the end of the program year in which the Advance is given.

AEO has a policy of providing advance funding on a limited, case-by-case basis, governed by the following criteria:

*See 2 CFR 200.305, Federal Payment*

- Subgrantee request includes amount needed and explanation of circumstances leading to request;
- Subgrantee is financially stable and operating within approved budget;
- Subgrantee has historically completed expected number of weatherization jobs per subcontract;
- Current production is reasonably on track;
- Expenditures compared to production, including in-progress jobs, are reasonable.

Below are the procedures for requesting advance funds, the maximum amount of request and documenting and utilization of advance funds.

#### Procedures:

- **Request:** Advances for DOE and for LIHEAP funds must be requested separately. To request, email a fully executed WAP 03 to the WAP Budget Specialist and also mail by USPS or other mail delivery service the forms with original signatures.
- **Amount of request:** The maximum allowable amount of the Advance is the average of monthly invoices from the previous grant year that included production of weatherized units.
- **Documentation of the Advance:** The approved Advance will be entered in ECOS as a separate categorical Advanced grant subtracted from the original categorical grant.
- **Maintaining use of the Advance funds for operating expenses:** The Advance may be carried forward until the last quarter of the program year as long as Subgrantee production proceeds on schedule according to the WAP 22 in the grant agreement. If production falls below expected level for two (2) months in a row, AEO reserves the right to require the Subgrantee to bill expenditures for a portion of the Advance in ECOS prior to the last quarter.
- **Documentation of expending the Advance funds:** During the last quarter of the grant year, expenses must be billed in ECOS using the Advance budget

and a zero balance must be reached in the Advance budget before the end of the program year.

Advance request is received and approved by Program Monitor, Budget Specialist, and Program Manager. The advance will be reconciled with actual expenditures the month following the payment of the Advance.

### **Capturing Advances in ECOS:**

ECOS has advance categories for both the LIHEAP and DOE programs. The following “grants” are to be selected to show utilization of advance funds.

- Advance Wx LIHEAP (PY)
- Advance Wx LIHEAP H&S (PY)
- Advance Wx LIHEAP Admin (PY)
- Advance Wx LIHEAP Capital Intensive (PY)
- Advance Wx LIHEAP Air Infiltration (PY)
- Advance Wx DOE (PY)
- Advance Wx DOE H&S (PY)
- Advance Wx DOE Admin (PY)
- Advance Wx DOE T&TA (PY)
- Advance Wx DOE Air Infiltration (PY)

The utilization of these grants will allow agency users the ability to document advance expenditures used when submitting a billing group. If a billing group includes costs in the advance line item, these costs will be displayed on the Billing Group as an Advanced grant. A Billing Summary report can be generated showing the current month’s billing, Year-to-Date (YTD) total and the Variance (remaining) balance. This will provide AEO and Subgrantee users an avenue to track and monitor advance expenditures within each submitted billing group.

Once the invoice is generated, the advance amount will not be included on the invoice which prevents duplication in expenses.

### **Bulk Material/Equipment**

At times, AEO may provide an agency an advance of funds that is used to purchase bulk material in advance of installation in a home. This is done to provide regional agencies additional dollars to assist with operating costs and save money while buying materials in bulk. Carbon monoxide, smoke detectors and exhaust fans are the only approved equipment items that can be purchased in bulk.

A Subgrantee must notify AEO when it purchases bulk items for inventory. A copy of the receipt must accompany the notification. AEO will create an Advance – Items from Inventory grant and the dollar value of the receipt(s) will be the amount of the Advanced – Items from Inventory grant(s).

There are two (2) means of tracking inventory advances:

- LIHEAP (PY) Advance – Items from Inventory
- DOE (PY) Advance – Items from Inventory

The cost of the bulk material/equipment purchase must be subtracted from one of the following grants:

- Advance Wx DOE (PY)
- Advance Wx DOE H&S (PY)
- Advance Wx LIHEAP (PY)
- Advance Wx LIHEAP H&S (PY)

### **Setting up Advance Grants:**

AEO provides an individualized total budget allocation for each agency. It is the agency's responsibility to monitor this amount and their expenses to avoid exceeding cost values provided by AEO.

Subgrantees must:

- When they are required to add Advance costs in Billing Groups, and
- How to upload supporting documentation to the Billing Group Files area,

### **Budgeting Requirements:**

- Each agency must set its line item budgets; AEO will monitor capped categories to ensure it is not exceeded.
- Detailed reporting within the line item of Advances,

### **Example: Subgrantee Billing**

- Expenditures included within the Advances (Installed Materials) line item of a monthly billing group should be:
  - Cost of materials pre-purchased with Advanced funds,
  - Intended funds to be documented within this line item must be tracked and aggregated outside of ECOS,
  - Advanced costs included within the Billing Group line item should represent materials installed in jobs within the associated billing group.
- Expenditures invoiced within each billing group will not be reimbursed by AEO for payment because these represent funds that have already been provided to an individual Subgrantee agency.

## **B. Reimbursement**

See 2 CFR 200.305(b)(3),  
Federal Payment

The preferred method of payment is reimbursement. The intent of AEO is to process reimbursements in a timely manner as long as requests are submitted by the due date. Subgrantees are advised that reimbursement will be based upon the number of completed units and associated expenses. For example, the number of hours spent conducting the initial energy audit, conducting diagnostic testing and developing the work order using the standard work specifications, etc., will be billable in ECOS.



For the QCI, only the hours spent conducting the final inspection, including all diagnostic testing and documentation, and entering in ECOS, are billable in ECOS for that unit. If an agency has a crew, the salary and fringe of the crew members along with materials installed on the unit will be billable based upon the number of hours spent on that unit. Subgrantees are allowed to bill salary and fringe in the Program Support category. The AEO realizes that this is a major paradigm shift for the subgrantee network; however, subgrantees are encouraged to right-size their staff and braid with other funds.

### **Monthly Billing Verification of Expenditures**

In order to approve amounts entered under “Associated Funding Source Costs” on ECOS invoice, documentation, organized by each funding source and line items is needed. For example: transportation costs equaling \$200 would require invoices/receipts for transportation totaling \$200.

- List of Line Items which require documentation if an amount is being requested for that month:
  - Direct Client Costs (Salary/Fringe)
  - On-Site Supervision Salary
  - On-Site Supervision Fringe
  - Transportation
  - Storage of Materials
  - Tools and Equipment
  - Vehicles
  - Liability Insurance
  - Financial Audit
  - Advance – Bulk Materials
  - Administrative Travel (Off-site)
  - Administrative Personnel Salary
  - Administrative Personnel Fringe
  - Administrative – Other
  - Client Education
  - Staff Training
  - Contractor Training
  - Technical Support
- Upload Document – Files >Other
  - Please organize documents so information is easy to follow.

### **C. Weatherization Invoice Process**

1. Invoice is due (submitted in ECOS) the 10th day of the month. If the 10th is on Saturday, due date is the 9th; if the 10th is on Sunday, due date is on the 11th.

Each Weatherization agency notifies the program monitor and budget specialist by email when the invoice is submitted in ECOS.



- Before close of business on the day after invoice is due, if invoice has not been received, program monitor will email the financial director, copying the executive director and weatherization director; AEO director, AEO senior manager, weatherization manager, budget liaison, and administrative analyst.
- The email will state: “As of the time of this email, (agency name) has not submitted an invoice for (“DOE,” “LIHEAP,” or “either DOE or LIHEAP”). Please let me know any problems you are having with billing and when to expect the invoice(s) to be submitted.”

If the agency has reached out to let any AEO staff know of problems or other delays with billing, for issues involving ECOS functionality, appropriate staff will assist the agency and be a liaison with JAI.

- Emails should be sent by the AEO staff assisting to resolve the problem(s) to document status of the fix. Such emails should be sent daily to update status and be addressed to the person at the agency reporting the problem(s), copying the financial director, weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, program monitor, budget liaison, and administrative analyst (whoever is not directly involved in the fix).

## **2. Technical and Compliance Review**

WAP program monitors will complete technical and compliance reviews according to WAP protocol.

- If there are any issues that prevent approval, monitors will discuss with appropriate staff at the agency and send a follow-up email to confirm the issues discussed, the agreed upon steps to be taken, and the time frame (three (3) business days) for these steps. If the agency needs to go back to a house before that house can be approved for billing, the house should be removed from the billing group and included with the next month’s billing group. This step should be included in the email.
- If the time frame for corrective action is not met, monitor will send a follow-up email to the agency staff as a reminder of the previous email, inquiring if there are problems with the corrective action and what might be a reasonable new time frame, copying the weatherization director, financial director, executive director; AEO director, AEO senior manager, weatherization manager, budget liaison, and administrative analyst.

Monitor is encouraged to speak directly with the agency staff required to make a correction, always following up with an email. After the initial and follow-up emails without required corrective action completed in the time frame cited in each email, the invoice will be reopened in ECOS and program monitor will email the weatherization director, copying financial director, executive director; AEO director, AEO senior manager, weatherization manager, budget liaison, and administrative analyst.

- This email will state: “The (agency) (DOE or LIHEAP) invoice has been reopened in ECOS and requires your attention to corrective action(s) discussed and confirmed in emails from me (include dates of emails). When these actions have been completed, please resubmit the invoice in ECOS and notify me and budget liaison by email. This re-submission date will be recorded as the official date the invoice was received by AEO.

When the invoice has passed the technical and compliance reviews, monitor will email budget liaison and copy agency weatherization director, financial director, executive director; AEO director, AEO senior manager, weatherization manager, budget liaison, and administrative analyst, stating:

- “(Agency) (DOE or LIHEAP) invoice has been approved after technical and compliance reviews. You will be notified when invoice has been approved by the budget liaison. “

### **3. Completion of Financial Review**

Budget liaison will complete financial review according to WAP protocol.

- If there are any issues that prevent approval, budget liaison will discuss with appropriate staff at the agency and send a follow-up email to confirm the issues discussed, the agreed upon steps to be taken, and the time frame (usually three (3) business days) for these steps.
- If the time frame for a corrective step is not met, budget liaison will send a follow-up email to the financial director as a reminder of the previous email and inquiring if there are problems with the corrective step(s) and what is a reasonable new time frame; the weatherization director, and executive director will be copied on this email as well as AEO director, AEO senior manager, weatherization manager, program manager, and administrative analyst, stating:

Budget liaison is encouraged to speak directly with the agency staff required to make a correction, always following up with an email. After the initial and follow-up emails without required corrective action completed in the time frame cited in each email, the invoice will be reopened in ECOS and budget liaison will email the financial director, copying weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, budget liaison, and administrative analyst.

- This email will state: “The (agency) (DOE or LIHEAP) invoice has been reopened in ECOS and requires your attention to corrective action(s) discussed and confirmed in emails from AEO (include dates of emails). When these actions have been completed, please resubmit the invoice in ECOS and notify program monitor by email. This re-submission date will be recorded as the official date the invoice was received by AEO.”

- When invoice passes financial review, budget liaison will email agency financial director, copying weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, program monitor, and administrative analyst. The email will state: “(Agency) (DOE or LIHEAP) invoice is approved and may be printed, signed, and uploaded in ECOS. Please notify program manager when these steps have been completed and also when the invoice with original signatures is mailed to AEO.”

AEO will wait five (5) business days for receipt of printed invoice with original signatures.

- If the invoice is not received in the mail on the 5th business day, administrative analyst will email the financial director, copying the weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, program monitor, and administrative analyst, to confirm that the invoice was mailed, as follows: “As of (date) the (agency) (DOE or LIHEAP) invoice with original signatures has not been received by AEO. Please let me know if you think this invoice is still in transit or if you will mail another invoice.”
- After waiting another five (5) business days without receiving the original invoice, the Administrative analyst will repeat the process in the previous bullet point. The second sentence will read: “Please mail another invoice with original signatures and let me know when it is mailed; since it is necessary for AEO to have original signatures in order to process the invoice for payment, we think it is prudent to mail another invoice.”

Administrative analyst will continue to monitor receipt of the original invoice,

- emailing the agency financial director, weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, program monitor, and budget liaison, when the original invoice is received.

#### **4. Invoice Prepared for Payment**

Once received, the budget liaison will prepare an invoice cover sheet and route the invoice to weatherization manager, AEO senior manager, AEO Operations Manager, and AEO director for approval signatures.

Approved invoices will be returned to budget liaison to include in the next request for funds. When funds are received, budget liaison will route invoice to administrative analyst who will record the date sent to Fiscal Accounts Payable and hand deliver the invoice to ADEQ fiscal director with priority notation.

- When the invoice is delivered to ADEQ fiscal director, administrative analyst will email agency financial director, weatherization director, executive director; AEO director, AEO senior manager, weatherization manager, program monitor, and budget liaison. The email will state: “(Agency)

(DOE/LIHEAP) invoice has been submitted for payment. Please allow up to five (5) business days to receive the payment.”

## **5. Verification of Payment**

Budget liaison will monitor AASIS beginning two (2) business days after the invoice is delivered to ADEQ fiscal director in order to know when payment has been made. If nothing appears in AASIS on the morning of the fourth (4th) business day, AEO director or AEO senior manager will contact ADEQ fiscal director to inquire about the payment.

- If direct deposit has not been utilized, AEO director or AEO senior manager will contact ADEQ fiscal director to investigate the discrepancy.
- If payment will not be received within five (5) business days as stated in administrative analyst’s email (two bullet points above), weatherization manager will email the agency’s financial, weatherization, and executive directors, copying AEO director, AEO senior manager, program monitor, budget liaison, and administrative to give a new date the payment should be received.

## **IV. REPORTING**

Quarterly financial reporting is required. ECOS Billing Summary Reports can be reviewed to validate the following line items:

- WAP 21 budget,
- monthly expenditures,
- Year-to-Date expenditures, and
- The remaining balance (Variance line).

The quarterly financial report will also include year to date cost per unit.

During the final quarter of the grant year, this report will be submitted monthly with all of the above requested information.

The due date will be the 15th day of the month following the end of the quarter.

For the monthly reports, during the final quarter, the due date will be 10th of the month following the month being reported.

## V. PROGRAM INCOME

*See PY 2019  
Weatherization  
Grant Guidance  
(WPN 19-1,  
Effective  
December 18,  
2018)*

DOE generally defines program income as any funds earned by Grantees and/or Subgrantees from non-Federal sources during the course of performing DOE Weatherization work. The income generated should be treated as an addition to program funds, is subject to the same rules as appropriated funds, and must be used to complete additional dwelling units in accordance with DOE rules. Property owner (i.e., landlord) contributions and leveraged resources (i.e., utility or Grantee funds) are **not** considered to be program income for the purposes of the WAP.

Program income includes but is **not limited to**:

- Gross income earned by the Subgrantee that is directly generated by or earned as a result of WAP activities;
- Income from fees for services performed;
- Income from coordinated work
- Income from the use or rental of real or personal property acquired under federally-funded projects;
- Income from the sale of commodities or items fabricated under an award;
- License fees and royalties on patents and copyrights.

*See 2 CFR  
200.307,  
Program Income*

Interest earned on the advance of DOE funds is **not** program income. Such interest must be remitted to the federal government. Program income does not include rebates, credits, discounts, etc., or interest earned on any of them.

*See 2 CFR  
200.302,  
Financial  
Management*

### Program Income Expenditure Plan

Program income funds must be accounted for separately and be included on the Program Income Expenditure Plan before they can be expended. Income received within an annual budget period must be included in the Program Income Expenditure Plans submitted to the WAP Program Manager. Program Income Expenditure Plans must be approved, in writing, by AEO prior to any expenditure.

*See 2 CFR 200.308,  
Revision of Budget and  
Program Plans*

Expenditure plans:

- Must be prepared at the beginning of the annual budget period but may be modified during the budget period.
- May not allocate more than ten percent (10%) of the program income funds received for eligible WAP administration costs.
- May not allocate more than ten percent (10%) of the program income funds received for training and technical assistance.
- Must allocate a minimum of eighty percent (80%) of the funds received for WAP services in compliance with DOE regulations.

DOE maintains a reversionary right to all tools and equipment purchased with program income and requires that they be accurately recorded on inventory to allow for effective monitoring.

All program income received during any given budget period must be audited in the Agency Financial Statements and utilized via a Program Income Plan for the current or subsequent budget period.

Interest income earned on program income funds shall be retained by the Subgrantee, and shall be used at the discretion of the Subgrantee's board to further the weatherization program of the Subgrantee organization.

## VI. FEE-FOR-SERVICE – WAP RELATED INITIATIVES

See PY2010  
Weatherization  
Grant Guidance  
(WPN 10-1  
effective  
December 18,  
2009)

Recognizing that WAP Subgrantees are community-based organizations operating as “energy centers” in their low-income communities, and are dedicated to the goal of mobilizing and maximizing resources available to target the needs of low-income housing in service of Arkansas’s affordable housing goals, and consistent with the WAP mission. Subgrantees are encouraged to participate in other low-income energy efficiency and affordable housing programs in a manner that is consistent with the protection of their nonprofit status.

Accordingly, in any instance in which such energy efficiency or affordable housing programs are primarily targeting low-income households, including the working poor who may be above the WAP income guidelines but below other State or Federal low-income program income limits, the following procedures and rules apply:

- Obtain prior written approval from the AEO Director to determine if said initiative meets the terms and intentions stated above;
- The use of vehicles purchased with WAP funds will be allowed using the standard mileage rate;
- Rental rates for tools and equipment: a price list for a standard list of “tool kits” shall be developed for specified types of “jobs” by the Subgrantees in a region (or by a single Subgrantee) and charged on a monthly or quarterly basis, in consultation with the AEO Director, using information collected regarding the fair market value for use of such “tool kits” for jobs during the period.



## VII. BRAIDING FUNDS

### A. Partnerships

See 10 CFR Part  
600.30 and 10  
CFR Part 600.123  
WPN 10-17  
Effective July 16,  
2010.

AEO and DOE encourage Subgrantees to form partnerships with other Federal programs [10 CFR 440, Section 440.16(e)]. These funds, partnered with Weatherization funding, will supplement the Weatherization program and are not considered leveraged funds.

Generally, braiding is not considered program income; however, program income is a form of leveraging. Leveraged resources are not considered to be program income for the purposes of the WAP. See *Section 5 – Financial Management* for additional leveraging information.

Leveraging activities include paying for agency staff or hiring consultant staff to explore and develop partnerships with utility companies and other entities that will generate non-Federal resources for Weatherization. Other allowable activities include: holding leveraging meetings; preparing technical materials/briefs; or facilitating voluntary match funds from a non-Federal source. The leveraged resources should expand energy efficiency services and/or increase the number of DOE-eligible dwelling units weatherized. The work done with leveraged resources must be consistent with an approved energy audit and utilize cost-effective measures.

Landlord financial participation in WAP is voluntary and, therefore, these funds are treated differently from traditional leveraged funds. The expenditure of these funds must be in accordance with the landlord contribution agreement made with the local agency, and must decrease the DOE cost-share by that amount.

### B. Buy Down

This guidance is specifically designed to address the DOE investment in eligible dwelling units weatherized by the Program. All associated health and safety costs incurred on a dwelling unit are generally treated outside the SIR when determining cost-effectiveness. On the other hand, all energy-related repair costs associated with weatherizing the dwelling units are a part of the SIR when determining cost-effectiveness.

When performing the energy audit on an eligible dwelling unit, the total costs associated with the installation of eligible measures – as listed in Appendix A - can be discounted by the amount of non-Federal resources leveraged for that particular measure in determining the SIR. The types of non-Federal resources that could be used would include, but are not limited to: landlord contributions, utility funds, donations from private sources, and/or state resources that supplement other similar funds. It is DOE's intent to allow subgrantees some flexibility in calculating the SIR for a specific measure when other funds can be used to offset some of the costs, thereby reducing the federal investment and raising the SIR to 1.0 or greater on the remaining investment.

The cost-effectiveness of the WAP will still be calculated on the total DOE investments used to weatherize the property. It is not DOE's intent to create projects that are not cost effective in design and installation. DOE expects that all subgrantees will use this SIR calculation allowance only when the cost effectiveness for the entire investment in the property can still be substantiated. Further, it is not DOE's intent to "leapfrog" measures that are already cost-effective in order to accommodate a measure that is included in the package of measures as a result of utilizing the provisions of this guidance. All measures that were cost-effective after the initial energy audit is conducted would remain a part of the list of measures to be completed on the unit.

For the purpose of meeting the SIR requirement by using other resources to reduce the investment in a material or measure, no federal resources or funds may be used to offset the total installation cost. This includes State designated funds which are actually federal-based funds such as LIHEAP, CDBG, etc., may not be used for this purpose. No exceptions will be granted to this provision.

Subgrantees utilizing this guidance will need to conduct an initial energy audit of the building to determine the cost-effectiveness of the federal investment, including measures that are not cost-effective without leveraged resources. Those agencies that have non-Federal resources for use in the building will need to run the energy audit a second time with the necessary resources for any specified measure(s) to ensure the total package of measures remain at least with a SIR of 1.0 or greater. A second energy audit run can be eliminated by indicating what measures will need to utilize this flexibility and the amount of funds necessary to accomplish the buy-down.

Subgrantees will also be required to complete a summary of all costs associated with the weatherization of the building, including any or all non-Federal resources to be used. This summary will become part of the building's customer file along with the inputs and results of both energy audits.

## VIII. ASSET MANAGEMENT

### A. Inventory

See 10 CFR Part  
600.130-36

All inventory **must** be tracked in accordance to 2 CFR 200.313(d). Subgrantees are required to capture all inventory on the Inventory Disposition (WAP 32) form. The following fields must be incorporated on the inventory form:

- Item Description;
- Serial Number;
- Source of Funding (Grant Number);
- Title Holder;
- Acquisition Date;
- Cost of Property;
- Percentage of Federal Funds Used;
- Location of Equipment/Inventory;
- Use (which programs use inventory);
- Current Condition;
- Date of Disposal (if applicable); and
- Sale Price (if applicable).

All data fields **must** be complete and accurate on the inventory form.

Subgrantees may choose either the perpetual or periodic inventory system. If the perpetual system is chosen, the agency must submit the results of reconciliation between a physical inventory and the general ledger carrying value of the inventory, as of the end of the Program Year. The results of the reconciliation shall be reported on the final monthly report as inventory gain/loss.

Full accountability for all materials purchased is required. Inventory is an asset, not an expenditure. All materials not on a completed home are inventory.

This includes materials:

- In the warehouse(s);
- On vehicles;
- On or at partially completed homes;
- On homes not reported in current or past months.

Inventory Control Systems must detail the movement of material through various stages of handling. The record system shall be considered a part of the books of record for accounting and audit purposes.

The chart of accounts in the books of record must contain provision for:

- The total materials available during the year (i.e., carry-over inventory plus new purchases);
- Current inventory (monthly);

- Loss/gain (adjusted monthly);
- The materials on homes complete and reported.

The record system must also track materials from purchase through installation on a completed home. Each step shall be documented, and signatures must be obtained to verify transmittal of material. The following steps are critical control points:

- Receipt of material (bulk or field purchase);
- Entry of material into warehouse records;
- Movement of material to rolling other subsidiary-type warehouses;
- Movement from warehouse (any type) to a specific job;
- Installation on a job or return to a warehouse;
- Bulk purchased materials must be recorded in a perpetual inventory system. Agencies must use FIFO for valuation purposes unless an agency is granted specific and written permission to utilize a different system.

Specific job purchases (windows, contract installation or small field purchase) must be valued at actual cost.

**Inventory must be reconciled monthly.**

- Determining loss/gain is a systems check as well as a physical count. Complete an accounting/inventory review to determine if losses are occurring at a stage other than physical loss.
- Loss is charged to the program and not to an individual job. All loss that an AEO monitor determines has been improperly charged to a job will be disallowed. The cost will be backed out of charges assessed to the job, and the agency will be responsible for bearing the cost with corporate funds. Continual violation will lead to stiffer penalties. A maximum of one percent (1%) of the monthly expenses of the program subgrant will be allowed for loss/gain during the program year.

Agencies that contract for services may only charge loss to the program under special circumstances.

- Agencies that contract for a specific type of service (i.e., insulation) but install some materials can charge loss for materials that were directly under the control of agency staff.
- Loss may be charged for items ordered, which cannot be installed due to an Act of God, for a specific house. As an example, if storm windows are ordered for a home that burns down prior to installation, the cost of the windows may be assessed to the program.

See 10 CFR Part  
600.130-36

WPN 13-4  
Effective October  
11, 2012

## **B. Disposal of Surplus/Salvage Weatherization Materials and Equipment**

Subgrantees must submit a letter to AEO to document items they wish to dispose of. All items listed for disposition must be processed in the appropriate manner for disposal.

**1. Equipment/vehicle with fair-market value of less than \$5,000:**

The item may be retained, sold, or otherwise disposed of without prior AEO approval. The U.S. DOE Program shall have the right to an amount calculated by multiplying the current fair-market value or proceeds from sale by the program's share of the equipment/vehicle's original purchase cost (2 CFR 200.134(g)). The Subgrantee will notify AEO after the sale of the equipment by submitting an Equipment/Vehicle Disposal Report. This procedure also will allow Subgrantees and AEO to update inventory records.

**2. Equipment/vehicle with fair-market value of \$5,000 or more:**

Subgrantees must receive prior written approval from AEO for disposal of vehicles/equipment with a current fair-market value of \$5,000 or more. The U.S. DOE Program shall have the right to an amount calculated by multiplying the current fair-market value or proceeds from sale by the program's share of the equipment/vehicle's original purchase cost (2 CFR 200.134(g)).

**All requests for disposal must include the following information:**

- item identification/description including model name and year;
- item serial or VIN number;
- acquisition date;
- present condition and mileage;
- purchase price;
- current fair market value;
- program(s) that own the item;
- if the item is to be replaced; and
- photograph, only on recently damaged vehicles.

Subgrantees will announce surplus equipment as available to all Weatherization Subgrantees under competitive bid. If no Subgrantee expresses interest in the property, the Subgrantee may dispose of the property through open, competitive bidding. Subgrantees will have ninety (90) days from the date of the Approval letter from AEO to dispose of the equipment/vehicles. The Subgrantee will notify AEO in writing after the sale of the equipment. All proceeds from sales must be returned to the funding source under which the property was purchased. The funds returned will be used to reduce net program support expenditures in the current program year and will be documented as such in the Agency audit. Effort should be made to expend them by the completion of the program. Subgrantees must comply with all procedures specified in 10 CFR Part 600, Department of Energy Financial Assistance Rules, as amended; the requirements specified in the AEO Terms and Conditions; and the State Procurement Standards.

**3. Document Losses from Disposition of Surplus/Salvage Materials**

To document losses from the disposition of surplus/salvage materials, the Subgrantee must complete and submit to the AEO a statement of surplus/ salvage material losses. Any loss attributable to the difference between the original purchase price and the salvage value should be documented on the regular monthly report as a loss. Cash receipts from the sale of surplus or salvage materials should be added to the Subgrantee's cash assets in a separate account and shall be reported to AEO at the end of each program year. These funds will be used during the following program year to augment material expense budgets and should be documented as such in the agency audit.

### **C. Equipment**

Vehicles and equipment means tangible, non-expendable personal property having a useful life of more than one (1) year and a per-unit acquisition cost of \$5,000 or more. The agency must insure its equipment in accordance with the provisions of 2 CFR 200. AEO requires an annual equipment inventory. The results of the annual inventory are due to AEO not later than sixty (60) days following the end of the program year.

*See 10 CFR  
Part 600.130-36*

1. Equipment records shall be maintained accurately and shall include the following information:
  - a. A description of the equipment.
  - b. Manufacturer's serial number, model number, stock number, national stock number, or other identification number.
  - c. Source of the equipment, including the award number.
  - d. Subgrantee ownership as shown on title.
  - e. Acquisition date and cost.
  - f. Information from which one can calculate the percentage of Federal participation in the cost of the equipment.
  - g. Location and condition of the equipment and the date the information was reported.
  - h. Usage of the equipment acquisition cost.
  - i. Ultimate disposition data, including date of disposal and sales price or the method used to determine current fair market value where a recipient compensates DOE for its share.
2. A physical inventory of equipment shall be taken and the results reconciled with the equipment records annually. Any differences between quantities determined by the physical inspection and those shown in the accounting records shall be investigated to determine the causes of the difference. The subgrantee shall, in connection with the inventory, verify the existence, current utilization, and continued need for the equipment.
3. A control system shall be in effect to insure adequate safeguards to prevent loss, damage, or theft of the equipment. Any loss, damage, or theft of equipment shall be investigated and fully documented; if the equipment was purchased with federal funds, the subgrantee shall promptly notify AEO.

4. Adequate maintenance procedures shall be implemented to keep the equipment in good condition.

**D. Use of Weatherization Inventory by Other Units of the Subgrantee Agency.**

If other business units of the Subgrantee agency use the vehicles for purposes other than the Weatherization Assistance Program, the use must be tracked and recorded and the Weatherization Assistance Program must be reimbursed.

## **IX. SALE OF WEATHERIZATION MATERIALS**

*See 10 CFR Part  
600.134*

During a transition from crew to contract labor, a Subgrantee may dispose of remaining materials to contractors (at the price at which the Subgrantee purchased the material). In its bid request, the Subgrantee may note that it will require the winning contractor to purchase the remaining inventory at cost as needed to complete the work assigned. The request for bid should list approximate quantities and prices in order to help the bidders determine how this requirement will affect their costs. The Subgrantee shall not purchase new materials for this purpose.



## **X. CLOSEOUT OF WEATHERIZATION PROGRAM YEAR**

*See 10 CFR  
Part 600.171*

Subgrantees may only report homes as completed that have all work, a final inspection and all rework completed by the end date of the Program year specified in the Terms of the Administrative Services Grant Agreement.

Only services or supplies received prior to the end of the Program Year will be reimbursed by AEO (i.e., services, office supplies). AEO will not reimburse the cost of any material inventory or for homes in progress. Homes in progress are to be classified as inventory and must be carried over into the next Program Year.

A home in progress is a home for which one of the following applies: (1) energy conservation measures (ECMs) have actually commenced, (2) specialty items have been ordered that cannot be returned to the vendor, or (3) the work has been awarded to a contractor.

## **XI. FINAL REPORTS AND AUDIT**

### **A. Final Reports**

Authority to spend subgrant funds is for a specific time period. The final report must document accrued expenditures and ending inventory as of the last day of the last month of the Program Year.

Each Subgrantee must submit an accurate final report within forty-five (45) days following the end of the Program Year.

### **B. Audits**

All Subgrantees are required to have a Single Agency Audit completed by a qualified auditing firm. A complete audit report is due to AEO within nine (9) months from the end of the agency's fiscal year or thirty (30) days from the date the final report is submitted to the recipient by the independent auditor whichever is sooner.

*See 10 CFR Part 600.226*

All figures on the final report are subject to auditor confirmation. A copy of the agency single agency audit shall be submitted to AEO. All accounts payable must be audit review letter and a management decision letter, if applicable.

Discrepancies between the final reports and the auditor prepared schedules in the audit report have to be reconciled prior to submission; otherwise the audit report will be forwarded to the agency's Board of Directors for corrective action.

Financial reports and audits of other programs operated by the Subgrantees will be made available to WAP. Subgrantee will inform WAP Budget Specialist of existence of such reports concerning other programs operated by Subgrantee and provide copies upon request by the Budget Specialist.

## Section 5 – Procurement

See *DOE  
Procurement Toolkit*  
(WPN 12-1 Effective  
January 31, 2012)

WPN 10-03  
Effective December  
30, 2009

This section, in its entirety, was developed to comply with the U.S. Department of Energy Procurement Toolkit. However specific topics are covered by other DOE Program notices and guidance as indicated by references in the left margin. The use of AEO Procurement forms (WAP Procurement A-M) will be mandatory, effective April 1, 2011.

The procurement of materials and labor for weatherizing homes must be accomplished according to DOE guidelines. It is not allowable to procure weatherization labor and allow labor contractors to purchase the materials for which they are reimbursed by WAP. WAP agencies must procure materials for weatherization by competitive bid and purchase materials accordingly. Materials needed for each house must be provided by WAP agency to the contractor installing them on the house.

## **I. SMALL, MINORITY, AND WOMEN-OWNED BUSINESS ENTERPRISES**

Pursuant to the Minority Business Economic Development Act (Act 1222), the AEO supports equal opportunity as well economic development in every sector, encouraging a ten percent (10%) utilization of services and goods provided by small, minority, and women-owned business enterprises.

Subgrantee shall make a good-faith effort to ensure that ten percent (10%) of the total amount expended reaches small, minority, and women-owned business enterprises as a source for supplies and services, through notification of bid solicitation, as well as by contacting the Minority Business Division of the AEO who can provide information on these business enterprises or other entities which may provide similar information. Subgrantee, shall document its good-faith effort to solicit bids from all interested and eligible suppliers or Subgrantees and advertise formal bids in at least one (1) daily newspaper of statewide circulation for at least seven (7) days.

### **WAP Regional Outreach Meetings**

The Arkansas Energy Office (AEO), Weatherization Assistance Program (WAP) has instituted a new outreach initiative, the WAP Regional Outreach Meetings. This initiative was designed to explain *What It Means To Do Business With WAP*. This initiative will involve state WAP staff hosting a series of outreach meeting around the state.

As a DOE priority, the state WAP staff will make special effort to reach out to small and minority-owned businesses. AEO WAP will be working in coordination with the Arkansas Economic Development Commission (AEDC) AEO's Outreach & Training Office and AEDC's Small & Minority Business office.

#### **A. Purpose**

The purpose of the initiative is to aid the subgrantees in their efforts to locate and secure qualified contractors. In our collaborative efforts, AEO WAP staff will host regional meetings around the state in order to attract potential contractors in each subgrantee's service area.

We will discuss with potential bidders:

- Mandatory bidders' conference;
- Licensing;
- Debarment.

Subgrantees are required to be in attendance at regional meetings located within its service territory.

**B. Focus**

The focus of these meetings are to make attendees aware of the opportunities that exist by becoming a contractor to one or more of our subgrantees. We will:

- Provide an overview of the WAP.
- Briefly discuss the enabling legislation (10 CFR 440, including Appendix A, 2 CFR 200, OSHA, DOE Quality Work Standards) which governs the WAP.
- Explain our expectations on quality of work.
- Highlight contractor reporting requirements (quote, invoices, licensing, disbarment, etc.).
- Encouraging attendees to submit bid packets for consideration to local subgrantees during their procurement process.

**C. Goal**

The goal of the outreach meeting is to increase the number of WAP qualified contractors informed about WAP throughout the state.

**D. Assurances**

AEO WAP assures the subgrantees that it will not:

- Cover the subgrantee's procurement process.
- Answer any questions on behalf of the subgrantee.

## **II. PROCUREMENT OF BUILDING INSULATION PRODUCTS CONTAINING RECOVERED MATERIALS (See X. *GUIDELINES FOR IMPLEMENTATION*)**

See *Program Year 2010 Weatherization Grant Guidance 5.3* (WPN 10-1, Effective December 18, 2009)

See *Clarification on Selection of Types of Insulation Materials Allowable for Use in the Weatherization Assistance Program* (WPN 10-16, Effective May 28, 2010)

See *Program Year 2010 Weatherization Grant Guidance 5.16* (WPN 10-1, Effective December 18, 2009)

See 10 *CFR* 440.19(c)(6) AND *Program year 2005 Weatherization Grant Guidance* (November 12, 2004)

The Comprehensive Procurement Guideline (CPG) program is authorized by Congress under Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976. A Subgrantee using federal WAP funds must put into effect affirmative procurement programs to procure items made from the highest percentage of recovered materials practicable, considering competition, availability, technical performance and cost, if procurement contracts for such items exceed \$10,000.

In addition, EPA guidelines effective February 17, 1990, specify insulation products purchased in bulk lots exceeding \$10,000 must meet the intent of this Act. Once a product is designated, procuring agencies are required to purchase it with the highest recovered material content level practicable. For more information, Subgrantees should consult the EPA Website:

<http://www.epa.gov/osw/conserve/tools/cpg/products.building.htm>

### III. PROCUREMENT, LEASING AND RECORDS MANAGEMENT

**Purpose:** This section is to inform Subgrantees of the procedures that must be followed in the procurement, management, and disposal of vehicles and equipment. Specific requirements are described below.

#### A. Vehicle and Equipment Purchase Guidelines

All agencies seeking to purchase vehicles and/or weatherization equipment greater than \$5,000 in value must receive prior written approval for the purchase by providing AEO with a purchase justification for each request.

***NOTE: ALL VEHICLE PURCHASES, EVEN IF PURCHASE PRICE IS BELOW \$5,000, REQUIRE BOTH DOE AND AEO APPROVAL BEFORE THE VEHICLE MAY BE PURCHASED.***

Any additional supporting information should also be submitted at the time the request is made. This purchase request form must also be submitted if an agency wishes to purchase a surplus vehicle or equipment from another agency at a cost of \$5,000 or more. Only under special circumstances, and with AEO's prior approval, shall agencies purchase used vehicles or equipment at a cost of more than \$5,000.

Subgrantees must comply with all requirements specified in 10 CFR Parts 440, 2 CFR 200 and WPN 17-6, Department of Energy Financial Assistance Rules, as amended (or, as appropriate, A-102), and the requirements specified in the Scope of Services and the Weatherization Program Competitive Procurement Standards. Also, for further information:

- All vehicles/equipment must be purchased no later than forty-five (45) days prior to the close of the program year.
- For approval of **all** vehicles and equipment purchases over \$5,000, the minimum information required by DOE includes the following:

The following items must be included on WAP Form 06:

- Name of requesting Grantee and Local agency.
- Where the vehicle will be used and how it will be used. Specify, full or part time use in Weatherization Program.
- A statement of whether this is a replacement or an expansion for ramp-up, number of new employees planned or already hired that will be using the vehicles, and if this is a replacement, how is the trade-in being addressed.
- Brief description of how the procurement will be done, and the confirmation that agency, State and Federal procurement guidelines will be met.
- What funding source(s) budget category will be used, (ex. DOE Weatherization Program Operations Funds). **Subgrantee T&TA funds are not an allowable option.**
- Statement that lowest bid will be selected, or a sufficient justification of the "best value selection" if the lowest bid was not recommended for DOE approval.

See Program Year 2010  
Weatherization Grant  
Guidance 2.5 (WPN 10-1,  
Effective December 18,  
2009)

The following items must also be included:

- If the State Purchasing Contract will not be used to purchase the vehicle, copies of bid specifications (vehicle description with options requested) and bids received must be submitted.
- Copies, or invoices, of the sealed bid newspaper advertisements (for vehicle or equipment purchases \$25,000 or greater).

Subgrantees must ensure:

- Their ability to sustain vehicles past the term of the grant, or return the fair market value to the program.
- That all vehicles are used exclusively for the Weatherization Assistance Program.

***NOTE: IF OTHER UNITS OF THE SUBGRANTEES USE THE VEHICLES FOR PURPOSES OTHER THAN THE WEATHERIZATION ASSISTANCE PROGRAM, THE USE MUST BE TRACKED AND RECORDED AND THE WEATHERIZATION ASSISTANCE PROGRAM WILL BE REIMBURSED.***

- That vehicles and equipment are tracked by a vehicle and equipment inventory.
- That when vehicles are no longer needed by the Weatherization Assistance Program, they are disposed and the proceeds, if any, are returned to the program.

Subgrantees should consider and weigh the options concerning leasing versus purchasing. Approval is not required for a vehicle lease that does not include a “purchase option.” But if a lease-purchase option is proposed, even if the purchase price is as small as one dollar (\$1), AEO and DOE must approve the transaction in advance.

Another option to consider when purchasing vehicles is the various fleet program offered by the automakers.

The approval process may be expedited by submitting a vehicle/equipment purchase request identifying, at the time the grant application is submitted, vehicles or equipment the agency anticipates purchasing during the upcoming year.



## **B. Leasing**

Agencies that lease equipment or vehicles from leasing companies or agencies that lease equipment or vehicles to their Weatherization Assistance Program must comply with the following:

- The Subgrantee must itemize the cost of leasing in the subgrant supplication and submit justification for the lease of vehicles or equipment. The method of lease should be outlined in the justification and in the vehicle/equipment purchase/lease request (i.e., whether the agency plans to use a leasing company/dealership or the agency is leasing to the Weatherization Program). The form should be submitted with the grant application for approval at that time.
- The Subgrantee must choose the method with the lowest cost to the program (i.e., leasing company/dealership or agency lease to program).
- Justification for the lease should contain at least three (3) telephone or informal bids from leasing companies/dealerships. A written comparison justifying the cost-effectiveness of lease vs. purchase must be submitted to AEO. The vehicle/equipment to be leased must be of the same quality as the vehicle/equipment purchase specification. The leasing of equipment must be submitted to AEO for prior approval.
- Lease terms are negotiable. Agencies are allowed to request authorization for least from July 1 through June 30 of each program year. Any request after that date may not be processed.

See *CFR 600.146*  
*Procurement Records*

## **C. Records Management**

Subgrantees are required to maintain certain information related to the bid process, contract(s) and protests if applicable to ensure proper documentation.

### **1. Bid file:**

A designated agency representative or contracts officer must establish and maintain a file which contains:

- a. A cost estimate and approval to proceed with the procurement from the agency executive director,
- b. Documentation of advertisement,
- c. Bid/Proposal package,
- d. List of individuals attending the bidders conference (sign-in sheet),
- e. Minutes of the bidders conference,
- f. List of evaluation panel members,
- g. Bids received,
- h. Summary sheet and work papers,
- i. Rejection letters.

**2. Contractor file(s):**

- a. Bid/Proposal,
- b. Notice of Award,
- c. Certificate of Insurance,
- d. Licenses (if applicable),
- e. Payment requests,
- f. Performance of evaluations,
- g. Work orders,
- h. Change orders, if applicable,
- i. Contract,
- j. Certifications:
  - Suspension and Debarment,
  - Lobbying, and
  - Drug-Free Workplace.

**3. Administration file, if applicable:**

- a. List of protest committee members, and
- b. Copy of the protest committee correspondence, meeting minutes and work papers.

## **IV. COMPETITIVE PROCUREMENT STANDARDS**

The intent of these procurement standards is to provide general procurement guidance to the Weatherization Program Subgrantees. These include the use of standardized procurement documents WAP PROC A-O which comply with all State and federal guidelines.

### **A. General Conditions**

All purchases shall be made by competitive procurement except those that are a single, local purchase or repetitive purchase of like items within a single year with a total value of less than \$5,000.

The RFQ competitive procurement instrument (or a similar representation) must be used for all purchases of \$25,000 or greater.

Agencies are encouraged to solicit competitive bids from small, minority, and women owned business enterprises.

Agencies are encouraged to purchase products manufactured in the United States when possible.

When soliciting furnace replacement, repair, or clean and tune contractors, agencies are reminded that: (1) weatherization funds cannot be used to remove asbestos and (2) replacement is limited to those systems that meet the criteria specified 10 CFR Part 440 Appendix A – Standards for Weatherization Materials (h).

Agencies must utilize written, internal procedures for weatherization service and material procurement. These written procedures must be updated as needed and should, at a minimum, include the following:

- Agency personnel in charge of the procurement process;
- Development of the procurement document;
- Pre-bid conference;
- Bid announcement/publicity;
- Handling of bidder questions prior to bid opening;
- Detailed bid opening procedures;
- Handling of bidder questions following bid opening;
- Documentation of bid opening procedures;
- Bid corrections;
- Bid withdrawals;
- Bid protests;
- Bid qualification process;
- Bid evaluation process;
- Bid tabulation process;
- Sole-source procedures and rebid;
- Preliminary award announcement;
- Final award and announcement;

- Review for contract compliance;
- Notification and documentation of contractor problems;
- Contract cancellation/termination;
- Breach of contract notification and response procedures;
- Re-award or rebid following contract cancellation/termination;
- Contract fulfillment and normal closure;
- Contract extension/negotiation;
- RFQ amendment or withdrawal;
- Resolving bid ties;
- Post award orientation meetings;
- Process used for telephone bids;
- Procedures for addressing material testing standards or specifications questions;
- Contract performance evaluation;
- Bidders lists;
- Bids from sole proprietors, partnerships and corporations;
- Implementation and review of the agency's affirmative procurement program for building insulation products containing recycled products.

## B. Determining Procurement Method

### Under \$5,000 – No Bid Required

All purchases shall be made by competitive procurement except those that are a single, local purchase or repetitive purchase of like items within a single year, 12-month period, with a total value of less than \$5,000. Note: All vehicle purchases, even if the purchase price is below \$5,000, require both DOE and AEO approval before the vehicle may be purchased. Although competitive bids are not required for purchases less than \$5,000, agencies are strongly encouraged to obtain quotes and price-compare.

**NOTE: ALL VEHICLE PURCHASES, EVEN IF THE PURCHASE PRICE IS BELOW \$5,000, REQUIRE BOTH DOE AND AEO APPROVAL BEFORE THE VEHICLE MAY BE PURCHASED.**

### Transparency and Procurement

Solicitation and receipt of competitive bids by telephone is no longer allowable. AEO now requires competitive bids to be in written form and issued by email, fax or postal mail.

**Reminder:** The following language, per Purchasing Law ACA 19-11-708 MUST be in all solicitations for purchases exceeding \$5,000.00: ***It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a state contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees of bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business.***

## **\$25,000 or More – Formal, Sealed Bids Required**

Act 303 of 2011 requires the Department of Finance and Administration (DFA) to post state expenditures on a public, “transparency”, website starting July 1, 2012. Purchases over \$25,000 will appear on the transparency website the day following the transaction so accuracy in all purchasing documents is critical!

Purchases of items or services, within a 12-month period, with a total value of \$25,000 or greater must be procured through the formal competitive bid process. These purchases must be completed by advertised, sealed, written bids. The agency must obtain a minimum of three (3) competitive bids.

### **C. Development of the Procurement Document**

#### **1. Format**

- a. Purchases of items or services, within a 12-month period, with a total value of \$25,000 or greater **MUST** be procured through the formal competitive bid process (i.e., advertised, sealed, written bids) unless specific authorization stating otherwise has been given by AEO.
- b. For all purchases \$25,000 or greater, agencies must utilize the RFQs procurement instrument for formal, sealed bid purchases.
- c. When procuring furnace contractors for replacement, repairs, and clean and tune work on gas or oil forced-air heating systems, wall units and floor units, agencies must use the appropriate RFQ procurement instrument and RFQ form pages provided by AEO.
- d. The structure of a procurement document should follow this general pattern:
  - Bidders checklist (WAP Procurement A);
  - General information (WAP Procurement B);
  - Application (WAP Procurement C);
  - Bid form pages with instructions (WAP Procurement D-H);
  - Sample contract and contractual clauses;
  - Other agency specific attachments.

#### **2. Content of the Request for Quotations (WAP PROC B)**

- a. Firm, Fixed Price:  
Cost plus percentage of cost purchasing is not allowed. Program expenditures cannot be made on the basis of a seller’s cost plus a percentage. All bids and contracts must be based on a firm, fixed price.
- b. Estimated Quantity:  
RFQs for weatherization services or materials should include estimates of the total quantity of each item to be purchased or estimates of the amount of services to be needed during the life of the contract for items for which the agency is able to reasonably determine estimated usage. Using a quantity of “1” is inappropriate for items or services for which usage can reasonably be estimated. The one (1) exception is heating System General Repair Items.

The estimated quantities are required to be included in the bid package, although they are not required to be part of the mathematical calculations on the pricing pages. For example, the estimated quantities may be provided to bidders as an attachment to the bid. The estimated size of individual orders, when applicable, may also be included. Bidders must be informed that the quantities are estimates, and the agency is not obligated to purchase the exact amount.

c. Quality Standards:

- The agency must require vendors and contractors to comply with all material standards and specifications stated in the RFQs, whether they are federally mandated standards or established by the agency. The RFQs must state that this is a requirement and failure to comply may result in disqualification of the bid or termination of the contract.
- The agency must use the material standards specified in Federal Register 10 CFR Part 440, Revised Appendix A. The agency must identify the specification numbers for items being bid and include the phrase, “or subsequent ASTM, ANSI or F.S. approved standards which supersede this specification.” (*NOTE: This may be included in the RFQs as a clause rather than repeated with each specification number.*)
- The agency must abide by the list of approved weatherization materials in the Weatherization State Plan.
- The agency should require all bidders to submit material certification documentation. If submission of this data is required, the RFQs must inform contractors and vendors that failure to submit material certification documentation when requested can result in disqualification of the bid or termination of the contract.
- Quality standards for material specifications may be set where federal specifications are not set. The specific characteristics of the item must be clearly described.
- Standards and specifications may be set for reasonable programmatic needs. Standards shall not be set that limit competition for non-programmatic reasons.
- Standards and specifications must be clear and accurate. If a brand name is used for descriptive purposes, the purchaser must clearly describe the specific features sought that the specific brand possesses. It is not sufficient to state “Brand-X or equivalent.”
- Substitution is defined as an item that materially conforms to the specifications listed, but is physically or technically different from the item bid. The RFQs must state the conditions under which substitutions will be allowed. Substitution shall only be made with the advanced written consent of the agency. Any product provided that does not meet the listed specifications shall be replaced by the contractor at no expense to the agency. If the contractor is unable to make an acceptable adjustment or replacement, the agency shall interpret this as a breach of contract and may seek damages for default.

d. Content Standards:

Agencies to whom the EPA recycled content regulation applies must include appropriate content standards and other requirements, in accord with Part I.

e. Performance Standards:

Standards regarding performance by the supplier may be set relative to agency needs. Performance standards must be reasonable and based on program requirements. Examples of such standards are delivery time and place, billing procedures, etc.

f. Bid Evaluation Criteria:

The RFQ must clearly state the criteria the agency will use to evaluate the responsiveness of the bid. These criteria must, at a minimum, cover the following points:

- All original bids must be typed or handwritten in indelible ink.
- All original bids must be submitted to the agency in a sealed envelope with “Sealed Bid” clearly marked on the outside.
- The RFQ will be awarded to the lowest-priced, responsive and responsible bidder.
- To be eligible for evaluation, the bid must meet the stated standards for materials and comply with all conditions listed in the bid.

g. Bid Closing/Return:

All procurement instruments must clearly state the time and date of the bid closing/deadline and the physical location where bids are to be received.

h. Sealed Bid-Photocopy:

The purpose of the sealed bid-photocopy is to provide verification of original bid prices in the event of a dispute. If the agency chooses to require all bidders to provide a sealed photocopy of the original bid, this photocopy must be:

- Provided by all bidders;
- Provided at the same time as the original bid;
- Sealed in an envelope with the words “Sealed Bid B Photocopy” clearly marked on the outside of the envelope.

i. Bid Opening:

All RFQs must clearly state the time, date and location of the bid opening. There must be a public opening of the bids, and public access to the bids must be provided. (Note: procurement documents, such as RFQs, are not opened publicly, and pricing information can be disclosed upon award of the contract.)

j. **Renewal Clause:**

The agency has the option to include renewal language in an RFQ or contract. Weatherization supplies/services can be renewed yearly, up to a maximum of three (3) years. If the agency chooses to include a renewal clause in the RFQ, the agency must select either a price or percentage-type of renewal and provide the appropriate space(s) in the bid document for the contractor to specify the renewal price or percent increase. It is recommended the bid/contract contain language that:

- Any renewal is based on successful completion of previous term of the contract as determined by the agency;
- Renewal is mutually agreeable by both parties;
- Renewal must be in writing, signed, and dated by both parties;
- Renewal price or percentage will be included in the bid evaluations when determining the lowest price of the initial bids;
- None of the work or services specified in this contract shall be subcontracted by the contractor without the prior written consent of the agency;
- The contractor agrees that all work shall be performed in strict compliance with all applicable laws, ordinances, OSHA guidelines, EPA's lead renovation, repair, and painting final rule (LRRPP) rules;
- Under no circumstances will any lien ever be placed on any client home.

3. **Preparation of the Heating Systems Clean, Tune, and Repairs RFQ for Use:**

When bidding Heating System services, agencies have the following bidding options (if the expected cost is less than \$25,000 over the life of the contract, which is typically one (1) year, for an agency's entire service area):

- Telephone bid clean and tunes and general repair items as needed. (This method is not recommended for agencies that need a large number of clean and tunes and general repairs performed.)
- Formal written bid of clean and tunes only. (In this case, General Repairs would be telephone bid on an as needed basis.)
- Formal written bid of clean and tunes and general repair items. If an agency expects to spend more than \$25,000 in Heating System services for its entire service area for a year, the agency must bid heating system services using the formal competitive bid process.
- Agency staff is responsible for ensuring that quotation prices are reasonable. The basis for determining reasonableness include, but are not limited to, comparison with prior year costs and comparison with other weatherization agencies.
- Complete the blank spaces in the RFQ to provide necessary information to vendors (time limits, service area, re-works, and Client complaints).
- Include the county name with the page number on the three pricing pages (e.g., 1-Saline, 2-Saline, 3-Saline). Do this only on the pricing pages. This will enable the agency to provide separate pricing pages



for each county rather than separate RFQs, thus reducing administrative costs. For example, if a contractor indicates interest in four (4) counties, fasten the four (4) sets of pricing pages matching those counties to the RFQ, and give the document to the contractor, rather than giving him or her four (4) separate RFQs.

- Estimated quantity of clean and tunes provide an estimated quantity of clean and tunes on the RFQ cover page. It is recommended that the estimated quantity of clean and tunes be based on the number of clean and tunes done during the previous program year and adjusted based on current-year estimated production.
- Estimated quantity of general repair items. A quantity of “A1” may be used for general repair items due to difficulty in estimating usage. If an agency chooses to use an estimated quantity greater than one (1), it is recommended that the estimated quantities for general repair line items be based on the repairs called for during the previous program year and adjusted based on current year estimated production.
- If the agency uses telephone solicitation, an RFQ for each bidder must be completed at the time of the telephone conversation, identifying the contractor and the contractor’s prices. This RFQ must be signed by the contractor if he or she is the winning respondent.

#### **4. Preparation of the Furnace Replacement RFQ for Use:**

- Each furnace replacement RFQ is for one (1) furnace;
- Identify the furnace system to be replaced, and identify what type of heating system and components are needed;
- Clearly and completely identify the job site;
- Complete the blank spaces in the RFQ to provide necessary information to vendors (time limits, description of furnace, Client address, etc.);
- If the agency uses telephone solicitation, an RFQ for each bidder must be completed at the time of the telephone conversation, identifying the contractor and the contractor’s prices. This RFQ must be signed by the contractor if he or she is the winning respondent.

#### **5. Quality Standards for Heating System Clean and Tune, Repairs and Replacements**

Service and materials must meet or exceed the specifications listed in 10 CFR Part 440 Revised Appendix A or subsequently approved standards that supersede those specifications.

## **V. SOLICITATION**

### **A. Type of Procurement**

#### **Under \$5,000 – No Bid Required:**

All purchases shall be made by competitive procurement except those that are a single, local purchase or repetitive purchase of like items within a 12-month period, with a total value of less than \$5,000.

#### **\$5,000-\$24,999 – Informal/Telephone/Written Bids Required:**

Single, local purchase or repetitive purchases of like items or services, within 12-month period, with total value of \$5,000 to \$24,999 must be procured through the competitive process by informal/telephone/written bids. The agency must, when possible, obtain a minimum of three (3) competitive bids (See Sole Source; Sole Response, and “No bid” Response).

However, informal/telephone/written bids are to be completed each time the item(s) is (are) needed. Purchases within this dollar-value window may also be procured by sealed, written bids.

The agency may wish to require telephone bidders to submit written bids to the agency before the end of five (5) working days in order to be eligible for a contract award. The agency is advised to have the winning respondent sign a contract, when procuring services or when procuring services or commodities by telephone bid.

#### **\$25,000 or More – Formal, Sealed Bids Required:**

Purchases of items or services, within a 12-month period with a total value of \$25,000 or greater, must be procured through the competitive process via formal, sealed bid. These purchases must be made by advertised, sealed, written bids.

### **B. Ensuring Competition**

The agency must abide by federal requirements for full and open competition. This includes the development and updating of bidders lists and public announcements when appropriate. A bidders list should be maintained including the names and contact information of all contractors who express interest in bidding on weatherization contracts during the program year.

The agency shall advertise for proposals for a minimum of seven (7) days. Ads should run in at least one (1) daily newspaper of general circulation in such places as are most likely to reach prospective bidders, daily or weekly newspapers specific to the counties served, and may provide such information through an electronic medium available to the general public at least five (5) days before proposals for such purchases are to be opened. Potential bidders/contractors on the agency contact list should be notified at the time the agency advertises for material/labor contractors in newspapers.

### **C. Pre-Bid and Pre-Quotation Bidders Conferences**

Agencies are encouraged to hold pre-bid and pre-quotation conferences, open to all interested parties, to clarify bid procedures and answer any questions about the bid process. It is suggested that the following items be discussed at the pre-bid conference, and at Pre-quotation conferences, if appropriate:

- How to complete and submit the procurement document;
- Criteria to be used to evaluate bid price;
- How corrections will be handled;
- How to obtain information regarding material specifications;
- Nondiscrimination provisions;
- Criteria for past performance or submittal of performance bonds;
- Examination of sample products;
- Right of agency to accept and reject bids;
- Contract alterations;
- Contract termination;
- Remedies in case of default/liquidated damages;
- Warranties and guarantees;
- Indemnities;
- Shipping instructions;
- Covenant against contingent fees;
- Lien waivers;
- Discounts;
- Bid bonds;
- Protests;
- Withdrawals; and
- Liability.

#### **1. Handling Bidders' Questions:**

The agency must ensure that, during the solicitation phase, information is provided equitably to all bidders.

DOE requires minutes to be taken during the bidders' conference which allows guidance provided during the bidders' conference to be shared with any interested party. Therefore, not attending the bidders' conference means only that a potential bidder 1) would not have the opportunity to ask his/her own questions and 2) therefore, might be at a disadvantage when submitting a bid; however, the potential bidder should not be prevented from participating in the competition. Subgrantee must ensure its procurement policies are in alignment with 2 CFR 200.319. Note: material bids do not require a bidders' conference.

**2. Contractor Debarment Certification:**

The bidder certifies by signing the agreement that they are not presently debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded from participation, or otherwise excluded from or ineligible for participation under federal assistance programs. This must be verified by the agency prior to award of the contract.

**3. Physical Handling of Received Bids/RFQs:**

The agency must ensure that a check-in/log procedure is used when sealed bids are received. This should include identifying the bidder, bid subject, and time and date the agency received the sealed bid on the outside of the envelope. The agency must ensure that the sealed bids (and bid bond, if any) are kept in a secure location (under lock and key) until time for the bid opening.

**4. Handling of Sealed Bid - Photocopy:**

If the agency has required the bidder to submit a photocopy of the RFQs, the photocopy must remain inside the sealed envelope in the agency's files for future review or legal settlement. Bidders who do not provide an appropriate photocopy when required to do so, are nonresponsive and ineligible for the bid award.

**5. Withdrawal of an RFQ Prior to Opening:**

Bidders should be allowed to withdraw their bid prior to the bid opening, if this occurs before the bid deadline has passed. The bidder may resubmit a bid(s) as long as the resubmitted bid(s) is (are) received prior to the bid deadline. Once a bid has been withdrawn and the bid deadline has passed, resubmission shall not be allowed.

## **VI. BID OPENING**

### **A. Public Opening**

Formal, sealed bids must be opened and read aloud in a public setting. A minimum of three (3) people must be present at a sealed-bid opening. The agency must also provide for public inspection of all bids during and after opening (provided this does not hamper the bid qualification and evaluation process). Copies of the bids, corrections and evaluations/tabulations should be made available immediately to any interested party.

### **B. Sole Source; Sole Response; and “No Bid” Response**

Sole Source purchase exists when: 1) supplies are proprietary and only available from the manufacturer or a single distributor; or 2) based on past procurement experience, it is determined that only one (1) distributor services the region in which the supplies are needed; or 3) supplies are available at a discount from a single distributor for a limited period of time.

An agency must request prior approval, with written justification, from AEO prior to making a purchase (commodity or service) from a sole source vendor.

Sole Response exists when:

- Only one (1) bidder has responded to a bid solicitation, or
- Only one (1) bidder remains eligible for bid award after all bids have been reviewed to determine whether they meet the bid requirements.

The agency must document its efforts to obtain competition and maintain this documentation for monitoring purposes.

If an agency encounters a sole-response situation, and the bid price is \$25,000 or greater, the agency must seek AEO approval to accept the bid. A cost analysis must be submitted to AEO at the time the agency seeks sole response bid approval which compares the bid price received to other vendor/contractor prices. The cost analysis must be submitted in a letter of request for Sole Source Approval to AEO.

A “No Bid” response exists when a bidder returns the bid marked as “no bid.” A “no bid” response from a bidder/vendor may be counted toward the requirement for three (3) competitive bids provided that all “no bid” vendors could have reasonably been expected to provide the commodity/service.

### **C. Corrections to the RFQs**

During the bid qualification process, the bidder and/or the agency may, in a public setting, make corrections to the bid for only those items that will in no way affect either the bid prices that have been quoted or the validity of the bid. These corrections are strictly limited to clerical-type information, e.g., wrong or missing dates, failure to submit an address or telephone number, etc. Corrections shall not

include any specific or technical requirements listed in the invitation for bid, i.e., submission of the bid by a specified deadline, failure to submit the bid in a marked and sealed envelope, failure to fulfill all bid requirements, etc.

Correctable errors will be allowed in order to prevent an otherwise valid bid from being disallowed due to an unintentional oversight or error on the part of the bidder that does not involve data or information used for comparative or evaluative purposes. The actual correction of an error shall be performed only by designated agency personnel at the time of bid opening. All correctable errors must be fully documented by the agency and witnessed by the bidder and two (2) other disinterested persons not affiliated with either the agency or the firm whose bid is corrected, or by a Notary Public.

**D. Preliminary Award**

A preliminary award may be announced at the bid opening, with the understanding that the bids will need to be closely, evaluated before final award will be made.

**E. Withdrawal of Bid After Bid Opening**

All bidders shall be allowed to withdraw their bid at any time before the contract award has been made. Once a bid has been withdrawn from consideration after bid opening, corrections or re-submissions shall not be allowed.

A bidder who is chosen as the winner, both parties having signed the bid, is obligated to fulfill the terms of that contract with the agency. Non-fulfillment of any of the terms of the contract shall be deemed as a breach of contract. In the event of such a breach of contract, the agency shall seek remedies as stated in the contract and to the full extent that the law provides. The agency also may refuse to accept future bids from that vendor for a period not to exceed two (2) years.

## VII. BID EVALUATION AND AWARD

### A. Evaluation Criteria

Bid evaluation and award must be based on evaluation methodology clearly stated in the procurement document. AEO may require justification for evaluation methodology. All bids must be evaluated on the basis of the documents submitted. Prices must be firmly and clearly stated in handwritten or typewritten indelible ink.

Contract awards shall be made only to responsible bidders whose bids are both responsive to the agency's solicitation and extend to the agency the most advantageous price.

For material items, if the lowest bid is not accepted and the total cost of the items is less than \$10,000, then documentation must be maintained in the files giving the reason the low bid was not accepted. If the total cost of the items is over \$10,000, then the bid must be approved by AEO.

For contracted services, the lowest bid must be accepted as the primary contractor for the materials/services designated. However, Subgrantees may award a secondary or tertiary contract under the circumstances detailed below.

Again, agencies are required to use the primary contractor unless one of the following conditions applies:

- a) The primary contractor cannot provide the services in the time frame requested by the agency in its RFQs. In such an event, the agency may award the contract to the next lowest bidder (secondary contract). If the next lowest bidder (secondary contract) cannot provide the services in the time frame requested by the agency, the agency may award the contract to the third lowest bidder (tertiary contract). If the tertiary contractor cannot provide services in the time frame required by the agency, the agency shall begin a new competitive bid process.
- b) **The agency has documented to AEO in writing receiving unsatisfactory services applicable to the primary contractor's work performance.** Upon AEO approval, the agency may award the contract to the next lowest bidder (secondary contract). If the agency documents unsatisfactory performance by the secondary contractor, then upon AEO approval, the agency may award a contract to the third lowest bidder (tertiary contract). If the agency documents unsatisfactory performance by the tertiary contractor, the agency shall begin a new competitive bid process.
- c) **If, in the opinion of the agency, there exists a potential conflict of interest,** the agency may award the contract to the next lowest bidder (secondary contractor). If a potential conflict of interest exists with the secondary contractor, then upon AEO approval, the agency may award the contract to the third lowest bidder (tertiary contractor). If a potential conflict of interest exists with the tertiary contractor, then the agency shall begin a new competitive bid process.

A circumstance may arise in which the agency discovers, after award of the primary contract, that the primary contractor cannot provide services in the requested time frame, performs in an unsatisfactory manner or has a conflict of interest. In these situations, the agency shall cancel the contract with the primary contractor and may award a contract to the second-lowest bidder (secondary contract). If the agency discovers these kinds of issues with the secondary contractor, the agency shall cancel the contract with the secondary contractor and may award the contract to the tertiary contractor. Rebates and/or discounts shall not be considered or allowed in evaluation of the RFQs or RFQ.

Agencies are encouraged to solicit bids from small, minority and women-owned business enterprises (MWBE) and to place interested small, minority and women-owned business enterprises on lists of potential contractors. No special preference in notice or information may be given to a small, minority and women-owned business enterprises and MWBEs may not be selected solely because they are small, minority and women-owned business enterprise. MWBEs must, however, be given additional consideration as part of a comprehensive evaluation of bids/bidders/ RFQs.

Subcontracting: If a potential contractor plans to subcontract any weatherization work, the contractor must receive prior, written approval from the agency.

If the bid documents were designed with a renewal option, the bidder's price or percentage of change of the renewal option must be included in the price evaluations when determining the lowest bid price.

## **B. Responsiveness**

The responsiveness of the bidder refers to whether the bidder filled out the RFQs according to the agency's instructions and submitted all documentation (if any) required by the agency for use in bid evaluation. An RFQs determined non-responsive is disqualified from further review.

A competitive procurement document, such as an RFQ, may be made responsive by asking for clarification from the offeror. Clarification refers to communication with an offeror "for the sole purpose of eliminating minor irregularities, informalities or apparent clerical mistakes in a proposal." *See VI. C Corrections to the RFQ.*

## **C. Responsibility**

The responsibility of the lowest bidder must be evaluated prior to award. A bidder or respondent determined non-responsible for the agency is ineligible for contract award.



#### **D. Procurement Selection Committee**

DOE requires the following documentation:

- Membership of the selection committee used to review and evaluate all bids received;
- Evaluations by each committee member which will support the selected contractors/materials providers;
- Minutes from each meeting of the selection committee.

It is necessary for Subgrantees to have this guidance prior to your deadline for submission of sealed bids when there is still time to set up your selection committee. DOE reviews procurement documentation during monitoring visits, so please create a procurement binder which aggregates all procurement documentation.

#### **Evaluation criteria include:**

- Financial resources, or ability to obtain them as, required during the performance of the contract;
- Ability to comply with delivery or performance schedules;
- Past performance;
- A satisfactory record of integrity and business ethics;
- Organization, experience, controls and skills;
- Facilities and equipment;
- Eligibility for award under applicable laws and regulations (for example, equal employment opportunity compliance).

The agency cannot limit acceptable past performance solely to previous work with the agency. (If the supplier has never had a contract with the agency, the supplier must be allowed to show prior performance with other buyers with similar needs).

#### **D. Protests**

Five (5) working days from the date of notification to bidders of the proposed award shall be allowed for protest by the participating bidders. Final award shall only be made after the five-working-day protest period ends.

The agency must have written procedures for dealing with protests.

## **VIII. TELEPHONE BIDS**

### **A. Telephone Procurement**

Goods and Services (except Heating System work) \$5,000-\$24,999 Informal/Telephone/Written Bids Required:

Single, local purchase or repetitive purchase of like items or services, within a 12-month period, with the total value of \$5,000 to \$24,999 must be procured through the competitive process by informal/telephone/written bids. The agency must obtain a minimum of three (3) competitive bids. However, informal/telephone/written bids are to be completed each time the item(s) is (are) needed. Purchases within this dollar-value window may also be procured by sealed, written bids.

The agency may wish to require telephone bidders to submit written bids to the agency before the end of five (5) working days in order to be eligible for a contract award.

The agency is advised to have the winning respondent sign a contract, when procuring services or commodities by telephone bid.

### **B. Telephone Procurement for Heating Systems Contractors**

The agency may solicit bids for heating system work via telephone solicitation for work that may exceed \$5,000. The agency must complete an RFQ for each bidder at the time of the telephone conversation, identifying the contractor and the contractor's prices. This RFQ must be signed by the contractor if he or she is the winning respondent.

Telephone bids for a furnace replacement, as well as the signed RFQ/Contract and signed work order are to be maintained in the Client file.

## **IX. CONTRACT MANAGEMENT**

### **A. When a RFQ Becomes a Contract**

An RFQ becomes a contract when it has been signed by the bidder and counter-signed by appropriate agency personnel. After that point, it is appropriate to refer to the document as a contract. Only agency forms should be used for bids/contracts and these forms should contain DOE contract language, when appropriate.

### **B. Amendments to the Contract**

Amendments to the Contract, should any become necessary during the course of the Contract, may be made only if allowed by a clause in the contract. The clause must state that the amendments will be mutually agreed upon in writing between the contractor and the agency and will be signed and dated by both parties. It is the agency's responsibility to ensure that the price of an amended item is found reasonable.

### **C. Breach of Contract**

Breach of Contract occurs when the contractor continues to violate any of the terms or conditions of the contract after being notified by the agency of the lack of compliance and possible consequences.

The agency must have written procedures for dealing with breach of contract and contract termination or cancellation.

### **D. Photocopy of Sealed Bid**

If the agency has required a "sealed-bid-photocopy" from the bidder, and that photocopy must be opened, the sealed photocopy shall only be opened in the presence of appropriate parties, which may include the Executive Director of the agency, agency attorney and Notary Public. If any discrepancy exists between the original bid and the photocopy, the bid or contract shall be immediately disqualified or discontinued (canceled or terminated) by the agency.

## **X. GUIDELINES FOR IMPLEMENTATION OF THE RECYCLED PRODUCTS IN INSULATION REQUIREMENT**

### **A. Who and What are Affected by the Regulation**

Agencies (both crew and contract), which procured \$10,000 or more of building insulation products during the previous fiscal year, are required to develop an affirmative procurement program targeting the purchase of insulation containing recycled products to the maximum extent practical. Other agencies that, during the coming year, make a single purchase of these products exceeding \$10,000 will also have to abide by this regulation at the time the purchase is made and for the remainder of the program year.

The \$10,000 threshold refers to the total amount of building insulation products purchased by the agency, not to individual types of insulation.

“Building insulation product” is defined as a material designed to reduce heat loss and that is installed between heated and unheated areas of the home. This includes, but is not limited to blanket, board, spray-in-place and loose-fill products used as ceiling, floor, foundation, and wall insulation. The regulation does not apply to air handling, acoustic, pipe, and cold-storage insulation.

### **B. Agency Procurement Procedures for Recycled Materials**

In order to be in compliance with DOE requirements, Subgrantees must revise any applicable portions of their procurement procedures to include an Affirmative Procurement Procedure for the purchase of materials with the highest possible content of recycled/recovered materials.

#### **1. Procurement of Recycled Materials**

Determine the type of insulation product that will meet the agencies needs (e.g., fiberglass, cellulose, rock wool, etc.). Specify that type of insulation in the RFQs.

The selection of the type of building insulation product may be based on performance characteristics, structural considerations, building codes, availability of competition, etc. In those cases where more than one (1) type of product meets the agency’s needs, the product having the highest minimum recycled content standard should be specified.

Include in the technical specifications portion of your RFQs the minimum recycled content standard listed below for that type of insulation.

Type of Insulation, percent (%) Recycled required (based on wt. of cellulose 75% core materials):

- Rockwool 75%;
- Perlite composite board 23%;
- PIR/PR rigid foam 9%;
- Foam-in-place 5%;
- Phenolic rigid foam 5%.

Inform (via RFQs) the bidders, that all bidders will be required to provide estimates of the percentage of recycled materials in the products they are bidding, and the winning bidder will be required to provide certification of the recycled content prior to contract award.

There is currently no minimum content standard for fiberglass insulation. Procurement of fiberglass insulation is allowed; however, the agency must base any decision to procure a building insulation product not containing recycled materials on one or more of the following:

- Availability within a reasonable time period;
- Availability at a reasonable price;
- Compliance with federal competition regulation; and
- Technical performance of the product.

These are the only acceptable reasons for not procuring building insulation products containing recycled materials to the maximum extent practical.

As always, award the contract to the lowest responsive, responsible bidder. If there is a tie, the contract will be awarded to the tying bidder whose product contains the highest percentage of recycled materials.

## **2. Promotion Program**

The regulation requires agencies to publicize the fact that insulation products containing recycled materials are being targeted. Appropriate forums for implementing this requirement include, but may not be limited to, pre-bid conferences, advertisements, brochures, invitations for bid, pertinent correspondence, news releases, etc.

## **3. Estimation/Certification/Verification**

The regulation requires agencies to develop estimation, certification and verification procedures. All bidders will be required to provide the agency with estimates of the percentage of recycled materials in the products they are bidding, and the winning bidder will be required to provide certification of the recycled content prior to the contract award.

The agency will verify the percentage of recycled materials contained in the insulation provided by the contractor. This verification can be done by contacting the manufacturer and providing him or her with batch numbers. There must be documentation in the files that this contact has been made. If the insulation

provided by the contractor does not meet the requirements stated in the RFQs, the contractor is in violation of his or her contract and is subject to the agency's procedures on contract compliance.

#### **4. Annual Review and Monitoring**

AEO requires agencies to conduct an annual review and monitoring of the effectiveness of its affirmative procurement program. The review must be documented in the agency's files.

The annual review and monitoring shall cover the following points:

- The quantity and dollar amount of building insulation with recovered content;
- An assessment of the effectiveness of the promotion program;
- An assessment of barriers to the purchase of insulation with recovered content (e.g., unavailability, resistance to use, etc.);
- Any other information the agency feels is pertinent to assessment of the affirmative procurement program, or any information requested by AEO.

#### **Procurement Quick Notes:**

1. Print media advertisement is only required in the statewide newspaper for seven (7) consecutive days or for three (3) consecutive days with documentation of other forms of outreach to potential bidders.
2. Advertisement must begin at least ten (10) days prior to bidders conference and contain complete information (see Ops Manual).
3. Bidders conference is designed to be the mechanism for obtaining explanatory information re: the bid packet and for asking questions about the bid packet.
4. Subgrantee must take minutes at the bidders conference and make the minutes available to attendees and to others who request the minutes and to those who pick up bid packets after the bidders conference.
5. Submission of bids cannot be contingent on attendance at the bidders conference; the only rejections of bids will be based on a potential bidder missing the deadline to submit bids.
6. There must be a minimum of three (3) weeks between the bidders conference and the due date of the bids.
7. Subgrantee must document outreach efforts to contact minority contractors (for example, attending an outreach meeting organized by AEO staff and adding interested contractors to a list of potential bidders to be sent a bid packet).
8. Include your Program Monitor as you disseminate procurement information and use the monitor as a resource if you have questions. Another resource is the updated Procurement power point shown during Grants Guidance and posted on the AEO website.

## Section 6 – Subgrantee Monitoring

The AEO is responsible for monitoring the performance of each local WAP Subgrantee. Monitoring enables AEO to determine if the residents of Arkansas are being adequately served and if the WAP is being operated in compliance with the federal/state regulations and requirements. Information obtained by the monitoring effort is used to determine:

- Internal controls and processes used by Subgrantees;
- Types of training and technical assistance required;
- Fiscal integrity of Subgrantees;
- Production rates;
- Proactive measures that may be taken to improve program operations;
- Compliance with federal/state regulations and requirements;
- Quality of weatherization work performed on Clients' homes.

## **I. PROBLEM RESOLUTION**

A variety of problems may arise during the course of a program year which may require different methods of resolution. Most problems can be placed into one of three categories:

### **A. Compliance & Program Management (Reporting)**

Compliance & Program Management problems often involve reporting issues. Reporting issues can generally be resolved using written communication explaining the problem. Where the problem is significant, an on-site visit will be made to gather the correct data and assist the Subgrantee in developing better reporting procedures.

### **B. Technical (Workmanship)**

A housing quality problem may be noticed during a field visit. Where significant problems are found in the workmanship on the home(s), the Subgrantee will be required to return to the home(s) and correct the problem(s). Where a problem is found to be widespread, the Subgrantee will be required to notify AEO of the resolution to the problem following procedures as outlined in (*Subgrantee Technical Manual*).

### **C. Fiscal Compliance**

AEO will require Subgrantees to take corrective action when a Subgrantee is not in compliance with federal/state requirements. The action taken will depend upon the nature of the problem. If, for example, a problem involves a disallowed cost, the Subgrantee will be required to repay AEO in non-federal funds. AEO will require the Subgrantee to provide documented evidence of corrective action(s) when AEO has determined that the Subgrantee is not in compliance. AEO will monitor Subgrantee implementation of corrective action(s) during annual on-site monitoring visits.



## **II. STAFFING & NOTIFICATION OF PERSONNEL**

### **A. Weatherization Personnel**

*See 10 CFR 440.15(e)*

WAP Subgrantees are required to maintain staffing sufficient to meet all production and Client service goals for the program.

Notification, in writing, must be given to the AEO of any weatherization personnel that have been hired, or have left employment, within fifteen (15) days of the hire or departure. Please provide name and title of employee.

### **B. Executive Directors and Board Chairs/Presidents**

Notifications, in writing, will be given to the AEO of any change in the Agency's Executive Director, Weatherization Director and Board Chair/President within fifteen (15) days of appointment or departure. AEO also requests the mailing addresses of Board Chairs/Presidents where they prefer to receive mail (home or business). This should be different from the agency address.

### **III. THIRD PARTY QCI MONITORING**

#### **Introduction**

Arkansas AEO looks at state inspections of completed jobs as an important opportunity to have a productive conversation with subgrantee staff and contractors who have worked on the unit. It is an opportunity to look at the unit with “fresh eyes” which the subgrantee will have already done during the inspection process with its own certified Quality Control Inspector (QCI). Therefore, we recommend that the following subgrantee representatives accompany the Third Party QCI during inspection at the house:

- Auditor;
- Subgrantee QCI; and
- Contractor(s), at subgrantee discretion.

AEO will have a representative, usually the program monitor, present during the inspection.

#### **Number of Units:**

In general, AEO will inspect at least five percent (5%) of completed units. Additional units may be inspected without obligation of completing a full QCI inspection, if AEO believes it is warranted by findings. If a subgrantee certifies that 100 percent (100%) of jobs completed have been audited and inspected by two (2) different staff, then AEO may inspect at least five percent (5%) of units completed. Regardless of the percentage of completed units to be inspected, AEO will inspect at least one (1) site built and one (1) manufactured home during each quarter.

#### **Arrangements for Inspections:**

The Third Party QCI will establish dates for quarterly inspections in consultation with AEO who will obtain approval from weatherization directors before the dates are finalized. The week before scheduled inspections, program monitor will confer with the weatherization director about the number of units, type of units and county where each unit is located. The subgrantee will contact clients and make specific arrangements for inspections. Subgrantee will email program monitor and Third Party QCI the following information:

- Client name;
- Address;
- County;
- Agency job#;
- Name and cell phone of a subgrantee staff person who will be present at the inspection;
- Copy of Audit Summary from ECOS; and
- Copy of Work Orders from ECOS.

Once arrangements have been made, QCI visits will not be cancelled due to weather unless roads are impassable or other dangers exist.

**Process:**

- Subgrantee staff will introduce QCI and state staff to the client. The Third Party QCI will perform the inspection at his/her discretion. Subgrantee staff and AEO staff will be present as Third Party QCI proceeds in and outside the unit. Subgrantee staff may bring its own equipment to check measurements made by Third Party QCI.
- Any observations or issues may be raised by anyone present, and discussion will take place on site. However, negative findings and disagreements will not be aired in the presence of the client.
- QCI will provide on-the-job training to subgrantee staff as needed and practical during the course of the inspection and will so note in the QCI report. In the opinion of the QCI, if additional training is needed by subgrantee staff, specific recommended training topics will be so noted in the report.
- **Missed Opportunities** are defined as ECM's or Health and Safety items which were not addressed in the audit software. Third Party QCI will cite missed opportunities for rework at subgrantee's expense unless subgrantee has documentation that ECOS evaluated the measure but did not deem it cost effective.
- WAP 61 is a form that documents the Third Party Quality Control Inspection process and findings. It will be completed by the AEO representative at the exit conference at the conclusion of the inspection. It is during this time that the Subgrantee representative may discuss any aspect of the inspection and show documentation from ECOS or the client file to support a different interpretation of findings for the Third Party QCI to consider. The AEO representative may clarify any policy relevant to the inspection findings. The Third Party QCI, however, will have final decision-making authority regarding inspection findings.

**Note: This process with the WAP 61 and inspection exit conference is being implemented to replace any obligation on the part of AEO to consider objections by the Subgrantee after the final report has been issued by the Third Party QCI. The final report of the Third Party QCI will not be amended nor will any part of it be retracted by AEO.**

- After returning to the office, AEO staff will send a copy of the completed WAP 61 form to the Weatherization Director and to the Third Party QCI. If the Weatherization Director does not accompany the Third Party QCI and AEO on the inspection but wants to be included in the exit conference an exit conference may be conducted at the office after one (1) or more QCI inspections have been completed. If it is not feasible for the QCI to return to the office after the last inspection due to travel distances, an alternative means for the Weatherization Director to participate in each exit conference is by phone, as it happens during lunch or in a vehicle out in the field.
- The Weatherization Director shall contact the client as soon as feasible after the completion of the inspection to ask how the inspection process went. It is not necessary to ask if there were any problems; the purpose of the call is to give the client the chance to express anything notable, whether good or bad. If the client has

anything substantive to say, the Weatherization Director shall put it in writing in an email to the AEO representative present at the inspection, copying the Third Party QCI and the WAP program manager. This email will be attached to the WAP 61 and AEO will address any client concerns and discuss lessons learned from both positive and negative client feedback.

### **Final Report and Reworks:**

Subgrantee will receive an official report from AEO of results of each inspection and any reworks required.

Third Party QCI will complete appropriate sections of WAP 10 (Health and Safety form) and will complete Third Party/AEO WAP 08 (Final Inspection form). Original Third Party QCI report will be placed in the client file on top of subgrantee QCI report.

After receiving Third Party QCI report(s) from AEO and after completing any required reworks, each subgrantee will complete a reworks section from WAP 08 explaining what was done to correct each finding on the unit and attach supporting photos showing the corrections. This reworks documentation will be sent to the AEO program monitor who will forward it to the Third Party QCI for final approval of the reworks; approval by Third Party QCI will be forwarded by AEO to the subgrantee for placement in client file. In the event that all reworks are not approved, this process will be repeated.

Subgrantees that receive a Vulnerable or At-Risk technical rating will be shadowed by an AEO QCI who will observe the subgrantee QCI during final inspection to ensure compliance with requirements. Sanctions, such as one-month probation, will be imposed if any significant findings are identified during shadowing. During probation, subgrantees and contractors will be subject to the following:

- Additional shadowing of subgrantee QCI with on-site training by AEO;
- Shadowing of contractors whose work is deficient by AEO.

Any training in the field will populate topics for later state-wide training, if warranted.

A final inspection should look at the unit with fresh eyes to determine if:

- all ECM's and H&S issues have been addressed by the audit,
- all measures have been installed according to Arkansas SWS, and
- all measurements (air flow tightness, air quality, etc.) are satisfactory post-weatherized.

## IV. MONITORING REVIEWS

See Program Year  
2010 Weatherization  
Grant Guidance 4.0  
(WPN 10-1,  
Effective December  
18, 2009)

Subgrantees must comply with all reporting requirements mandated by the Arkansas Energy Office, Department of Energy and state/local codes. To ensure compliance is adhered to the AEO/WAP utilizes Program Monitors (PM). WAP PM will monitor three (3) distinct but interrelated areas of program operations. They are: (1) Compliance and Program Management, (2) Technical and (3) Fiscal.

See Program year  
2010 Weatherization  
Grant Guidance  
Amendment re:  
Grantee Program  
Oversight/Program  
Monitoring (WPN  
12-5 Effective  
December 1, 2011)

1. **Compliance & Program Management:** Compliance and Program Management monitoring reviews expected production goals, client files and individual unit expenditures. *Note:* All files must be maintained for a five (5) year period.
2. **Technical:** Technical monitoring reviews diagnostic testing results, output and input reports, work orders and the installation of measures.
3. **Fiscal Oversight:** Fiscal monitoring reviews overall program expenditures and the tracking of funds.

(WPN 10-9  
Effective January 15,  
2010)

AEO WAP monitoring procedures involve:

- A. **Subgrantee Desktop Reviews\***,
- B. **On-sight Monitoring,**
- C. **Field (client home) inspections, and**
- D. **Fiscal Reviews.**

\*Periodic desktop auditing will be through the use of the Energy Conservation Online Systems (ECOS).

### A. Subgrantee Desktop Reviews

The AEO/WAP Program Monitors will utilize the ECOS web-based system to review activities and expenditures in real time. Desktop reviews examines:

1. Client Information;
2. Household Energy Audits;
3. Jobs;
4. Building History;
5. Supporting material (photographs, write-ups, waivers, etc.)

Program Monitor desktop review will:

See Program Year 2010  
Weatherization Grant  
Guidance Amendment re:  
Grantee Program  
Oversight/Program  
Monitoring (WPN 10-9,  
Effective January 15, 2010)

- Identify any deficiencies in reporting such as delinquent reports. Where discrepancies exist between planned activities and actual accomplishments reported, the Monitor will follow-up with the Subgrantee to determine causes and propose solutions that will correct the discrepancy. These findings will be reported to the Program Manager.
- Be used to report both major and minor problems that require resolution, such as significant staffing changes or excessive employee turnover. This

information will be provided to the Program Manager. Together they will also identify and implement corrective actions.

After conducting a thorough desk audit, the Program Monitor will schedule an onsite monitoring visit to the agency. Please see Desk Auditing Checklist below:

<b>ECOS Desk Auditing Checklist</b>	
Client Info	Check Income
ECOS <i>Building Info</i> Tab (i.e., for Proof of Age of Home	Look @ SHPO (if applicable)
ECOS <i>Waiver</i> Tab (if applicable)	Look @ justification (if applicable)
<b>Part 3:</b>	
ECOS Jobs Result Tab	Look @ Post Heating/Cooling Savings
ECOS <i>Space Details</i> Tab from the Audit section. (re: Diagram of unit).	Look at Drawn Floor Plan Diagram
ECOS <i>Infiltration</i> Tab from the Audit section.	Look @ Blower Door Pictures (are they labeled?)
ECOS Audit input data from <i>Audit Summary</i> Section.	Look at Auditor's printout
<b>Part 4:</b>	
ECOS <i>Material Cost</i> Tab.	Look @ Units of Labor
ECOS <i>Job Analysis</i> Tab.	Look at SIRs
ECOS <i>Work Order</i> Tab.	Look @ Auditor's Comments on orders & Location of work.
ECOS Work-Order change notices (if applicable).	Look @ General Labor & Incidental Costs (purchase & repairs)
Materials taken from inventory.	Look @ Advance from Inventory grant
Invoices, bills for materials.	Contractor prices from bid sheet.
Invoices, bills for labor charges (if applicable).	Contractor prices from bid sheet
<b>Part 5:</b>	
ECOS Inspection Final Summary.	Look @ Estimate vs. Actuals
<b>Part 6:</b>	
Before pictures.	Look @ uploaded pictures
After Pictures.	Look @ uploaded pictures

## **B. Onsite Monitoring**

### **1. Office Reviews:**

Onsite monitoring visits will occur at Subgrantee agencies. Program Monitor will review: (1) expected production goals against actual production, (2) client files and (3) individual unit expenditures. Monitors will review a representative sampling of client files at the agency to determine that proper documentation of service delivery is maintained in the client files. In addition, Monitors will:

- Review prior findings to determine existing deficiencies or areas of concern and determine whether those issues have been resolved.
- Verify that each home/client met program eligibility guidelines.
- Verify that each home received a Final Inspection conducted by the Subgrantee's Quality Control Inspector (QCI) **before** the home was reported to the AEO as complete.
- Track expenditures from purchase to inventory to installation on the unit.
- Verify inventory log is up-to-date and reflects current inventory status.
- Conduct an inventory inspection for accuracy.
- Verify quality control inspections are being performed on each home.
- Review subgrantee's costs, labor and fuel rates (semi-annual review).
- Verify WAP staff certifications are up-to-date.
- Review contractors' bid prices (annual review).
- Verify contractors' certifications are up-to-date.
- Verify that contractors are not on the disbarment list (semi-annual).

### **2. Field Inspections**

Monitors will review a representative sampling of client files at the agency to determine that measures were installed according to the Standard Work Specifications (SWS) and that acceptable materials were used in the installation. This is accomplished by conducting field inspections at the work site/client's homes. The Subgrantee must arrange site visits and accompany the Program Monitor to the client's home. Monitors will:

- Conduct quality control inspection of at least five percent (5%) of completed homes to determine the quality of workmanship and appropriateness of service delivered by each Subgrantee.
- Inspect a minimum of four (4) homes per quarter at various stages of weatherization to ensure compliance with DOE rules and consistency between reported activities and actual measures.
- Inspect at least one (1) unit per quarter per subgrantee and per crew or contractor for lead safe work practices.
- Interview WAP Subgrantee staff and clients to determine whether all tests were performed and appropriate measures installed on each unit.

### 3. **Fiscal Reviews**

During each site visit, Program Monitors will examine previous Subgrantee invoices and expenditure reports and verify that they match the agency general ledger. A sample of payments will be examined to verify the existence of documentation that supports the charges, that payments were made to vendors and that payments are allowable under program rules and regulations.

The books and records for any program activities allocated to or charged back to the WAP funds are also subject to review by the Program Monitor. If the Program Monitor notes a problem with allocations or charge backs, the findings will be noted in the report.

If training and technical assistance is warranted, it will be provided to the Subgrantee. Subsequent visits by the Program Monitor will verify that the problem has been corrected or that additional action is necessary.

The Budget Specialist will conduct an annual onsite Program Compliance Monitoring for each subgrantee. The Budget Specialist will conduct a review of all financial systems for compliance with AEO Financial Procedures and 2 CFR 200.

As a part of the annual review, the Budget Specialist will review the Single Agency Audit (A-133) to determine if there are findings specific to the WAP and to assess overall agency financial management.

After subgrantee monitoring activities, the WAP Program Monitor will submit a written report to the Program Manager within fifteen (15) days of return from a monitoring visit. After review by the Program Manager, the report will be finalized and submitted to the Subgrantee for reply.



**ECOS COMPLIANCE OF PROGRAM MANAGEMENT CHECKLIST**  
**Weatherization Assistance Program (WAP)**

Applicant:	Billing Month/Year:
Property Owner:	Agency:
Property Address:	
Funding Source: <input type="checkbox"/> DOE <input type="checkbox"/> LIHEAP	Project Cost:

**COMPLIANCE APPROVAL**

<input type="checkbox"/> Compliance Desk Review Complete <input type="checkbox"/> Approved for Payment <input type="checkbox"/> HOLD	Date _____ Date _____	
Reviewed by: _____		
Comments:		

**COMPLIANCE REVIEW**

Eligibility Verification	Findings	Notes
Last Cert Date		
Dwelling Type	<input type="checkbox"/> SF <input type="checkbox"/> MF <input type="checkbox"/> MOHO	
Ownership Type	<input type="checkbox"/> OWN <input type="checkbox"/> RENT	

Required Documents Review	OK	N/A	Findings/Notes (all signatures obtained)
Weatherization Application (WAP 04)	<input type="checkbox"/>	<input type="checkbox"/>	
Household Income Verified	<input type="checkbox"/>	<input type="checkbox"/>	
SHPO ( <i>if applicable</i> )	<input type="checkbox"/>	<input type="checkbox"/>	
DOE Point System followed	<input type="checkbox"/>	<input type="checkbox"/>	
Notice of Action Letter	<input type="checkbox"/>	<input type="checkbox"/>	
Client Proof of Ownership	<input type="checkbox"/>	<input type="checkbox"/>	
Rental Agreement ( <i>if applicable</i> )	<input type="checkbox"/>	<input type="checkbox"/>	
Deferral of Services	<input type="checkbox"/>	<input type="checkbox"/>	
<i>If so, justification provided</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Right to Fair hearing given	<input type="checkbox"/>	<input type="checkbox"/>	
Documentation verifying energy source for appliance	<input type="checkbox"/>	<input type="checkbox"/>	
Client Education Form (WAP 13)	<input type="checkbox"/>	<input type="checkbox"/>	

Required Documents Review	OK	N/A	Findings/Notes (all signatures obtained)
Receipts/Invoices/Inventory Sheets	<input type="checkbox"/>	<input type="checkbox"/>	
Building Check and Job Order Sheet (WAP 16)	<input type="checkbox"/>	<input type="checkbox"/>	
Photographs of dwelling exterior	<input type="checkbox"/>	<input type="checkbox"/>	
Approved Waiver(s) (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	
Appliance Replacement Consent	<input type="checkbox"/>	<input type="checkbox"/>	
Photograph of existing appliance with tag	<input type="checkbox"/>	<input type="checkbox"/>	
Appliance vendor invoice for delivery, install and/or repair	<input type="checkbox"/>	<input type="checkbox"/>	
Client Response Form (WAP 09)	<input type="checkbox"/>	<input type="checkbox"/>	
Was Proposed Production Met	<input type="checkbox"/>	<input type="checkbox"/>	
Is Expenditure Rate in-line with Production	<input type="checkbox"/>	<input type="checkbox"/>	
Were there any Client Complaints	<input type="checkbox"/>	<input type="checkbox"/>	
Were there any Contractor Payment Delays	<input type="checkbox"/>	<input type="checkbox"/>	

SIR and TASK CATEGORIES				
All approved conductive tasks have SIR $\geq 1$	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
All incidental tasks are associated with an approved ECMs	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
All air infiltration tasks are allowable measures	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Air infiltration SIR $\geq 0.4$	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
All duct infiltration task were modeled on Infiltration tab	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Duct Infiltration SIR $\geq 0.4$	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
All health and safety tasks are in the right category	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Capital Intensive category applied	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Job total SIR $\geq 1$	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

<b>COMMENTS:</b>

<b>OPEN ITEMS</b>

**ECOS BILLING TECHNICAL REVIEW CHECKLIST**  
**Weatherization Assistance Program (WAP)**

Applicant:	Billing Month/Year:
Property Owner:	Agency:
Property Address:	
Funding Source: <input type="checkbox"/> DOE <input type="checkbox"/> LIHEAP	Project Cost:

**COMPLIANCE APPROVAL**

<input type="checkbox"/> Compliance Desk Review Complete	
<input type="checkbox"/> Review Approved	Date _____
<input type="checkbox"/> HOLD	Date _____
Reviewed _____	
Comments:	

**TECHNICAL REVIEW**

Required Review	Result	Findings/Notes
<b>BUILDING</b>		
	Yes    No	
Building model accurate	<input type="checkbox"/> <input type="checkbox"/>	
Drawings	<input type="checkbox"/> <input type="checkbox"/>	
Photos of dwelling- pre and post WX documentation	<input type="checkbox"/> <input type="checkbox"/>	
<b>ASSESSMENT and DIAGNOSTIC TESTING</b>		
	Yes    No	
Mold/Moisture Assessment conducted/good	<input type="checkbox"/> <input type="checkbox"/>	
LBP test/notice documented	<input type="checkbox"/> <input type="checkbox"/>	
<i>If LBP, LSW practices documented</i>	<input type="checkbox"/> <input type="checkbox"/>	
ASHRAE 62.2 Ventilation worksheet/RED Tool pre and post	<input type="checkbox"/> <input type="checkbox"/>	
Final Ventilation Checklist (ASHRAE)	<input type="checkbox"/> <input type="checkbox"/>	
Adequate thermal barrier coverage	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A
Combustion appliances listed	<input type="checkbox"/> <input type="checkbox"/>	
Mechanical ventilation and other exhaust devices list complete	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A
CAZ test number acceptable	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A
Steady State listed and acceptable	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A
Ambient CO acceptable	<input type="checkbox"/> <input type="checkbox"/>	
Spillage passed	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A
Draft and Vent CO measurement passed	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> N/A

Required Review	Result		Findings/Notes
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### ASSESSMENT and DIAGNOSTIC TESTING, CONTINUED

	Yes	No	
Appliance Technician Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	
Pressure Pan results (WAP 11)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A
Work Order/Signed Contract	<input type="checkbox"/>	<input type="checkbox"/>	
Quality Control Inspection done (WAP 08)	<input type="checkbox"/>	<input type="checkbox"/>	
<i>Reworks (WAP 08)</i>	<input type="checkbox"/>	<input type="checkbox"/>	
Post Wx blower door results acceptable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A
Supporting documentation acceptable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A

### SIR and TASK CATEGORIES

	Yes	No	
All approved conductive tasks have SIR $\geq 1$	<input type="checkbox"/>	<input type="checkbox"/>	
All incidental tasks are associated with an approved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A
All air infiltration tasks are allowable measures	<input type="checkbox"/>	<input type="checkbox"/>	
Air infiltration SIR $\geq 1$	<input type="checkbox"/>	<input type="checkbox"/>	
All duct infiltration task were modeled on Infiltration	<input type="checkbox"/>	<input type="checkbox"/>	
Duct Infiltration SIR $\geq 1$	<input type="checkbox"/>	<input type="checkbox"/>	
All health and safety tasks are in the right category	<input type="checkbox"/>	<input type="checkbox"/>	
Capital Intensive category applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A
Job total SIR $\geq 1$	<input type="checkbox"/>	<input type="checkbox"/>	

### COMMENTS:

### OPEN ITEMS

## **V. AEO WAP MONITORING PROCEDURE**

### **A. Monitoring Visit Protocol**

AEO Program Monitor will contact the Weatherization Director to schedule a monitoring visit. The monitor will discuss the review and outline what documents and program staff he/she will need to have access to and how many on-site visits to weatherized homes (in-progress) will be part of the review. Monitor will request that the Executive Director be present for the entrance interview and the exit interview on the first and last days of the monitoring visit. Once dates have been set, monitor will send a letter that states the dates and times of the visit and lists documents, staff, and homes that will be expected to be available to the monitor. The monitor will work through the Weatherization Director should the review necessitate access to additional documents, staff, or houses.

During the exit interview, monitor will discuss strengths and weaknesses of the program and list findings which have been identified for inclusion in the monitoring report. Program staff will have the opportunity to offer additional information that would explain why the finding should not be part of the monitoring report. No findings will be included in the monitoring report if the program agency has an explanation and additional documentation that satisfy the finding.

### **B. Areas of Review**

- File documentation, including income verification;
- Compliance with state & federal regulations;
- Compliance with state weatherization assistance program specifications;
- Completed project inspection;
- Performance testing of homes;
- Inventory control;
- Health & safety inspection;
- Audit results;
- Resource accountability;
- Work quality;
- Fiscal controls.

### **C. Routine Program Evaluation Outline**

- Review prior program evaluations;
- Set up dates for the on-site visit and request that agency has completed files from the prior month ready for review;
- Travel to agency;
- Meet and greet;
- Discuss agency operations;

- Discuss community partners;
- Discuss other resources;
- Review participant files with staff;
- Based upon the monthly production goals, choose a percentage of the completed jobs for field inspection based on agency rating. Of this number, conduct a performance test on required percentage ;
- Perform field inspection;
- Performance test homes;
- Program Monitor and agency representative will discuss any opportunities identified during the inspection and performance testing of the homes;
- Interview participants;
- Prepare exit interview report;
- Discuss findings;
- Incorporate mutually agreed upon comments into the final review;
- Discuss new techniques, approaches or protocols;
- Discuss training needs;
- Schedule additional follow up(s) on technical assistance topics identified;
- Review corrective action from prior review;
- Draft final review;
- Send copy to executive director and agency coordinator.

#### **D. Field Test Detail**

Inspection of completed houses, with the accompaniment of the local agency auditor/inspector, provides an opportunity to provide on-site technical assistance. Various installation techniques, quality control issues, or test procedures may be discussed during the course of performing the inspection.

Diagnostic testing is performed, including blower-door tests, combustion safety tests, exhaust fan flow metering and duct leakage tests. The test results are compared with those noted in the participant file.

With the implementation of ECOS, the state Program Monitors will continue to check set-up values in the ECOS energy audit.

**\*\*Exemplary practices, successful approaches, or creative ideas in the operation of the local program will be identified and noted.\*\***

Crew Health and Safety procedures will be checked for compliance with the AEO Health and Safety Plan as contained in the DOE State Plan.

At the conclusion of the monitor's visit, an exit conference will be conducted with the Weatherization Director and the Executive Director. If there are deficiencies, a recommended course of action will be agreed upon.

Every effort will be made to complete and mail a final report to the Executive Director and Weatherization Director within fifteen (15) working days of the monitor visit. The agency will submit a written response within fifteen (15) working days providing assurance that identified problems are resolved in a timely manner and documented.

**E. Evaluation Tools and Equipment**

The following tools and equipment will be used by Program Monitor to help determine satisfactory work performance:

1. Blower-door tests on a sample of completed jobs to verify the extent of air-sealing work and to assess the risk of indoor air quality problems.
2. A carbon monoxide detector and manometer on a sample of completed jobs that have combustion appliances to verify compliance with combustion safety test procedures.
3. An infrared scanner on a sample of completed jobs to verify uniform insulation coverage in closed cavities and inaccessible areas, as well as adequate air sealing work.
4. Digital cameras to take photos of houses inspected and to record extraordinary circumstances or work performance.
5. Pressure pan to verify duct sealing.
6. Exhaust Fan Flow Meters to measure the amount of air flow (CFMs) on the mechanical devices.

**F. Reference Material**

1. Arkansas Weatherization Program Operations Manual.
2. US Department of Energy 10 CFR Part 440 Weatherization.
3. US Department of Energy 2 CFR Part 200 Financial Assistance Rules.
4. OMB Circular A-122: Cost Principles for Non-Profit Organizations.
5. OMB Circular A-133: Audits of States, Local Governments and Non-Profit Organizations.
6. 36 CFR 800: Protection of Historic Properties.
7. 40 CFR 745: Lead-Based Paint Poisoning Prevention in Certain Residential Structures.

Technical procedures adopted for the weatherization program, include:

1. SWS Deck of Cards.

## VI. LEVELS OF AGENCY PERFORMANCE

As a result of the monitoring process, the Program Monitor will assess the Subgrantee and assign a level of performance in overall agency performance, workmanship, fiscal oversight, and program management based upon the categories listed below:

**Stable:** Meets program expectations. Activities are generally accurate, effective, organized, sound, proficient, and proactive. Good administration systems.

**Vulnerable:** Noncompliance issues. Sometimes meets program expectations. Marginal administrative systems exist.

**At-Risk:** Frequently does not meet program expectations. Inadequate, poor, substandard, incomplete, or deficient documentation exist. There is poor communication between state and agency staff. Inadequate administrative systems exist.

### Use of Terminology

**Finding:** Findings are defined as the Subgrantee's failure to comply with regulations and/or guidance.

**Concern:** Concern is defined as a Subgrantee's inconsistency to comply with guiding documents (SWS Deck of Cards, Subgrantee Operations Manual, Service Agreement, 10 CFR 440, 2 CFR 200, WPNS, etc.).

**Recommendation:** Recommendations are best practices. They are suggestions for the best course of action.

### A. Stable Agency Performance

AEO expects every agency to meet this standard of performance with no more than three (3) deficiencies overall in the following three (3) categories: Compliance & Program Management, Technical, and Fiscal Oversight. In the technical category, a finding will become a deficiency if found evident in more than two (2) client files or units.

#### 1. Compliance & Program Management

Agency has well-established systems for program administration and operations, with no more than one (1) finding in the following areas:

- Compliance with major program requirements, such as, lead-based paint procedures, cost allocation plan/indirect rate, required contractor information;
- Agency has a minimal number of minor procedural findings (as related to program rules, policies and procedures);
- Agency has complete and organized files;
- No more than one program specific finding in the annual audit;
- Evidence of prudent decision making as to the use of program resources;
- The agency maintains a professional working relationship with AEO;



- Past corrections made and reported in a timely manner;
- Income eligibility is accurate.
  - Production:
    - Agency unit production is in line with funding and the Weatherization Plan.
    - Agency sometimes exceeds monthly production goals.
    - Agency has completed ninety percent (90%) of the projected Monthly production.
    - Agency has no more than one (1) Monthly production report filed late.

## 2. **Fiscal Oversight:**

- 
- Inventory Log is up to date and reflects current inventory status;
- General Ledger is in line with the ECOS or WAP 21A billing on ninety percent (90%) of files;
- Monthly Production Report is completed accurately and illustrates the correct number of clients served on ninety percent (90%) of client files;
- Receipts for expenditures are in all client files;
- No mischaracterization of expenses (i.e., admin cost billed as program support cost);
- Other.

## 3. **Technical**

- Staff well trained in performance of specific job duties;
- Complete scopes of work using Standard Work Specifications and Field Guide in all client files;
- Staff proficient in the use of ECOS software;
- Evidence ECOS is run with actual and true pre-post data (including costs) in all instances;
- Staff and contractors have demonstrated proficiency in technical applications, including diagnostics:
  - (a) Blower Door Guided Air Sealing;
  - (b) CO Testing;
  - (c) Infrared Camera;
  - (d) CAZ Testing.
- Agency has required segregation of duties between the Energy Auditor and the Quality Control Inspector (QCI);
- Agency complies with OSHA/AEO safety rules, as applicable;
- No “at-risk” elements are found in major categories for an agency;
- Reworks are documented with written instructions to the contractor and a follow up QCI is complete;
- Agency has no more than one (1) missed opportunity.

## **B. Vulnerable Performance**

If after two (2) consecutive monitoring visits, an agency shows a pattern of continued findings in the same category, then the agency is considered vulnerable.

### **1. Compliance & Program Management**

Agency has marginal systems for program administration and operations, with multiple findings in the following areas:

- Failure to comply with major program requirements, such as required contractor information;
- Agency fails to maintain a professional relationship with AEO Staff;
- Files are incomplete and not organized in more than thirty percent (30%) of files reviewed;
- There is evidence of imprudent decision making as to the use of program resources;
  - Production:
    - Agency unit production is low relative to funding and is not consistent with Weatherization Plan;
    - If monthly production is not completed and the agency has more pending units, then planned production requires;
    - Agency has more than two (2) monthly production reports filed late.

### **2. Fiscal Oversight**

- Inventory Log is not up to date and does not reflect current inventory status;
- General Ledger is not in line with the ECOS or WAP 21A billing in no more than thirty percent (30%) of client files;
- Monthly Production Report is not completed accurately and does not illustrate the correct number of clients served. No more than one (1) in a quarter;
- Receipts for expenditures are not in client files in no more than thirty percent (30%) of the client files reviewed;
- Expenses have been mischaracterized (i.e., admin cost billed as program support cost) in no less than thirty percent (30%) of the client files;
- Agency fails to comply with cost allocation plan/indirect rate;
- More than one fiscal specific finding in the annual audit;
- Past corrections were not made and reported in a timely manner;
- Several “at-risk” elements are found in major categories for an agency.

### 3. **Technical**

The agency has H&S findings in more than twenty percent (20%) of client files reviewed;

- Not in compliance with lead-based paint procedures;
- Inconsistent evidence of prudent decision making as to use of program resources:
  - Incomplete scopes of work;
  - ECOS documentation is not current and inconsistent with billing;
  - Evidence that ECOS is not used with actual and true pre-/post-data (including costs).
- Staff and/or contractors do not demonstrate proficiency in technical applications, including diagnostics:
  - Blower Door Guided Air sealing;
  - Infrared Camera;
  - CAZ Testing;
  - CO Testing.
- Agency has a number of severe procedural findings related to programs rules, policies and procedures, and health and safety findings from previous monitoring reports;
- Agency does not comply with OSHA/AEO safety rules, as applicable;
- The agency does not maintain a professional working relationship with AEO.

***NOTE: INCREASED MONITORING (10%+) MAY BE CONDUCTED ON AGENCIES DEEMED TO BE VULNERABLE UNTIL SUCH TIME AS THE AGENCY HAS CORRECTED ITS DEFICIENCIES.***

### C. **At-Risk Performance**

At-risk agencies are identified as a result of a variety of factors that may include but not be limited to:

1. **New Subgrantee status, agency is operating during a probationary period**
  - Probation Status can last from six to twelve (6 to 12) months depending upon the competencies of the new Subgrantee makeup.
2. **Compliance & Program Management**
  - There is evidence of significant administrative or program sub-standard performance; for example, repetitive pattern of findings, failure to have copies of critical diagnostic documentation on file or lack of compliance with historical preservation rules in more than forty percent (40%) of client files reviewed;
  - The agency is not in compliance with program policies, procedures and specifications;
  - There has been a change in key staff or frequent turnover in lower level staff;

- The agency has program specific findings in its annual audit;
- The agency files are incomplete or disorganized in more than forty percent (40%) of client files reviewed;
- The agency staff is unresponsive to AEO requests and deadlines: For example, the agency consistently fails to provide monthly reports, invoices and expenditure reports, or contract closeouts in a timely manner;
- The agency fails to maintain a professional relationship with AEO.

Production:

- Agency unit production is low relative to funding;
- Agency fails to meet monthly production goals for three (3) months. If monthly production is not completed and the agency has more pending units than planned production required;
- Monthly production reports are filed late more than forty percent (40%) of the time.

3. **Technical**

- The agency has health and safety findings in more than twenty percent (20%) of the client files;
- Agency staff members/crew has deficient technical skills. There has been a change or frequent turnover in key weatherization contractors or crew members;
- The agency has deficient scopes of work (work plan is insufficient);
- Inconsistent decision making as to use of program resources:
  - Incomplete scopes of work;
  - ECOS documentation is not current and inconsistent with billing;
  - Evidence that ECOS is not used with actual and true pre-/post-data (including costs).
- Staff and/or contractors do not demonstrate proficiency in technical applications, including diagnostics:
  - Blower Door Guided Air sealing;
  - Infrared Camera;
  - CAZ Testing;
  - CO Testing.
- Agency has a number of severe procedural findings related to programs rules, policies and procedures, and health and safety findings from previous monitoring reports;
- Agency does not comply with OSHA/AEO safety rules, as applicable;
- The agency does not maintain a professional working relationship with AEO.

#### 4. **Fiscal Oversight**

- Inventory Log is not up to date and does not reflect current inventory status;
- General Ledger is not in line with the ECOS or WAP21A billing;
- Monthly Production Report is consistently not completed accurately and does not illustrate the correct number of clients served (no more than one (1) in a quarter);
- Receipts for expenditures are not in client files in no more than forty percent (40%) of client files reviewed;
- Expenses are mischaracterized (i.e., admin cost billed as program support cost);
- Agency fails to comply with cost allocation plan/indirect rate;
- No more than one (1) fiscal specific finding in the annual audit;
- Past corrections were not made and reported in a timely manner;
- Several “at-risk” elements are found in major categories for an agency:
  - The agency has fiscal specific audit findings;
  - Agency production is low relative to funding;
  - At-risk agencies will be monitored no less than once monthly. Other factors in the frequency of monitoring visits may be based upon the requirements of specific funding sources.

***NOTE: INCREASED MONITORING (10% +) MAY BE CONDUCTED ON AGENCIES DEEMED TO BE AT-RISK UNTIL SUCH TIME AS THE AGENCY HAS CORRECTED ITS DEFICIENCIES. IN ADDITION, FUTURE FUNDING MAY BE WITHHELD FROM AGENCIES DEEMED TO BE AT-RISK.***

## **VII. PERFORMANCE FINDINGS CORRECTION PROCESS**

- Each Subgrantee shall be advised within fifteen (15) working days after the conclusion of the quarterly review process of any findings. If the agency's performance rating is deficient in any category and the program is out of compliance with contract provisions or that the program is out of compliance with state or federal regulations, AEO will issue a report with findings which provide specific examples of each such issue, request corrective action on each deficiency and request that the Subgrantee develop a corrective action plan.
- Subgrantee will respond to the corrective action request within fifteen (15) working days from receipt of the request. The response will include a corrective action plan which specifically addresses identified findings.
- AEO will notify the Subgrantee within fifteen (15) working days of the acceptance or rejection of all or parts of the Subgrantee's corrective action plan. The Subgrantee will be given an additional ten (10) working days from the receipt of the Monitors notification to provide an acceptable corrective action plan for any remaining, unresolved deficiencies.
- Any agency rated "Vulnerable" or "At Risk" will be monitored monthly during the next quarter. Technical assistance will be provided by AEO staff and PTC to correct deficiencies.
- If after a corrective action plan has been submitted and the subgrantee continues to be at "Vulnerable" or "At Risk" status after monthly technical assistance, the state reserves the right to begin the termination process.
- If a subgrantee fails to comply with the Findings and Corrective Action process, the failure shall lead to sanctions. Such sanctions may include but not be limited to withholding of funds, disallowance of costs, probation pending corrective action compliance, suspension or termination of the contract. AEO shall inform the Subgrantee of any appeal rights and procedures to state and federal authorities in the written communication of sanctions.
- Sanctions will begin with the agency being placed on probation:
  - (a) The Program Manager and the assigned Program Monitor will conduct an on-site visit with the agency staff to include the Executive Director, Weatherization Director and the Fiscal Manager to discuss and develop a strategic plan to resolve the deficiencies and findings. The plan will be specific with action steps and responsibilities assigned;
  - (b) Probation can last from six to twelve (6 to 12) months depending upon the strategic plan.
  - (c) The Strategic Plan could result in temporary realignment of service area for the remainder of the program year.
- After the end of the probationary period, AEO will make a determination as to whether the Strategic Plan was successful. If so, the agency will be reinstated without reservation. If unsuccessful, the defunding process will begin.

## **IX.TERMS FOR PROBATION OR DEFUNDING OR PENALTIES**

The “AEO General Terms and Conditions,” “Scope of Services” and “Administrative Grant Agreement” specifies the criteria necessary for a Subgrantee to be considered in contract compliance with AEO. Failure to maintain fiscal control, comply with federal regulations or fulfill contract obligations will lead to probation; loss of funding; or other penalties provided in state law, AEO policies, federal law or regulation, or AEO Terms and Conditions for Administrative Services Grant Agreement Federal Subgrants. The terms of the probation will depend on the specific situation. At the end of the probation period, AEO will conduct a performance review. In the event a Subgrantee fails to meet specified minimum standards at the end of the probationary period, AEO may reallocate all or part of the unobligated WAP funds to a suitable replacement Subgrantee.

## **X. PROCEDURES TO TERMINATE/DEFUND A WAP SUBGRANTEE**

Before termination of a WAP Subgrantee, an administrative hearing will be conducted in accord with federal regulations.

If the hearing officer upholds the termination action, then an official Notice of Termination will be sent to the Subgrantee by certified mail with return receipt. The Notice of Termination will detail specifically unresolved corrective actions, outline the steps taken to resolve the issues and the results of those steps. In addition, the official notice shall give detailed instructions regarding the disposition of activities and/or services, supplies and equipment used by the affected Subgrantees for WAP operations.



## Section 7 – Technical Standards and Best Practices

Subgrantees are responsible for completing all weatherization work in compliance with the AEO standard and specifications listed below and the Standard Work Specifications for Single Family Homes, Multifamily and Manufactured Homes as adopted by the AEO. This requirement applies to both in house crews and private contractors. A record of adaptations and interpretations may be found in Appendix B of this document and will be updated on an as needed basis. Any updates or modifications will be transmitted to the agencies in writing as well as distributed to their technical committee representatives at quarterly meetings.

Subgrantees must also adhere to all specifications for materials as identified in 10 CFR Part 440, Appendix A.

The requirements outlined in the five (5) sections of the Quality Work Plan (QWP) listed below will be included in the 2017/18 State Plan.

The QWP defines specifications for work quality, workforce training and the qualifications required for individuals performing inspections of WAP work. The requirements are based on the resources developed under the Guidelines for Home Energy Professionals project. Adopting these benchmarks for quality allows the WAP to leverage the institutional knowledge, developed over thirty (30) years, to set the standard for quality in the Program.

### Guidance:

Section 1: Definition of Work Quality, Guidelines and Standards

Section 2: Communication of Guidelines and Standards

Section 3: Inspection and Monitoring of Work Using Guidelines and Standards

Section 4: Training to Implement and Maintain Guidelines and Standards

Section 5: Exemptions

### Section 1. Definition of Work Quality Guidelines and Standards

**Justification** The State Plan Application submission must advise DOE of the Type of Work to Be Done (per the Application Package). This includes “Technical Guides and Materials” – and items such as standards documents, program updates, procedures manuals, field guides and other materials used to direct work in the field.

**Requirement** All tasks performed on client homes must meet the specifications, objectives and desired outcomes outlined in the Standard Work Specifications for Home Energy Upgrades, as adopted by AEO, where applicable.

- “Applicable tasks” are those tasks that are addressed in the Standard Work Specifications for Home Energy Upgrades for Single Family, Multifamily and/or Manufactured Homes.

- Grantees will make available to Subgrantees comprehensive field standards outlining Grantee expectations of work scope and quality. These field standards must meet or exceed the minimum standards outlined in the SWS where applicable.
- Grantees must review their field standards and ensure that the relevant procedures in those guides will result in work that achieves the desired outcomes in the SWS. Field standards will reference the appropriate SWS for the procedure being described and clearly state the required specifications for that procedure.
- The field standards may be maintained in a separate document.

**Time Line** Grantee made available in hard copy and electronically on its website the “Standard Work Specifications Field Guide for Single-Family Homes created by A Collaborative Effort Without Borders more commonly referred to as the “Deck of Cards” and the same for Manufactured housing as well as the Subgrantee Operations Manual, to all Subgrantees in PY 2016.

## **II. Developing a Quality Work Plan Assessing Subgrantee Capacity**

**Justification** Compliance with federal (and state, if applicable) requirements at the Subgrantee level. Per Section 440.15 Subgrantees, the grantee shall ensure each Subgrantee has the necessary experience and capacity to undertake a timely and effective weatherization program.

**Expectation** To effectively administer a Federal program, staff must have a clear and consistent understanding of both the Program rules (10 CFR 440) and the financial rules (2 CFR 200 and OMB Super Circular) that govern the program. Administrative staff is held responsible for all managerial aspects – some that are specific to the WAP and some that are necessary to successfully implement the financial requirements of any federal grant.

### **A. Identifying the Minimum Competencies held by Subgrantee Staff**

AWAP contracted with Center for Applied Building Science at Pulaski Technical College (PTC) to perform an assessment of each Subgrantee’s WAP workforce to ascertain relevant work experience, training and certifications held by the workforce as they pertain to the Knowledge, Skills and Abilities (KSAs) required of each occupational position.

In addition, AEO/WAP compiled the Job Task Analysis (JTAs) for all weatherization classifications along with its stated knowledge, skills and abilities (KSAs) and disseminated it to the network to review and conduct a self-assessment on their competencies. Establishing A Baseline.

AEO compiled the data from each Subgrantee and established a baseline from which each agency could identify its strengths and weaknesses and develop a plan to address them.

## **B. Evaluating Knowledge, Skills & Abilities (KSA)**

Credentials, training received, and experience levels were gathered, and an active assessment on each employee's KSA was conducted through a series of questionnaires, tests, and/or observations.

## **C. Recommended Training Plan**

<b>Justification</b>	Pursuant to Section V.8.4 of the Grantee Application Package submission, Grantees must submit to DOE a proposed training plan and milestones to ensure the training plan is on pace to be accomplished. The Grantee Application submission instructions provide elements that should be addressed as part of the submission. These include how the Grantee training plan reflects feedback from DOE Project Officer visits and Grantee field monitoring visits
<b>Requirement</b>	<p>Beginning in Program Year 2014, Grantee Training Plans must include comprehensive training for all WAP workers that is aligned with the NREL Job Task Analysis (JTA) for the position in which the worker is employed.</p> <ol style="list-style-type: none"><li>1. Training Plans must address two (2) distinct categories:<ul style="list-style-type: none"><li>• <b>Tier 1 Training:</b> Comprehensive, occupation-specific training which follows a curriculum aligned with the JTA for that occupation. Tier 1 training must be administered by a training program that is accredited by IREC for the JTA being taught.</li><li>• <b>Tier 2 Training:</b> Single issue, short-term, training to address acute deficiencies in the field including dense packing, crawlspace, ASHRAE, etc. Conference trainings are included in this category.</li></ul></li><li>2. Training Plans must ensure that all workers receive regular Tier 1 training.</li><li>3. Tier 2 training can be provided on an as-needed basis, however, the majority of worker training should occur in Tier 1.</li></ol>
<b>Time Line</b>	<p><b>Prior to the start of the 2018 PY</b></p> <p>Subgrantees must provide to the Grantee, a training plan to ensure that all training planned for the upcoming PY meets the requirement outlined in this section. The plan must include projected training for private contractor crews as well as all Subgrantee staff. Where available, all DOE funded Tier 1 training will be provided by IREC accredited training programs. Where IREC accredited training is not available, the Subgrantee must provide a plan to access IREC training. IREC accredited trainings can be administered in a number of ways including traveling training programs, distance learning programs and other options approved by DOE, administered in a number of ways including traveling training programs, distance learning programs and other options approved by DOE.</p> <p>All Tier 1 training paid for with WAP T&amp;TA funds must meet the requirements of this section.</p>

#### **D. Post Assessment**

Post assessment will be monitored as a part of the normal State monitoring duties. The State's technical unit (whether contractors or state employees) will conduct onsite field monitoring to determine if Subgrantees are meeting federal regulations.

The Grantee's WAP Financial Manager and the Program Monitors will monitor for fiscal and programmatic compliance of the WAP. Assessments will document the capacities of Subgrantee's staff as it relates to their duties. Assessments will be seen in documents, such as:

1. periodic monthly monitoring reports,
2. desk reviews, and
3. year-end financial reviews.

### **Section 2 Communication of Guidelines and Standards**

**Justification** Weatherization Program Notice WPN 12-5 includes a list of materials grantees shall provide to their designated DOE Project Officer (PO) as part of the monitoring process. DOE will pay particular attention to agreements, procedures manuals, and other relevant materials to ensure Grantees have informed subgrantees of the expectations for work quality.

**Requirement** Grantees must provide subgrantees and/or contractors with technical requirements for field work. The Grantee must confirm receipt of those requirements and provide follow-up and clarification upon request. The technical requirements must be clearly communicated and the specifications for work to be inspected must be referenced in subgrantee contracts. Contractors hired by the subgrantee must have agreements that include the same technical requirements referenced above. The work of the contractor must be consistent with the Grantee standards and field guides. The goal is to ensure:

- The Grantee is implementing quality work plans that align with the SWS.
- All subgrantees staff, contractors, and anyone doing the actual work are aware of these standards.
- Every home is inspected and complies with the SWS as adopted by AEO and approved by DOE.

#### **Time Line as of PY 2016**

All subgrantee agreements and vendor contracts contain language which clearly documents the specifications for work as outlined in this section.

### **Section 3 Inspection and Monitoring of Work Using Guidelines and Standards**

**Justification** As part of the WAP State Plan/Application Package submission, Grantees must describe procedures being followed for "Final Inspection" under Section V.5 of the Application Package.

## **Requirement    Quality Control Inspector**

Quality Control Inspectors (QCI) working for, or contracted by, the WAP must possess the knowledge, skills and abilities in the National Renewable Energy Laboratory (NREL) Job Task Analysis for Quality Control Inspectors and have been awarded the Quality Control Inspector credential by Building Performance Institute. This applies to all individuals who perform an evaluation and sign off on work performed in homes including final inspectors and Grantee monitoring.

- QCI competency is demonstrated by certification as a Home Energy Professional Quality Control Inspector.
- Quality Control Inspectors can be employed by third party organizations or subgrantees; however, the Grantee is ultimately responsible for ensuring that every unit reported to DOE meets the work quality guidelines required by the WAP.
- The Grantee must have a policy for validation of the Quality Control Inspectors' credentials.
- The Grantee must have policies and procedures in place to address situations when the QCI is not inspecting units using the standards adopted by the state and consistent with the SWS. This policy must include monitoring of the QCI and procedures for disciplinary action if the Grantee inspection protocols are not consistently followed.

Every DOE WAP unit reported as a “completed unit” must receive a final inspection ensuring that all work meets the minimum specifications outlined in the SWS, as adopted by the AEO and in accordance with 10 CFR 440.

- Units must be inspected using criteria found in the specifications outlined in the *Work Quality* section of this guidance.
- Every client file must have a form that certifies that the unit had a final inspection and that all work met the required standards. The certification must be by a certified QCI. Signatures would meet the requirement. If a unit has received both a final inspection and has also been monitored by the Grantee, two (2) certification forms may be available in the client file – one for each inspection.
- Grantees must include in their annual WAP Grantee Application specific protocols that will ensure that the work performed by the WAP meets the criteria outlined under the Work Quality section of this guidance.
- The Quality Control Inspection must include an assessment of the original audit and confirm that the measures called for on the work order were appropriate and in accordance with the Grantee audit procedures and protocols approved by DOE.
- Grantee Quality Control Inspection Policies can be developed in two (2) ways:
  1. DOE Prescribed QCI Policy: DOE has developed two (2) standard options for administering quality control inspections:
    - Independent QCI: The QCI is an individual that has no involvement in the prior work on the home either as the auditor or as a member of the crew. The Grantee or a DOE approved representative (for example, a third party HEP certified Quality Control Inspector) must perform quality assurance reviews of at least five percent (5%) of all completed units.
    - Independent Auditor/QCI: The Auditor performs the audit, creates the work order, and performs the final quality control inspection.

The auditor is not involved in any of the actual work on the home. Because this model does not allow for an independent review of the audit on every home, the Grantee must increase their percentage of quality assurance reviews to ensure that audits are being performed consistently and correctly. The Grantee must perform quality assurance reviews of at least ten percent (10%) of all completed units. The final percentage of inspections will be defined by the Grantee and justification provided to DOE supporting the final number. The Grantee must also develop a quality assurance plan that ensures that the individual who is functioning as both the auditor and the quality control inspector is able to consistently perform both tasks.

2. Grantee Developed QCI Policy: The Grantee may choose to develop a quality control inspection policy that differs from the standard options defined by DOE. The policy must be presented to DOE for approval and must contain the following elements:
  - Description of the individuals performing the quality control inspections and their relationship to the work – i.e., are they independent, did they audit the home, did they work on the crew, etc.
  - Grantee process for ensuring that quality control inspections are performed in an impartial and complete manner. This must include audit review as described above.
  - Grantee process for reviewing the success of the QCI Policy and resolving any issues that affect the quality and impartiality of the inspection process.

**Time Line     As of PY 2016**

AEO has chosen to adopt the Independent QCI process for compliance inspections.

**Section 4 Provide Training to Implement and Maintain Guidelines/Standards**

Pursuant to Section V.8.4 of the Grantee Application Package submission, Grantees must submit a proposed training plan with milestones to ensure the training plan is on pace to be accomplished. The Grantee Application submission instructions provide elements that should be addressed as part of the submission. These include how the Grantee training plan reflects feedback from DOE Project Officer visits and Grantee field monitoring visits. In 2014 and 2015, this list will be expanded to include items outlined in this section. Beginning in Program Year 2014, Grantee training plans must include comprehensive training for all WAP workers that is aligned with the NREL (JTA) for the position in which the workers is employed.

Training plans must address two distinct categories:

1. **Tier 1 Training:** Comprehensive, occupation-specific training which follows a curriculum aligned with the JTA for that occupation. Tier 1 Training must be administered by, or in cooperation with, a training program that is accredited by a DOE-approved accreditation organization for the JTA being taught.
2. **Tier 2 Training:** Single-issue, short-term, training to address acute deficiencies in the field such as dense packing, crawlspace, ASHRAE, etc. Conference training are included in this category.

Training Plans must ensure that all Weatherization field staff receive **regular Tier 1** training. Each Grantee will decide on the regularity of training based on workforce needs and availability of funds. The training plan should include an analysis of training needs and a plan for meeting those needs over a defined period of time, which can span multiple Program Years. Tier 2 training can be provided on an as-needed basis, however, the majority of worker training should occur in Tier 1.

#### **Time Line     2017/18 Grantee Plan**

Grantees must provide a Grantee training plan to ensure that all training meets the requirement outlined in this section. All DOE funded Tier 1 training will be provided by DOE-approved accredited training programs. Accredited training can be administered in a number of ways included traveling training programs, distance learning programs and other options approved by DOE.

Beginning of Grantee's Program Year 2017/18

All Tier 1 training paid for with WAP T&TA funds must meet the requirements of this section.

#### **Installers/field technicians**

Milestone: By the end of PY 17/18.

- Completion of Tier 1 requirements and "Additional Trainings Required."
- Obtain RI Credentials administered by BPI Installers/technicians.
- At least once in every three-year period attend a nationally recognized home energy training conference and participate in a complete track of training sessions. Certificates are required to prove participation.
- New Hires for this position have one (1) year from the date of hire to complete or show evidence of completion of Tier 1 trainings and "Additional Trainings Required."

#### **Tier 1**

- Complete a Retrofit Installer training program that has been aligned to cover the DOE approved JTA for Retrofit Installers and administered by an IREC approved training provider.
- Obtain the Retrofit Installer credential administered by BPI.



**Additional Trainings Required:**

- Obtain OSHA 10 certification.
- Obtain EPA Lead RRP certification.
- Completion of a Mobile Home Weatherization Tactics training program (Certificate required).

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 17/18.

- Duct sealing.
- Crawl space air sealing and insulation.
- Mobile Home Insulation tactics.
- Retrofit Installers are responsible for acquiring the required CEUs and maintaining their BPI credential, OSHA 10 and EPA Lead RRP certifications.

**Crew Leaders**

Milestone: Milestone: by the end of PY 17/18.

- Completion of Tier 1 requirements for Crew Leader and “additional Trainings Required.”
- Obtain the Crew Leader Credential administered by BPI.
- Crew Leaders must repeat Tier 1 training requirements every three (3) years.
- At least once in every three-year period attend a nationally recognized home energy training conference and participate in a complete track of training sessions. (Certificates required to prove participation.).
- New hires for this position have one (1) year from the date of hire to complete or show evidence of completion of Tier 1 trainings and “additional Trainings Required.”

**Tier 1**

- Complete the Installer requirements in addition to complete a Crew Leader training program that has been aligned with the DOE Approved JTA for Crew Leaders and administered by an IREC approved training provider.
- Obtain the Crew Leader credential administered by BPI.

**Additional Trainings Required:**

- Obtain OSHA 10 certification.
- Obtain EPA Lead RRP certification.
- Complete an ARWAP approved ASHRAE 62.2 training program (certificate required).
- Successfully complete a Mobile Home weatherization tactics training program (certificate required).
- Complete an ARWAP approved training program on the “Deck of Cards” and AR State guidelines.



**Tier 2** (identified needs via DOE and State Monitoring visits) to be completed by the end of PY 17/18.

- Duct sealing.
- Crawl space air sealing and insulation.
- Mobile Home Insulation tactics.
- Crew Leaders are responsible for acquiring the required CEUs and maintaining their BPI credential, OSHA 10 and EPA Lead RRP certifications.

### **Energy Auditors**

Milestone: By the end of PY 17/18.

- Complete Tier 1 requirements and “Additional Trainings required.”
- Obtain the EA credential administered by BPI.
- Energy Auditors must repeat Tier 1 training requirements every three (3) years.
- At least once in every three-year period attend a nationally recognized home energy training conference and participate in a complete track of training sessions. (Certificates required to prove participation).
- New Hires for this position have one (1) year from the date of hire to complete or show evidence of completion of Tier 1 trainings and “Additional Trainings Required.”

### **Tier 1**

- Complete an Auditor training program that has been aligned with the DOE approved JTA for Energy Auditor and is administered by an IREC approved training provider.
- Obtain the Energy Auditor credential administered by BPI.

### **Additional Trainings Required:**

- Complete DOE endorsed Health and Safety with Lead Safe Work practices training.
- Obtain OSHA 10 Certification.
- Obtain EPA Lead RRP Certification.
- Complete Infrared Thermographer Level 1 training.
- Successfully complete a Mobile Home weatherization tactics training program (Certificate Required).
- Complete sixteen (16) hours of building modeling software training (Provided by JAI).
- Complete an ARWAP approved ASHRAE 62.2 training program (Certificate Required).
- Complete an ARWAP training program on the “Deck of Cards” and AR State guidelines.

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 16/17.

- ASHRAE 62.2 2010 Calculations and implementation (conference session).
- Zonal Pressure Diagnostics and Air Sealing.
- IR camera and insulation assessment techniques.
- Energy Auditors are responsible for acquiring the required CEUs and maintaining their BPI credential, OSHA 10 and EPA Lead RRP certifications.

### **Quality Control Inspector**

Milestone: By the beginning of PY 17/18.

- Completion of Tier 1 requirements.
- Obtain QCI credential administered by BPI.
- By the end of PY 2017/18 completion of “Additional Training Required.”
- Energy Auditors must repeat Tier 1 training requirements every five (5) years.
- At least once in every three-year period attend a nationally recognized home energy training conference and participate in a complete track of training sessions. (Certificates required to prove participation).
- New Hires for this position have one (1) year from the date of hire to complete or show evidence of completion of Tier 1 trainings and “Additional Trainings Required.”

### **Tier 1**

- Complete a Quality Control Training program that has been aligned with the DOE approved JTA for Quality Control Inspector and is administered by an IREC approved training provider.
- Obtain the Quality Control Inspector Credential administered by BPI.

### **Additional Trainings required:**

- Complete DOE endorsed Health and Safety with Lead Safe Work practices training.
- Obtain OSHA 10 Certification.
- Obtain EPA Lead RRP Certification.
- Complete Infrared Thermographer Level 1 training.
- Successfully complete a Mobile Home weatherization tactics training program (Certificate Required).
- Complete sixteen (16) hours of building modeling software training (as provided by JAI).
- Complete an ARWAP approved ASHRAE 62.2 training program (Certificate Required).

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 17/18.

- ASHRAE 62.2 2010 Calculations and implementation (Conference session).
- Zonal Pressure Diagnostics and Air Sealing.
- IR camera and insulation assessment techniques.
- Complete an ARWAP approved training program on the “Deck of Cards” and AR State guidelines.
- Zonal Pressure Diagnostics.
- QCI Inspectors are responsible for acquiring the required CEUs and maintaining their BPI credential, OSHA 10 and EPA Lead RRP certifications.

There are no Tier 1 or Tier 2 requirements as stated in WPN 15-4 for Weatherization Directors, Financial Managers or contractors at the Subgrantee level. However, the purpose of the QWP and training plan is to ensure that all of the workforce is well trained for their specific job duties. The DOE is developing curriculum, similar to the technical curriculum found on [waptac.org](http://waptac.org) for grantee level management training. The JTAs and KSAs have been developed and are projected to be submitted to the DOE for approval by the end of March 2015. Curriculum was expected to be available in PY16. When that curriculum is available ARWAP will look to adapt it for Subgrantee level management training as well. Arkansas has long strived to be in the forefront of quality service providers, so until such time as DOE approved curriculum is available, the following trainings are necessary and will be offered.

### **Weatherization Directors**

Milestone: By the end of PY 17/18.

- Complete Tier 1 training requirements of the Crew Leader Job.
- Classification and “additional Trainings.”
- Complete a Tier 1 training program designed for Retrofit Installers, Crew Leaders, Energy Auditors or Quality Control Inspectors at least once every three (3) years.
- At least once in every three-year period attend NASCSP training conference and participate in a complete training track of sessions (Certificates required as proof of participation).
- New Hires will have one (1) year from date of hire to complete or show evidence of prior completion of the Tier 1 Crew Leader training and the “Additional Trainings.”

### **Additional Trainings**

- Weatherization Directors Training two (2) days offered by grantee level staff.
- Financial Toolkit training as outlined on [waptac.org](http://waptac.org).
- OMB Circular Training as offered by NASCSP.
- OSHA 10.
- EPS Lead RRP.
- Complete an ARWAP approved ASHRAE 62.2 training program (certificate required).
- Complete sixteen (16) hours of building modeling software training (as provided by JAI).
- Complete sixteen (16) hours of financial management software training (as provided by JAI).

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 17/18.

- Mobile Home Weatherization tactics.
- Financial Management software training (as provided by JAI).

### **Financial Managers**

Milestone: By the end of PY 17/18.

- Complete Financial Toolkit training as outlined on waptac.org.
- Complete two-day Weatherization Training offered by grantee level staff.
- Complete sixteen (16) hours of financial management software training (Provided by JAI).
- At least once in every three (3) year period attend NASCSP training conference and participate in a complete training track of sessions. (Certificate required as proof of participation).

**Tier 2** (Completed in PY 17/18).

- Weatherization Directors Training—two (2) days offered by grantee level staff.
- Financial Toolkit training as outlined on waptac.org.
- Financial Management software training (as provided by JAI).
- OMB Circular Training (as provided by NASCSP).

Contractor Training has always been an area that has caused great discussion. There is an expected level of expertise that comes with their licensing requirements. However, most contractors are not trained to understand and implement WAP technical measures and programmatic guidelines. This generally has caused agency staff more work and time training and correcting issues as well as costing contractors more time and work as well as frustration and financial hardships. For these reasons Arkansas feels it is necessary to adopt practices that are already required in many states and have proven very successful. Beginning in PY 2015 contractors will be required to successfully complete ARWAP recommended trainings and attend annual conference training events in order to stay up to date on Tier 2 requirements.

### **Air sealing/Attic preparation/Wx measure installers and Insulation installers**

Milestone: by bid deadline for PY 17-18.

- Completion of Tier 1 requirements for Retrofit Installer and “Additional Trainings required.”
- Installers/technicians must repeat Tier 1 training requirements at least once every three (3) years.
- New Hires or new contract awardees will have one (1) year from the date of hire or award to complete or show evidence of completion of Tier 1 trainings and “Additional Trainings Required.”

**Tier 1**

- Complete a Retrofit Installer training program that has been aligned to cover the DOE approved JTA for Retrofit Installers and administered by an IREC approved training provider.
- Obtain the Retrofit Installer credential administered by BPI.

**Additional Trainings Required:**

- Obtain OSHA 10 certification.
- Obtain EPA Lead RRP certification.

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 17/18.

- Duct sealing.
- Crawl space air sealing and insulation.
- Mobile Home Insulation tactics.
- Retrofit Installers are responsible for acquiring the required CEUs and maintaining their BPI credential, OSHA 10 and EPA Lead RRP certifications.

**HVAC Contractors**

Milestone: by bid deadline for PY 17/18.

- Completion of Building Science Professional training program and obtain certificate (a higher level Building Energy Certification may be substituted i.e., Building Analyst, RESnet rater etc.).
- OSHA 10 certification.
- New Hires or new contract awardees will have ninety (90) days from the date of hire or award to complete or show evidence of training requirement adherence.

**Tier 2** (identified needs via DOE and State monitoring visits) to be completed by the end of PY 17/18.

- Duct sealing.
- Zonal Pressure diagnostics.

**Plumbing Contractors**

Milestone: by bid deadline for PY 17/18.

- Completion of Building Science Professional training program and obtain certificate (a higher level Building Energy Certification may be substituted i.e., Building Analyst, RESnet rater etc.).
- OSHA 10 certification.
- New Hires or new contract awardees will have ninety (90) days from the date of hire or award to complete or show evidence of training requirement adherence.

**Electrical Contractors**

Milestone: by bid deadline for PY 17/18.

- Completion of Building Science Professional training program and obtain certificate (a higher level Building Energy Certification may be substituted i.e., Building Analyst, RESnet rater etc.).
- OSHA 10 certification.
- An ARWAP approved ASHRAE 62.2 training program (Certificate Required).
- New Hires or new contract awardees will have ninety (90) days from the date of hire or award to complete or show evidence of training requirement adherence.

Additional Tier 2 training needs for subsequent program years will be developed from information obtained by DOE project officer visits, monitoring visits and other sources as deemed necessary by ARWAP management staff. While it is customary and understood that some personnel may perform more than one (1) job duty – for instance QCI and Auditor – those individuals will need to meet the requirements of both job classifications in order to perform those duties.

## Section 5 Exemptions

**Section 3 Exemptions:** Grantees whose service territory climate and DOE-approved energy audits limits the allowable measures to *baseload only* are exempt from the Quality Control Inspector requirement. Grantees must submit an alternate training and evaluation plan to ensure that the individuals performing quality control inspections in these locations are adequately trained and skilled to inspect in accordance with the SWS. All other requirements outlined in “Work Quality” above still apply. The installed work must meet the specifications outlined in the SWS.

Further information to carry out the requirements set forth above can be found in the following links or by contacting the U.S. Department of Energy Weatherization Assistance Program, [wapinfo@nrel.gov](mailto:wapinfo@nrel.gov) (Subject Line: Quality Work Plan):

- The Standard Work Specifications for Home Energy Upgrades for Single Family, Manufactured Housing, and Multifamily Homes <http://sws.nrel.gov>
- The IREC ISO 17024 Accreditation Program for Energy Efficiency Training Programs <http://www.irecusa.org/credentialing>
- The NREL Job Task Analysis for Quality Control Inspector <http://www1.eere.energy.gov/wip/pdfs/51670.pdf>
- Home Energy Professional Quality Control Inspector Certification <http://www.bpi.org>

Grantees with specific questions related to this guidance should contact their DOE Project Officer.

AnnaMaria Garcia  
Program Manager  
Office of Weatherization and Intergovernmental  
Program Energy Efficiency and Renewable Energy

The Subgrantee shall be advised after the conclusion of the review process of any employee that did not meet the competency expectation. The employee that has failed to meet expectation will receive an At-Risk rating in the area of noncompliance. A clear and concise expectation of the employee’s responsibility (based on State and DOE expectations) will be shared with the Executive Director and Weatherization Program Director. An overall risk assessment will be conducted on the Subgrantee.

## I. EMPLOYEE/CONTRACTOR IDENTIFICATION

See DOE Policy  
Re: Recovery Act  
Recipient Use of  
Recovery Act  
Logos on Signage  
(From Matt Roger,  
Effective May 12,  
2010)

See Program Year  
2010  
Weatherization  
Grant Guidance  
3.1 (WPN 10-1,  
Effective  
December 18,  
2009)

In addition to compliance with AEO standards and specifications with regards to weatherization work, Subgrantees are to represent the Weatherization Assistance Program in a professional manner. The professional attire and demeanor of the crew or contractor is important. If a Subgrantee uses crews, each crew member should wear shirts that list the name of the Subgrantee and state “Weatherization Assistance Program”. Also, each crew member should have an identification badge that is visible at all times or have his/her name printed on the shirt. If the Subgrantee uses contractors, the contractor should have an identification badge with his/her name and that of the company visible at all times. Additionally, all Subgrantee weatherization vehicles should have a permanent or magnetic sign that states “Weatherization Assistance Program” or has the WAP logo and the name of the Subgrantee.

### Arkansas Weatherization Assistance Program Graphic Identity Guidelines

The Arkansas Weatherization Assistance Program is committed to an integrated network of Weatherization professionals to serve all Arkansans. One piece of this is projecting an engaging and coherent image. Consistent, high-quality communications materials build recognition for our work among clients, employees, colleagues and our communities.

At the 2010 Arkansas Weatherization Conference a new graphic identity and logo scheme for Arkansas Weatherization programs was unveiled.

This new logo does not take the place of the national Weatherization Assistance Program logo but does distinguish Arkansas as a trend-setting, forward-thinking state that’s closely aligned with the national movement to create green jobs and reduce our dependence on foreign sources of energy. The guidance provided here is intended to preserve the strength of the new logo, prevent distortions and misuse of the mark, and ensure statewide consistency.

Please share this guidance with those in your agency who regularly work on weatherization publications and promotional materials. Working together, we can create a strong, cohesive visual presence for the Arkansas Weatherization Assistance Program.

Please see Appendix XX for further guidance.



## **II. DEVELOPING A QUALITY WORK PLAN ASSESSING SUBGRANTEE CAPACITY**

**Justification** Compliance with federal (and state, if applicable) requirements at the subgrantee level. Per Section 440.15 subgrantees, the grantee shall ensure each subgrantee has the necessary experience and capacity to undertake a timely and effective weatherization program.

**Expectation** To effectively administer a Federal program, staff must have a clear and consistent understanding of both the program rules (10 CFR 440) and the financial rules (2 CFR 200 and OMB Super Circular) that governs the program. Administrative staff is held responsible for all managerial aspects – some that are specific to the WAP and some that are necessary to successfully implement the financial requirements of any federal grant.

### **A. Identifying the Minimum Competencies held by Subgrantee Staff**

All Subgrantees are required to perform annual assessment of its current WAP workforce to ascertain what the current training and certifications levels are of the workforce as they pertain to the Knowledge, Skills and Abilities (KSAs) required of each occupational position as developed and distributed by the Department of Energy (DOE). The results of the assessment should be taken into account when developing a Training and Technical Assistance (T&TA) plan. Each program year, Subgrantees are required to submit to AEO a T&TA showing the need and utilization of T&TA funds.

In addition, AEO/WAP compiled the Job Task Analysis (JTAs) for all weatherization classifications along with its stated knowledge, skills and abilities (KSAs) and disseminated it to the network to review and conduct a self-assessment on their competencies. On the following pages are the outlines for each classification as determined by the National Renewable Energy Laboratory (NREL).

### **B. Establishing A Baseline**

AEO must review the collected data on each subgrantee's WAP staff. AEO will document:

1. Each employee's credentials,
2. What training each has received, and
3. Experience level of each employee in performing their assigned duties.

This data will be used to develop a baseline for each employee. A copy of the baseline results will be sent to both the Grantee and the relevant subgrantee.



**C. Evaluating Knowledge, Skills & Abilities (KSA)**

Now that credentials, training received, and experience levels have been gathered, it is now necessary to conduct an active assessment on each employee's KSA through a series of questionnaire, tests, and/or observations.

**D. Recommended Training Plan**

A recommended training plan will be generated on each employee with the expectation that each will be able to effectively demonstrate competencies in the occupational KSAs associated with their position. This plan will contain general training requirements for each occupation within the workforce including technical staff, management, administrative and financial staff. This general requirement will cover necessary training and credentials required of new hires as well as continuing education expectations over a given period of employment.

The deliverables under the Training Plan are:

1. A set of milestones for all current employees as well as new employees to ensure their progress toward the goals stated in the plan.
2. A list of expected continuing education goals for each employee.

All recommended training must be in alignment with the Department of Energy (DOE's) WAP training. AEO and Subgrantees will seek training from an IREQ accredited training center and/or an IREQ accredited trainer.

**E. Training & Technical Assistance**

All individuals involved with subgrantee program management are competent and have completed expected training, as needed.

Only the Quality Control Inspector is expected to have certification at this time. All other staff are not required to have certifications; however, it is expected by DOE that each of these categories of employees have a clear and consistent understanding of both the Program rules (10 CFR 440) and the financial rules (2 CFR 200) that govern the Program.

Administrative staff is responsible for all managerial aspects – some that are specific to the WAP and some that are necessary to successfully implement the financial requirements of any federal grant.

Those staff performing as financial managers should have a thorough understanding of State and subgrantee procurement requirements as well as the 2 CFR 200.

## F. Post Assessment

Post assessment will be monitored as a part of the normal State monitoring duties. The State's technical unit (whether contractors or state employees) will conduct on-site field monitoring to determine if subgrantees are meeting federal regulations.

The Grantee's WAP Financial Manager and the Program Monitors will monitor for fiscal and programmatic compliance of the WAP. Assessments will document the capacities of subgrantee's staff as it relates to their duties. Assessments will be seen in documents, such as:

1. periodic monthly monitoring reports,
2. desk reviews, and
3. year-end financial reviews.

The Subgrantee shall be advised after the conclusion of the review process of any employee that did not meet the competency expectation. The employee that has failed to meet expectation will receive an At-Risk rating in the area of noncompliance. A clear and concise expectation of the employee's responsibility (based on State and DOE expectations) will be shared with the Executive Director and Weatherization Program Director. An overall risk assessment will be conducted on the subgrantee.

## G. Contingency Plan – Fail to Meet Competency

After repeated findings, if a particular employee fails to demonstrate the expected competency, the Subgrantee may develop a plan to retain the employee. If the employee is a technical employee, the subgrantee may work out an agreement with other WAP subgrantees to borrow "pre-approved/qualified" employees to fill in while their employee receives additional training. Under this plan, the employee will have up to six (6) months to build up their competencies. If the employee does not meet the KSA's expected by DOE, that specific WAP employee can no longer work in that capacity.

In order to implement a Quality Work Plan, the WAP workforce must have uniform job classifications. These job classifications are created by DOE to ensure a level of competency for weatherization workers in various positions.

Job Classifications consist of:

- **Weatherization Installer/Technician:** Installs weatherization materials on the homes;
- **Weatherization Quality Control Inspector:** Conducts Final Inspections;
- **Weatherization Crew Chief:** Serves as leader of a crew of Weatherization Installers/Technicians;
- **Energy Auditor:** Conducts the actual audit of the home and writes up specifications;
- **Weatherization Contractor:** Contracts with the Subgrantee to install weatherization measures on the home.

AEO realizes that each agency will not have staffing at the level indicated and that staff often perform dual roles. In Arkansas, the Weatherization Director functions as the program manager. At some subgrantee agencies, the Weatherization Director and the Energy Auditor perform duties of the Weatherization Inspector.

In your T&TA Plan, you are asked to indicate the role or dual role of each staff person (i.e., Energy Auditor/Weatherization Inspector; Weatherization Director/Weatherization Inspector). Reminder: the same person can NOT audit and inspect the same home. The AEO will make final approval of key personnel attendance and participation in efforts to ensure identified key personnel receive and attend appropriate training(s) or conference(s).

In addition to the above job classifications, AEO requires that someone be assigned the duties of a Client Education Specialist. The duties of this person can be performed by the Energy Auditor or Weatherization Director.

New contractors must attend Contractors Workshop as scheduled by AEO.

### **Worker Safety:**

Subgrantee must post at agency office and on-work site safety rules for its staff and contractors who work on site in client homes. All relevant rules from OSHA 10 and 30 and OSHA Confined Spaces (effective January 2016) must be addressed.

Weatherization field staff sometimes encounter situations that are hazardous, such as vicious animals, drugs, or unsanitary conditions in and around the home. Each situation will be different and must be addressed on a case by case basis.

If vicious or bothersome animals are present and the Client refuses to restrain the animals in a location that will allow the weatherization work to proceed undisturbed, the crew or contractor is advised to leave and report the situation to supervisory personnel. The Subgrantee is advised to send the Client a letter explaining the situation and the need to restrain the animal(s) during the weatherization work and during the final inspection. If the Client fails to comply with this request, the home will not be weatherized. (*See Section VI Deferrals/ Denials*)

If the weatherization staff or contractor encounters a situation where drugs are visible in the home, they are advised to leave and report the situation to supervisory personnel. The Subgrantee should document in the file and not weatherize the home.

### III. CLIENT EDUCATION

See Program  
Year 2010  
Weatherization  
Grant Guidance  
3.2 (WPN 10-1,  
Effective  
December 18,  
2009)

Client education is a key component of any effective Weatherization Program. Before and after completing an energy audit on the home, Clients must be given educational materials about energy conservation and any safety issues that exist in the home.

Client education may include, but is not limited to:

- A. **Energy Savings Kit, if Subgrantee uses** – give to Client and explain how to use each item.
- B. **Energy Savings Information** – give Client pamphlet(s) that shows ways to conserve energy. Discuss the main items in the pamphlet, or a flip chart may be used to explain ways to reduce energy use.
- C. **Health and Safety** - give Client copies of the following brochures, if applicable to that home:
  - *A Brief Guide to Mold, Mildew and Moisture, and Your Home, (EPA 402-K-023-003),*
  - *Renovate Right (EPA-740-K-10-001),* a guide to lead-based paint hazards,
  - *A Citizen's Guide to Radon or A Consumer's Guide to Radon Reduction,*
  - *Asbestos In Your Home,* and
  - *Protect Your Family from Asbestos-Containing Vermiculite.*
- D. **Client Education Checklist (WAP 13)** – have Client initial each item after it is explained. Each space on the checklist must be initialed by the Client or, if not applicable to this Client and home, “N/A” entered in the space.

**NOTE: SOME ITEMS ON THE CHECKLIST CANNOT BE DISCUSSED UNTIL THE FINAL INSPECTION. CLIENT SHOULD NOT BE ASKED TO INITIAL ANY ITEM UNTIL THAT ITEM HAS BEEN DEMONSTRATED OR EXPLAINED.**

Additional handouts required to complete the checklist are:

- Fair Hearings and Appeals form (WAP 23).
- AEO brochure (PUB 345).

Clients must sign the bottom of the form after it is completed. Subgrantee employees who completed the form with the Client before and after weatherization work must also sign; therefore, more than one (1) line is provided for agency representative signatures.

## IV. ENERGY AUDIT

The energy audit is a part of the Energy Conservation Online System (ECOS). ECOS is a web-based system. Subgrantee auditors must use the data collection forms available through ECOS and maintain a completed copy in the client file. The Subgrantees must have adequate segregation of duties for weatherization personnel. DOE has advised that allowing the same auditor to perform both the initial energy audit and the final inspection on the same project presents a conflict of interest. In order to prevent the appearance of a conflict, Subgrantees must have a different individual perform the initial energy audit and final inspection.

It is also a conflict of interest for a contractor to actively participate in determining the scope of work for weatherization projects. In Arkansas, the role of assessing a home and determining the most cost-effective energy conservation measures for that home is left to ECOS and a well-trained, experienced Energy Auditor.

Weatherization field staff sometimes encounter situations that are hazardous, such as vicious animals, drugs, or unsanitary conditions in and around the home. Each situation will be different and must be addressed on a case by case basis.

If vicious or bothersome animals are present and the Client refuses to restrain the animals in a location that will allow the audit and weatherization work to proceed undisturbed, the Auditor, crew or contractor is advised to leave and report the situation to supervisory personnel. The Subgrantee is advised to send the Client a letter explaining the situation and the need to restrain the animal(s) during the weatherization work and during the final inspection. If the Client fails to comply with this request, the home will not be weatherized. If the weatherization staff or contractor encounters a situation where drugs are visible in the home, they are advised to leave and report the situation to supervisory personnel. The Subgrantee should document in the file and not weatherize the home.

*(See Section VI Deferrals/Denials)*

### A. **Energy Audit Procedural Checklist**

Energy audits usually take 3 to 3 1/2 hours to complete. Included in this energy audit checklist are the required equipment, forms, procedures, practices and standards that must be followed by energy auditors for the use of DOE and leveraged funds. This is meant as a minimum guide. Client buildings are each different as are the circumstances of each audit. Additional equipment, tests and forms may be required on a case by case basis as determined by the experienced auditor. A comprehensive assessment involves an Energy Auditor evaluation of the dwelling and is the most important and time-consuming process in the delivery of weatherization services.

Before beginning an energy audit, Energy Auditors are reminded that clients and their homes are to be respected at all times. Program staff and/or contractors should:

- Schedule and keep your appointments or call with changes; don't assume the client won't mind a drop-in visit.
- Speak clearly and use everyday vocabulary, explaining any energy terms used; watch for signs that the client doesn't understand so that you can slow

down and try different wording; don't assume the client understands or does not understand what you are trying to say.

- Go over to explain and highlight information in written materials, such as the Client Education checklist and booklets you are providing; don't assume the client has read or will read the materials you provide.
- Discuss options with client; don't assume the client wants or does not want a service or appliance.
- Ask permission before using client's restroom or other personal effects.
- Always speak respectfully to client; never use derogatory, demeaning or insulting language at the client's home.
- If you track dirt or other debris into the home, always clean up before you leave.

**Equipment/Tools: (minimum)**

- Blower door
- Combustion Analyzer
- Gas Leak Detector
- Infrared camera
- Digital camera
- Duct Pans and/or Duct Blaster
- Watts Up? Meter
- Ladder
- Flashlight
- Measuring tape
- Pencil/Pen/Clipboard

**Forms:**

- Client's Application form (WAP 02)
- Client Education form (WAP 13)
- Health and Safety Checklist (WAP 10)
- Lead-Test form (WAP 26)
- Pressure Pan Duct Test form (WAP 11)
- Fair Hearing Request form (WAP 23)
- Renovate Right (lead safety), Mold and Moisture, Energy Saving Tips booklets
- ECOS input forms, paper for diagramming house

**Note: Make sure your vehicle is loaded with the equipment, tools and forms you'll need to complete the audit as listed in the table above; are there other items you want to add?**

**1. Client Introduction/Client Interview (15 to 20 minutes)**

- Upon entering the clients home, immediately identify who you are and the agency you represent.
- Explain to the client that the purpose of your visit is to evaluate the home for air infiltration and high energy use and that the evaluation will be based on tests you perform using special tools and equipment. Each tool will generate a reading and those readings will be uploaded into an energy audit program which then gives specific recommendations for their home.
- Explain the types of repairs allowed by WAP and emphasize that nothing is certain until the audit is run on the computer.
- Ask them if they have any questions about what the program offers.
- Ask the client which rooms/lights they use the most.
- Ask the client about the age of their refrigerator and how it operates and if you can plug in a Watts Up? Meter.
- Ask the client about the condition of their heat and air systems, and their hot water heater.

Client knowledge of their home and appliances can be invaluable to the Auditor in determining measures to be installed.

## **2. Client Education (10 to 15 minutes)**

After your introduction and overview of the Weatherization program:

- Review the Client Education pamphlets (*A Brief Guide to Mold and Moisture, Renovate Right!* etc.).
- Review the front of the client education checklist (WAP 13) with client; explain items one at a time, then ask client to initial that item.

## **3. Energy Audit Diagnostics (approximately 2 ½ to 3 Hours)**

Use standardized ECOS Input forms (WAP 14 or 15) when conducting the energy audit assessment to ensure all required data is collected. Below is a quick reference checklist of diagnostic procedures:

- Set-up Watts Up? Meter to record refrigerator energy consumption (if testing this unit). Also record model information and serial number on ECOS Input form.
- If home uses propane or natural gas, conduct a leakage test on all supply lines. Leaks must be repaired prior to weatherizing the unit.

### **On exterior of home:**

- A simple site survey drawing to include dwelling and shading landscape.
- Observe the roofline, note sources of ventilation (gable vents, soffit vents and/or whirly birds), and any signs of damage. Take pictures of any areas of concern.
- Visually assess condition of walls, windows and doors. Take pictures of any areas of concern.
- Measure all walls, windows and doors and create a diagram of the home's exterior, noting any unheated spaces.
- If central air unit is present and operational, feel around plenum to determine whether cold air is escaping. Visually assess cleanliness, age and condition of the unit.
- Test for Lead if home was built prior to 1978. Record test results on Lead-Test Documentation Sheet (WAP 26).

### **In interior of home:**

- Go room by room to observe/assess ceilings, walls, and floors for gaps or cracks. Note signs of water damage, mold or mildew. Take pictures of any areas of concern.
- Documentation of primary and secondary heating and cooling appliance data and fuel source(s).
- Perform carbon monoxide tests using the Health and Safety Checklist (use WAP 10). Combustion analysis will be performed using ANSI/BPI-1200-S-2015 Standard Practice for Basic Analysis of Buildings as a guide:
  - Living Area Ambient Air.
  - Space Heater(s).
  - Furnace.
  - Water Heater.
  - Kitchen Range/Oven.
  - Range Burners.



- Fireplace or Stove.
- Set-up for Blower Door test.
  - Take pictures with infrared camera.
  - Conduct Pressure Pan Duct test on all ducts.
  - Test Return Air.
- Conduct Blower door subtraction test for additional duct analysis.
- Photo document the blower door tests and readings pre- and post-weatherization.
- Conduct Exhaust flow tests on all exhaust fans.
- Insulation checks:
  - Remove wall plates or find inconspicuous holes to check insulation thickness in walls.
  - Check for insulation around water heaters (if applicable) and pipes.

#### **In the crawl space**

- Take multiple measurements to determine adequate clearance for workers.
- Verify presence of insulation, R value and coverage area.
- Verify presence of moisture barrier, debris, worker safety hazards, or ground moisture problems.
- Locate areas of possible air leakage such as around duct boots, pipes, wires and other plumbing penetrations.
- Assess alignment of air barrier with thermal barrier.
- Assess appliance venting and water heater discharge if present.
- Assess ability to protect installed measures.
- Conduct combustion gas testing and ambient CO testing for determining OSHA confined space requirements.

#### **In the attic**

- Assess for adequate ventilation, type, free of blockage.
- Assess for existing insulation, type, depth nominal R value.
- Assess air leakage points such as vent pipes, wiring penetrations, access scuttles and doors, structural anomalies, furnace closet ceilings etc.
- Make note of need for and location of damming and chutes.
- Ensure clearance to combustibles requirements for all vent pipes.
- Measure and make note of floored areas in attic.
- Assess duct work and appliances located in the attic space.
- Note any worker or occupant safety issues such as knob and tube wiring.
- Conduct combustion gas testing and ambient CO testing for determining OSHA confined space requirements.

If there are combustible appliances in the unit, combustion and a fuel leak tests must be performed on the combustible appliance(s) and the fuel source before proceeding with any other inspection or testing process.



Clients must agree to correct or allow correction of any health and safety measures before any additional weatherization measures can be performed.

Test results will determine how or when to proceed in regard to performing weatherization on the dwelling:

- If combustible appliances test within acceptable limits, proceed with weatherization;
- If combustible appliances test results are above the allowable CO level, repair or replacement may be coordinated with weatherization (allowable measures only);
- If an appliance does not work, it cannot be tested for CO and as such does not constitute a CO hazard and is not eligible for replacement with H&S funds.

Obviously, diagnosis of a home with combustion appliances requires that the home is connected to a fuel source and has a sufficient amount of fuel to complete CO and gas leak testing.

In cases where little/no fuel is present:

- Due to inability to pay an overdue utility bill or to purchase additional fuel, such as propane.
  - Refer Client to local LIHEAP agency for home energy assistance or winter crisis funds.
  - Follow-up with LIHEAP agency on Client's status, as you may be able to help meet the ten percent (10%) LIHEAP referral requirement.
  - Refer to other resources in your community if Client cannot be served by LIHEAP.
- Due to the home being disconnected from the fuel source or meter for the required fuel, or lacks a fuel storage tank.
  - Contact the local fuel provider or other resources in your community.

If fuel issues can be resolved by referral to other agencies, weatherization can be postponed until fuel is available. Otherwise, this unit must be deferred or denied (*See VII. Deferral/Denial in this section*).

## **B. Building Structure**

Building rehabilitation is beyond the scope of weatherization; however, program workers frequently encounter such problems. Dwellings whose structural integrity is in question should be referred to other housing Subgrantees for additional work. Weatherization services may need to be deferred until the dwellings can be made safe for crews and occupants. Incidental repairs necessary for the effective performance or preservation of weatherization materials are allowed. For example, replacing water-damaged flooring as part of replacing a water heater is allowed.

### C. Data Collection

The Health and Safety Checklist (WAP 10) and ECOS data collection form (WAP 14) must be completed for each dwelling receiving weatherization assistance and must be placed in the Client file. Additionally, the Client file must include each of the following:

- A site plan drawing;
- ECOS forms;
- Health and Safety Checklist (WAP 10), including diagnostic testing data collection results – pre and final;
- Client education checklist (WAP 13);
- Pressure Pan Duct Leakage (WAP 11).

### D. General Heat Waste (GHW) Reduction Measures

See (WPN 13-5,  
Attachment I-  
fourth page

A GHW reduction measure is a weatherization measure that has a pre-calculated, “set” amount of energy savings. The calculated energy savings potential is static and uniform whenever that task is installed in a home. The following measures are DOE-approved for installation in eligible dwellings:

- Water heater wrap: insulating blanket;
- Water heater pipe insulation (on first six (6) feet of hot water pipe exiting water heater);
- Faucet aerators;
- Low-flow showerheads;
- Limited weather-stripping and caulking to increase comfort (does not include major air sealing work, which should be guided by blower door testing);
- Furnace or air conditioner filters.

GHW reduction measures may be installed on any eligible home when the auditor identifies need for one or more measures.

Water heater tank wrap and weather-stripping/caulking are also in ECOS as ECM tasks. When identified as needed in a home, AEO requires that they be entered under GHW unless the audit pulls up the ECM.

Total GHW measure costs (including labor) for one house must not exceed \$250. The installation of these weatherization materials has been determined by DOE to be generally cost effective without the need for justification in the site-specific energy audit (no SIR requirement). The reason that they are deemed cost effective is that the materials are relatively low-cost and can be quickly and easily installed.

It is essential that each Subgrantee find these materials at the best price available and ensure that contractors and crew understand correct procedures for quick and easy, thus low cost, installation.

#### E. **Air Infiltration/Sealing**

According to WPN 16-8 blower door guided air sealing may have a SIR less than 1.0 Air sealing, attic air sealing, duct air sealing and crawl space air sealing may have a SIR of 0.4 and above and still be an approved measure. Please keep in mind the total job SIR still must be equal to or greater than 1.0.

Windows and doors are still a low priority. Air sealing should be performed on the top and bottom plates first.

Air sealing is a priority. Using caulk to seal leaks in the interior of the house has a long history in WAP. However, caulk is a five-year material whereas WAP measures have a 20-year life expectancy. Therefore, sealing with caulk in the interior of the house is not an allowable measure, unless access from the attic or from the crawl is not possible. Limited air sealing on exterior walls is allowable as a GHWR measure (See previous section).

Air sealing must be accomplished from the crawl and the attic if at all possible. Only if the break in the air barrier is not accessible from the attic and crawl may it be sealed from within the living space.

Address all penetrations of the building envelope.

The physical inspection of plumbing, electrical, and HVAC penetrations through ceiling, flooring, and exterior walls is one of the most important parts of the dwelling inspection process. Often the greatest reduction in air infiltration may be realized by these overlooked areas. Recording the location of those air infiltration locations for appropriate sealing is very important.

#### ***NOTE: Jalousie windows***

*De-pressurizing a home with the blower door effectively seals jalousie window and inaccurately measures the leakiness of the windows. DOE advises agencies to pressurize and depressurize homes with jalousie windows and enter an average of those two (2) CFM readings in ECOS. Even with that, ECOS may not call to replace all inoperable jalousie windows with a cumulative and individual SIR of 1.0 or greater. As always, photo documentation must be kept in the Client file to support all window replacements.*

## F. Insulation

Insulation is one of the most-effective and therefore important ECM's that can be installed on a site-built or manufactured home during weatherization. New or additional insulation to bring existing insulation up to Arkansas standards should always be selected as an ECM in audit software in order to calculate a SIR.

**Any insulation measure not receiving a SIR of 1.0 or greater should be documented in the client file so that monitors and inspectors have this information directly from the audit software to explain why a particular insulation ECM was not done.**

### (1) Attic insulation:

- New or additional attic insulation must be installed if allowed by audit software. ( $SIR \geq 1.0$ ).
- If different parts of the attic have varying levels of insulation/no insulation, the square footage of each section where a different level of insulation exists or no insulation exists must be entered as a separate attic in order to evaluate for the required amount of insulation in each section.
- The goal is to bring each section of the attic up to R-38, the Arkansas standard for attic insulation.
- Adding additional insulation to an attic which has less than R-38 is required if cost effective.
- **Air sealing the attic must precede installation of attic insulation. Photo/infrared documentation of attic air sealing is required in the client file.**
- Attic preparation must be completed prior to insulating the attic.
- If existing insulation has been installed without attic air sealing and/or appropriate attic preparation, these tasks must be completed during weatherization of the home if cost effective.
- **Attic air sealing, attic preparation and attic insulation may be entered as one ECM in ECOS. Since attic insulation requires both air sealing and appropriate preparation in order to be effective.**

### (2) Wall insulation:

- Particular attention should be given to client education about the importance of this measure and how it will be done on the client's home. Permission to proceed is required, as with all measures.
- Wall insulation may be installed from the exterior or from the interior.
- Installing insulation into the wall from the exterior may be accomplished by:
  - a) Drilling holes into wood siding and installing wooden plugs to seal when dense packed.
  - b) Unzipping vinyl or steel siding and drilling holes in the air barrier then plugging with plastic or wood plugs when dense packed and replacing siding.

In either case the end result should be as aesthetically authentic to the structure as is possible

- Incidental repair costs include painting plugs to match the wall color (interior or exterior).

See netting fabric  
4.1301.2b

(3) **Floor insulation:**

- If there is 24-inches from the bottom of the joist to the ground at an entrance to the crawlspace floor insulation should be installed if cost effective. If the twenty-four inch (24”) height tapers lower in areas of the crawlspace, it is still necessary to insulate as long as there is twenty-four inch (24”) average clearance underneath ninety percent (90%) of the floor area.
- **Existing floor insulation which has been disturbed or deteriorated must be repaired even if clearances do not meet the twenty-four inch (24”) guideline**
- **Air sealing the floor from the crawlspace must precede installation of floor insulation and be documented by photos in client file. The floor insulation clearance standards apply to air sealing from the crawlspace.**
- Arkansas uses batt insulation on floors as standard. Other methods allowable in SWS require AEO approval.
  - Ground moisture barriers should always be considered in order to protect the installed measure.

See SWS 4.1301-1

**G. Programmable Thermostats**

Are not allowable as a cost effective measure under ECOS.

**H. Compact Fluorescent Lights (CFLs)**

DOE has determined that replacement of indoor, screw-in incandescent light bulbs by fluorescent tube fixtures is an allowable weatherization measure.

**I. Seal and Insulate Ducts**

Duct sealing is also a priority. In ECOS the blower door subtraction method is used to assess. Sealing of ducts will be with mastic and mesh netting. See SWS Field Guide for Single-Family Homes and Manufactured Homes

There should not be more than three (3) readings above 1.0 and no readings above 3.0.

All ducts with readings above 3.0 must be sealed. Of the remaining ducts that are over 1.0, seal highest to lowest, leaving no more than three (3) ducts unaddressed. If sufficient funds are available in the energy audit, best practice would include addressing all ducts with readings above 1.0. In ECOS duct sealing is addressed

under Systems. If additional funds are needed, GHWR funds may be utilized within the cap of \$250 to seal ducts where leakage is significant to client.

At the beginning of this section it was stated that a visual inspection of the duct system should be performed while evaluating the attic and/or crawlspace for air infiltration and determining the required air sealing activities. Also, pressure pan testing of the ducts is required as it may indicate hard to detect leaks in floor or ceiling ductwork. If it is determined that duct repairs are required, those repairs should be performed before any new or additional insulation is installed. If the central unit is recommended to be replaced by the audit, the Energy Auditor must determine if there is sufficient funding to address all measures and if not, prioritize duct repair work.

**Note:** If a monitoring visit reveals that no data was collected, or if data cannot be provided upon request by the state office, the Subgrantee will be required to re-visit the home and perform pressure pan tests at their own cost. If results indicate leakage, repairs must be coordinated and test results provided (In the form of photo documentation and final test results) to the monitor. Reimbursement processing may be suspended until data is provided.

## **V. REPLACING MAJOR APPLIANCES/SYSTEMS**

### **A. Heating and Cooling Systems**

The Energy Auditor, using the ECOS audit software, determines the most cost effective and energy efficient way to assure that the dwelling being weatherized will be capable of providing the household with a controlled environment.

Switching out an existing heating and/or cooling appliance with a new one may not be the best option or even an allowable process, i.e., unvented combustibles space heaters. Also, the condition of the dwelling or the size of the household may dictate a different measure to provide.

#### **1. Replacing or Repairing Heating Systems**

When replacing or repairing heating systems, the Subgrantee must have its service provider to record the information below on the WAP 50 form.

- Model Number/Brand;
- Type of Metering Device;
- Probe Devices Used;
- Capacitance Specifications (fan, blower, and compressor) (if repaired or replaced);
- Record readings/testing results;
- Record Leak detector Readings;
- Record Microfarad Readings (if feasible);
- Document Capacitance Specifications;
- Document the Measured Capacitance (Herm/Fan).

In addition, photographic documentation is required when requesting the repair or the replacement of the HVAC system or its parts. Please submit the following photographs with the waiver request:

Pictures:

- Picture of model and model number;
- Picture of the Evaporator Coil (inlet and exit sides) if accessible. If cleaning please provide pictures of in-progress cleaning;
- Pictures of Evaporator's fins if accessible. If cleaning please provide pictures of in-progress cleaning;
- Pictures of metering device;
- Pictures of probe device when checking (degrees of superheat, and pressure);
- Pictures of leak detector readings;
- Pictures of drain pans if accessible;
- Pictures of Capacitor and wiring;
- Pictures of microfarad readings.

## 2. Replacing or Repairing Cooling Systems

When replacing or repairing cooling systems, the Subgrantee must have its service provider to record the information below on the WAP 50 form.

- Model Number/Brand;
- Type of Metering Device;
- Probe Devices Used;
- Capacitance Specifications (fan, blower, and compressor) (if repaired or replaced);
- Record readings/testing results;
- Record Leak detector Readings;
- Record Microfarad Readings (if feasible);
- Document Capacitance Specifications;
- Document the Measured Capacitance (Herm/Fan);
- Document current refrigerant levels;
- Document amount of refrigerant added (lbs. of refrigerant);
- Document time elapsed between refilling refrigerant and checking levels.

In addition, photographic documentation is required when requesting the repair or the replacement of the HVAC system or its parts. Please submit the following photographs with the waiver request:

Pictures:

- Picture of model and model number;
- Picture of the Evaporator Coil (inlet and exit sides) if accessible. If cleaning please provide pictures of in-progress cleaning;
- Pictures of Evaporator's fins if accessible. If cleaning please provide pictures of in-progress cleaning;
- Pictures of metering device;
- Pictures of probe device when checking (lbs. of refrigerant and pressure);
- Pictures of leak detector readings;
- Pictures of drain pans if accessible;
- Pictures of Capacitor and wiring;
- Pictures of microfarad readings.



### 3. Replacing Air Conditioning Units Using Capital Intensive Funds (CI)

Capital Intensive (CI) funds are only used in replacing furnaces or non-compliant space heaters for use as a secondary heat source during power outages.

#### Special Circumstances Case-by-Case Consideration

DOE policy (WPN 11-6) does have an **action/allowability** to replace, repair, or install air conditioning systems in homes of at-risk occupants where climate conditions warrant. Basically, it can be covered under Health & Safety.

In order to use this Action/Allowability you **must** complete a two-step process.

1. Determine presence of at-risk occupants. At-risk persons need documentation such as a doctor's statement verifying a medical condition (e.g., asthma, COPD). Presence of elderly persons or children in the household also creates an at-risk situation justifying need for air conditioning.
2. Document the need for replacement or repair.

#### a. Central Heat/Air Units

Replacement of a central heating (furnace) or a central heating and cooling unit is allowed if recommended by ECOS with a SIR of 1.0 or greater.

If the system is inoperable, use an efficiency of sixty percent (60%) for heating, an HPSF rating of \_\_\_\_\_ for a heat pump, and \_\_\_\_ SEER for cooling.

General Guidelines for Central Heating & Cooling units:

- Audit must be populated with all sized units.
- Duct work must have been inspected and tested to meet pressure pan guidelines.
- Pressure pan testing results must be recorded.
- Exterior unit should be installed level and on a base.
- Installation by licensed HVAC contractor.

***NOTE: REPLACING A CENTRAL UNIT WHEN THERE IS ONLY ONE (1) OCCUPANT IN A DWELLING MAY RESULT IN INCREASING THE ENERGY USAGE AND THE UNIT NOT OPERATING EFFICIENTLY. MOST LIKELY, THE DOORS TO UNOCCUPIED ROOMS WOULD BE SHUT. INSTALLING A WINDOW UNIT, CLOSING OFF DUCTS AND CREATING A CONDITIONED LIVING SPACE MAY BE A MORE COST EFFECTIVE AND ENERGY SAVING OPTION.***

- (i) **Replacement of heat with a SIR of 1.0 or greater.** The preferred method of replacing a heating and cooling unit is by authorization (a SIR of 1.0 or greater) on the energy audit output report. The ECOS Output Report will recommend the replacement of an inefficient central heating and cooling unit. Based upon the data entered in the materials set-up data screen, this will be the correctly sized unit for the home.
- (ii) **Exception to Audit Recommendation of Central Heating and Cooling Unit.** If the audit does not recommend replacement but a maintenance inspection (by a licensed heating and cooling contractor) indicates that the central unit requires excessive work to bring it to an efficient functioning level, the unit may be replaced. In some instances, the inspection report may recommend needed repairs, however, the following requirements apply:
  - Capital Intensive funds (LIHEAP) must be used when there is no SIR.
  - There must be a detailed inspection report on the contractor's invoice or letterhead indicating the problem and estimated cost to address and cost of recommended replacement unit.
  - \*For households with only one (1) occupant, it may not be cost effective to replace a central unit even if recommended. A reverse cycle wall unit in a conditioned living space should be considered.
  - All documentation placed in Client file.
  - A notation must be made in the Health and Safety Checklist and BCJOS – "Maintenance report justifies replacement."
  - No documentation equals a disallowed cost.

**NOTE:** HVAC(R) licensed contractors can work on any part of a defined HVAC system:

- Duct;
- Furnace;
- Coil;
- Condenser;
- Pans;
- **Gas lines within six (6) feet of the unit**, including disconnecting and connecting the unit and repairing/replacing the connection and the six (6) foot (maximum) line;
- **Electrical connections within ten (10) feet of the unit** as long as the electrical connection is suitable in capacity for equipment to be served and has been provided by others within ten (10) feet of unit;
- **Cannot** perform plumbing work such as water heaters.

Source: Bob Higginbottom, Executive Secretary of HVACR Board, Arkansas Dept. of Health, 501-661-2647,  
[Robert.higginbottom@arkansas.gov](mailto:Robert.higginbottom@arkansas.gov)

b. **Air Conditioning**

Replacing air conditioning as part of a package unit (heat and air in one unit) is allowable with a SIR of 1.0 or greater as described above. Replacing a separate air conditioning unit is allowable with a SIR of 1.0 or greater.

However, replacement of an inoperable unit that cannot be repaired must be based on the needs of the occupants and be done with H&S funds under the following circumstances: occupants are elderly, children, or person(s) with a medical condition documented by a physician's statement of requirement for air conditioning.

c. **Window Air Conditioning Units**

- (1) ECOS determines and documents need for replacement.  
General Guidelines for window units:

- Photo documentation in file to show condition.
- Replace with appropriate sized (refer to manufacturers sq. ft. coverage for maximum efficiency).
- Upgrade to a heat pump allowed if heating source warrants replacement also.
- Dwelling with single person occupancy – window unit allowed as an alternative to central unit replacement.
- Creating a conditioned living space.

**Scenario:** Installing a window cooling unit when creating a conditioned living space (weather-stripping the exterior and interior doors leading to a room). This and a safe (low CO reading) vented heater in a room, would provide a temperature controlled environment.

**Scenario:** If no cooling unit exists (or one that is deemed to be replaced) and the heater is un-vented, (or vented but unsafe – high CO readings), installing a heat pump window unit may be a viable option.

Agencies are required to reclaim refrigerant from window air conditioning units using the process and protocols as indicated in the refrigeration section.

- (2) Health and Safety: based on needs of occupants. (See above)

d. **Space Heaters**

- (1) Stand-alone electric-repair, replacement, or installation is not allowed. Removal is recommended.

*See Weatherization Health  
and Safety Guidance (WPN  
11-6, Effective January 12,  
2011)*

(2) Unvented Gas-and Liquid-Fueled Space Heaters.

DOE will not permit any DOE-funded weatherization work to proceed where the dwelling unit is heated with an unvented gas and/or liquid-fueled space heater as the primary heat source. This policy applies to unvented natural gas-fired space heaters, unvented propane-fired space heaters, and unvented kerosene space heaters. This policy is consistent with the IRC and the IFGC. If the primary source of heat is an unvented space heater, it must be replaced with a vented one before weatherizing the unit. This is done with LIHEAP Capital Intensive Funds.

DOE requires removal of all unvented gas- and liquid-fueled space heaters and replacement with vented, code-compliant heating systems as a prerequisite to weatherization. However, DOE will allow unvented gas-or liquid-fueled space heaters to remain as secondary heat sources in single-family houses provided they comply with ANSI Z21.11.2. DOE is allowing this flexibility primarily to provide low-income clients an emergency back-up source of heat in the event of electrical power outages. Therefore, preference should be given to code-compliant units that do not require electricity.

Specifically, any unvented gas- and liquid-fueled space heaters that remain in a completed single-family house after weatherization:

- Shall not have an input rating in excess of 40,000 Btu/hour;
- Shall not be located in, or obtain combustion air from sleeping rooms, bathrooms, toilet rooms, or storage closets, unless:
  - Where approved by the authority having jurisdiction, one listed wall-mounted space heater in a bathroom:
    - Has an input rating that does not exceed 6,000 Btu/hour;
    - Is equipped with an oxygen-depletion sensing safety shut-off system; and
    - The bathroom meets required volume criteria to provide adequate combustion air.
  - Where approved by the authority having jurisdiction, one listed wall-mounted space heater in a bedroom:
    - Has an input rating that does not exceed 10,000 Btu/hour;
    - Is equipped with an oxygen-depletion sensing safety shut-off system; and
    - The bedroom meets required volume criteria to provide adequate combustion air.
- Shall require the enforcement of minimum ventilation guidelines as required by ASHRAE 62.2. American

Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings.

DOE funds may not be used to replace unvented space heaters to be left in the weatherized dwelling unit as secondary heating sources. AEO allocates Capital Intensive funds (LIHEAP) which may be used to replace non-compliant, unvented secondary space heaters with ANSI Z21.11.2 compliant unvented space heaters.

The Manufactured Home Construction and Safety Standards require all fuel-burning, heat-producing appliances in mobile homes, except ranges and ovens, to be vented to outside. Further, all fuel-burning appliances in mobile homes, (except ranges; ovens, illuminating appliances, clothes dryers, solid fuel-burning fireplaces and solid fuel-burning fireplace stoves) must be installed to provide for the complete separation of the combustion system from the interior atmosphere of the manufactured home (i.e., to draw their combustion air from outside). Therefore, mobile homes must have heat source compliant with manufactured housing standards.

**e. Requirements to Request a Fuel Switch**

In order to justify a request for a fuel switch, the subgrantee must submit information which supports the request to AEO. This information will ensure that all Program rules and guidance are being followed by the Subgrantee in the decision-making process. The request must include the following:

- An official letter from the Subgrantee stating that the site-specific energy audit demonstrates the cost effectiveness of the fuel switch over the life of the measure as indicated by the Savings to Investment Ratio (SIR).
  - The audit libraries must contain all utility cost information to provide accurate data for the fuel switch decision.
  - All other related charges associated with fuel-switching must be included in ECOS and provided with the letter for approval of the Subgrantee's energy audit procedures.

**Prior to submitting:** In addition to accepting the administrative burden associated with making decisions about fuel switching, the Subgrantee must also demonstrate an ability to analyze all information collected prior to submitting a fuel-switch request. To demonstrate this internal capability to AEO, the Subgrantee must submit the following documents as part of the request:

- One complete sample audit for each type of fuel-switching scenario anticipated (e.g., one (1) sample audit for switching from an oil boiler to a gas boiler, one (1) sample audit for switching from a gas furnace and central A/C combination to an electric heat pump) with all supporting documentation that demonstrates fuel switching is cost-effective when interacted with all other appropriate energy conservation measures for the building.
  - Supporting documentation must include a copy of the client utility bill(s) which list all charges for the present energy source(s) and cost information including but not limited to the costs charged for the current energy commodity, base and service charges, taxes, supply and transmission charges and renewable energy or energy conservation adjustments.
- The escalation rate used in the energy audit of those energy prices over the life of the new measure.
- A statement that if a heat pump or other combined heating-and-cooling system is to replace a heating-only (or cooling-only) system, no savings will be attributed to the cooling (or heating) system that was previously not being used in the home, but all the costs of running the system throughout the year will be included in the audit.

## B. Refrigerators

WPN 00-5, Effective  
October 6, 2000

Refrigerators can be replaced if the energy audit gives a SIR of 1.0 or greater. Ten percent (10%) of those replaced will be metered.

Subgrantee must keep a list of weatherization jobs where refrigerators were replaced and indicate if the existing refrigerator was metered.

### PROCEDURES:

Based on the recommendations above, DOE has approved the use of these two (2) measures in the Program. The attachment lists the standards of conformance for each measure. States are reminded that these measures must be included as a part of their energy audit and that they must be cost-tested.

Minimum standards of energy efficiency for many major appliances were established by the U.S. Congress in the National Appliance Energy Conservation Act (NAECA) of 1987, and in the National Appliance Energy Conservation Amendments of 1988. Appliances covered by NAECA included refrigerators, refrigerator-freezers, freezers, room air conditioners, fluorescent lamp ballasts, incandescent reflector lamps, clothes dryers, clothes washers, dishwashers, kitchen ranges and ovens, pool heaters, television sets (withdrawn in 1995), and water heaters. Standards for some fluorescent and incandescent reflector lamps, plumbing

products, electric motors, and commercial water heaters, and heating, ventilation, and air conditioning (HVAC) systems were added in the Energy Policy Act of 1992 (EPACT). EPACT also allowed for the future development of standards for many other products.

Appliance manufacturers must produce products that either meet the minimum level of energy efficiency, or that consume no more than the amount of energy that the standard allows. These rules do not affect the marketing of products manufactured before the standards went into effect. Any products already made and in stock can be sold. The new standards will stimulate energy savings that benefit the consumer, and reduce fossil fuel consumption, thus reducing air pollution emissions.

The U.S. Department of Energy (DOE) is responsible for developing the test procedures for the Appliance Standards Program. These procedures are published in the Code of Federal Regulations (10 CFR Chapter 11, Part 430). The DOE periodically issues new standards or rulemakings for specific appliances. These are published in the Federal Register (FR). Information on the rulemaking process and FR notices are available at the DOE's Office of Codes and Standards' World Wide Web site at URL: [http://www.eere.energy.gov/buildings/appliance\\_standards/](http://www.eere.energy.gov/buildings/appliance_standards/)

States which choose to include replacement refrigerators in their programs must also comply with the standards for addressing the environmental concerns with disposal of the existing refrigerator. The environmental standard is part of the attachment. The cost, (if any), associated with the disposal requirement of refrigerators which contain CFC's are allowable program costs. States may amend their current 2000 State plans to incorporate this change.

## REPLACEMENT REFRIGERATORS

(standards for conformance)

### Refrigerators/Refrigerator-Freezers

[Final Rule: Energy Conservation Program for Consumer Products: Energy Conservation Standards for Refrigerators, Refrigerator-Freezers, Federal Register, 62FR23102, April 28, 1997]

Product Class	Maximum Annual Energy Consumption (kWh) 1/01/93	After 7/01/2001
Refrigerators and Refrigerator-Freezers-Manual Defrost	13.5 AV + 299	8.82 AV + 248.42
Refrigerator-Freezers-Partial Automatic Defrost	10.4 AV + 398	8.82 AV + 248.4
Refrigerators-automatic defrost and refrigerator-freezers- automatic defrost with top freezer without ttd* ice service	16.0 AV + 355	9.80 AV + 276.0
Refrigerator-freezers-automatic defrost with side-mounted freezer without ttd* ice service	11.8 AV + 501	4.91 AV + 507.5
Refrigerator-freezers-automatic defrost with bottom-mounted freezer without ttd* ice service	16.5 AV + 367	4.60 AV + 459.0

\* ttd = through-the-door

AV = total adjusted volume expressed in ft<sup>3</sup>

An adjustment factor accounts for the differing electricity requirements of refrigerators and refrigerator-freezers. The adjustment factors for these product classes are: all refrigerators-1.0; basic refrigerators-1.44; refrigerator-freezers-1.63. Other features of the refrigerator/freezer, such as whether the unit has automatic or manual defrost or through the door services, are also considered. Most refrigerator-freezers purchased in the United States are automatic defrost with a top-mounted freezer and without through-the-door ice service. Here is an example of how to determine the maximum annual energy consumption using this standard.

AV = fresh food volume in ft<sup>3</sup> + (adjustment factor x freezer volume in ft<sup>3</sup>)

If the volume of the fresh food compartment is 14.5 ft<sup>3</sup> and if the volume of the freezer compartment is 3.8 R<sup>3</sup> and the adjustment factor for a refrigerator-freezer is 1.63, then:

AV = 14.5 ft<sup>3</sup> + (1.63 x 3.8 ft<sup>3</sup>)

AV = 14.5 ft<sup>3</sup> + 6.19 ft<sup>3</sup>

AV = 20.69 ft<sup>3</sup>



Now that the AV has been determined, plug it into the formula listed in the chart above. The formula for an automatic defrost with top-mounted freezer and without through-the-door ice service refrigerator-freezer is  $16.0 \text{ AV} + 355$ , therefore:

$$\begin{aligned}\text{kWh/yr} &= 16.0 \text{ AV} + 355 \\ \text{kWh/yr} &= 16.0 (20.69 \text{ ft}^3) + 355 \\ \text{kWh/yr} &= 331.04 \text{ ft}^3 + 355 \\ \text{kWh/yr} &= 686.04\end{aligned}$$

Note: All replacement refrigerators must meet UL-250 (1993) standard.

Note: All refrigerator units replaced must be properly disposed according to the environmental standards in Clean Air Act (1990) section 608, as amended by Final Rule, 40 CFR 82, May 14, 1993.

Refrigerators are a Base Load Energy measure not a Health and Safety measure. Whether or not a refrigerator should be replaced cannot be decided by the age and/or appearance of the unit. The energy efficiency of the unit must be determined using one of the options/methods outlined below.

**NOTE:** DOE REQUIRES THAT A MINIMUM OF TEN PERCENT (10%) OF ALL REFRIGERATORS REPLACED BY A SUBGRANTEE IN A PROGRAM YEAR MUST HAVE BEEN METERED. THE READING DETERMINED AS A RESULT OF METERING THE REFRIGERATOR SHOULD BE USED IN ECOS. MULTIPLE COUNTY SUBGRANTEES MAY PURCHASE ADDITIONAL WATT METERS (SUCH AS WATTS UP? METERS) IF NEEDED TO MEET METERING REQUIREMENT.

## Frequently Asked Questions – Refrigerator Replacement

### What existing units may be replaced?

- **Refrigerators and refrigerator-freezers** – Only new refrigerators and refrigerator-freezers can be installed with DOE funds. However, agencies may encourage Clients to give up other model types such as chest freezers as part of the refrigerator replacement. For example, a Client has an inefficient 15-cubic-foot refrigerator-freezer and a stand-alone upright freezer. The agency may replace both units with a new 18- or 21-cubic-foot refrigerator-freezer if the energy savings compared to both the existing units justify the measure.

### What new replacement units may be installed?

- **Refrigerators and refrigerator-freezers** – Weatherization Program Notice 00-5 lists the types of refrigerators that may be installed with DOE funds. They are refrigerators and refrigerator-freezers with manual, automatic, or partial automatic defrost. Units must comply with UL-250 and with energy efficiency standards established in the National Appliance Energy Conservation Act of 1987 that are periodically updated. New replacement units may **not** have through-the-door ice or water service since this feature increases energy use.

### **What are the cost-effectiveness requirements?**

- **SIR 3.0** – the state requires that refrigerator replacement result in a savings-to-investment ratio (SIR) of 3.0 or greater.
- **Economic life time = 15 years** – According to *Appliance* magazine the expected service life of a refrigerator averages fifteen (15) years. DOE believes fifteen (15) years is an appropriate economic life time to use in life-cycle cost calculations.

### **What are the metering requirements?**

- **Meter at least ten percent (10%) of units replaced** – it is not required to meter every existing refrigerator that is replaced. Initially, as the program gains experience, DOE will require states to meter at least ten percent (10%) of the units replaced. Units that cannot be located in the AHAM or other refrigerator databases may make up all or most of the ten percent (10%) requirement.
- **Meter at least two (2) hours** – The minimum metering duration required to obtain results accurate enough to make a reliable replacement decision has been debated for several years. DOE believes a two-hour minimum metering duration is an appropriate compromise. Besides metering, how else can energy use of existing refrigerator be determined?
- **AHAM or other certified database of refrigerator energy use** – The Association of Home Appliance Manufacturers' database, separately or as incorporated into ECOS, may be used to estimate the annual energy use of existing refrigerator.

### **Can I replace refrigerators based solely on age?**

- **No** – Although older refrigerators were built to less efficient standards, other factors such as size and manual defrost impact energy use of existing refrigerators. Initially, as the program gains experience, DOE will require agencies to meter or use the AHAM, Home Energy, or accompanying database to estimate the annual energy of existing refrigerators.

### **What do I do with the existing refrigerator?**

- **Take out of service** – Make sure the existing refrigerator removed from the house does not find its way back onto the electric grid.
- **Dispose in an environmentally responsible manner** – All refrigerators replaced must be properly disposed of according to the environmental standards in the Clean Air Act of 1990, section 608, as amended by Final Rule 40 CFR 82, May 14, 1993.
- **Take to a de-manufacturing facility or incorporate disposal requirements in vendor contract** – De-manufacturing facilities like the one in Syracuse, New York, described in the special report by Larry Kinney and Rana Belshe (*Refrigerator Replacement in the Weatherization Program: Putting a Chill on Energy Waste*) exist in certain parts of the country. If none are available locally, specific disposal requirements can be written into the contract with the vendor supplying the new refrigerator. Although this arrangement makes the vendor responsible for the removed refrigerator, states should verify replaced refrigerators are disposed of properly.

## 1. **Cost Effectiveness:**

Current regulations governing weatherization activities require that measures installed in a dwelling unit be selected on the basis of cost effectiveness, with the most cost effective installed first. Unvented space heaters have very high efficiency ratings because they discharge their exhaust gases directly into the space being heated rather than outside, allowing the energy embodied in the hot exhaust gases to be released into the heated space. Vented space heaters exhaust combustion products and considerable amounts of energy out of the residence, and, therefore, are far less energy efficient.

The replacement of an unvented space heater with a vented one may not be cost-justified through energy savings. However, DOE strongly encourages WAP to combine other weatherization measures and health and safety considerations with vented space heaters as replacements for unvented space heaters. In such instances, the heat energy demanded by the structure can be lowered by energy-saving, cost-effective weatherization measures so that total energy costs are less or the same, while the indoor air quality is greatly improved through the use of a vented space heater paid for with health and safety funds.

**Smoke and Carbon Monoxide Detectors:** Any space heater replacement or repair procedure should include inspection to ensure that working smoke and carbon monoxide detectors are installed on the same floor as the space heater. In instances where smoke and carbon monoxide detectors are not present or are not operating properly, new detectors may be purchased and installed with DOE funds. The purchase and installation cost of the smoke and carbon monoxide detectors are health and safety costs. ASHRAE 62.2 guidance on smoke and CO detectors is applicable.

**Client Education:** Client education, including information on the proper operation of the heating equipment, installed smoke or carbon monoxide detectors and any other measures installed, must be provided. Of critical importance is strong client education regarding the dangers of carbon monoxide and excessive moisture levels, particularly if any unvented space heaters are left in the dwelling as a secondary heat sources for emergency back-up.

Before removing any unvented space heat from a client's home, the client must be informed that the replacement vented space heat requires electricity to operate so will not provide heat during a power outage. Documentation of client understanding is required.

Note: Currently there is no unvented space heater approved for installation in a mobile home.

## 2. **Other Health and Safety Consideration:**

Electrical wiring and chimneys should be checked to ensure they are in good condition and that no obvious building code violations are evident. Masonry chimneys used by vented space heaters should be properly lined in compliance with the IFGC. Safety inspection related to the space heater should include, but not be limited to, a check for adequate floor protection and code-compliant clearances to walls and other combustible materials. Even though many vented space heaters are manufactured with spill switches, it is still a requirement that a worst-case depressurization draft test be performed on all vented units.

- i. **Compliance with Local Code, Permitting, and Inspection Requirements:** Installation of space heaters requires knowledge of appropriate industry standards and adherence to all aspects of the applicable building code(s) in the municipality where installation is taking place. Building permits should be secured, where required, (this is a program operations cost) for all space heater work and final inspection by competent professionals should take place before any heater is put into operation. States are reminded that even licensed heating contractors may not be aware of the stringent requirements of the Weatherization Program, so their work should be reviewed by Program staff.
- ii. **Implementation:** Grantee health and safety policy, especially as it relates to space heater repair and replacement, in compliance with the above guidance, must be explained in the applicable State Plan or appropriate amendment in order to permit Project Management Center review and approval. Funds to address these items as part of weatherization work will be allowable costs. It is especially important to insure that adequate inspection, safety, liability, and insurance procedures exist and are followed. In all cases, an education component for clients should be a part of the space heater work. Further, testing for indoor air quality, especially carbon monoxide levels in homes with unvented space heaters, should be performed. The cost to purchase the testing device and mechanical tools necessary to check for indoor air quality and to train personnel to do the testing are allowable program expenses. These charges may be made to the program operations cost category.

## 3. **Wood and Other Solid Fuel Heaters**

Maintenance, repair and replacement of primary indoor heating units is allowed where occupant health and safety is a concern. Maintenance and repair only is allowed for secondary heating systems. Subgrantees are required to inspect the chimney and flue and conduct combustion appliance zone (CAZ) testing during depressurization and give client safety information, including recognition of depressurization.

#### **4. No Heat**

If there is no heat due to “red-tagged,” inoperable, or non-existent heating system, the heat source may be repaired, replaced or installed because climate conditions in Arkansas require homes to have heat.

Arkansas considers a home with no heat to be a valid Health & Safety issue. Therefore, if, during the energy audit, a home is discovered to have an inoperable or red-tagged heat source, the proper procedure is to include as Health & Safety in ECOS a mandatory Clean, Tune and Evaluate. If the licensed HVAC technician is unable to repair the unit so that it is safely operational, than replacement of the heat source should be requested, from AEO. If there is no legitimate heat source (a fireplace or a cook stove oven is not considered a heat source), then installation of heat in the home should be requested. However, if ECOS pulls up an SIR of 1.0 or greater for HVAC replacement/installation, a waiver is not required.

Please request a waiver from AEO to install heat in a “no heat” situation, to include the following:

- First, try repairs/replacement as on SIR, if an SIR cannot be achieved, replace under H&S;
- A description of the existing HVAC equipment, with pictures, if applicable;
- Type of heat you are recommending to be installed based on the size of the house and household composition;
- A request to change type of heating fuel, if applicable.

### **C. Quality Assurance Inspection and Testing**

When all of the work has been completed on the dwelling a thorough Quality Assurance Inspection must be completed by an individual possessing the HEP Quality Control Inspector credential. A final blower door test and other required diagnostic tests (CO, pressure pan, etc.) must be performed in accordance with DOE accepted procedures. A complete analysis of the client file must be performed with all discrepancies documented. Upon completion of the inspection all testing data will be recorded on the Health and Safety Checklist (WAP 10) and all discrepancies noted on the WAP 08 form.

All work must comply with program guidelines.

#### **1. Final Blower Door Test**

A final blower door test is required. Since air sealing funds are partially awarded based on initial blower door test results and an established target reduction, a considerable effort must be made to achieve the targeted reduction. If the targeted post blower door reading as recommended by the target air closure limit is not reached, a written justification as to why the targeted reading was not met must be included in the Client file. Additional photo documentation may be requested.

#### **2. Final Infrared Camera Evaluation**

Using an infrared camera, the Quality Control Inspector should perform another assessment with the blower door running, repeating the pre-weatherization evaluation, to identify any missed items or other air sealing opportunities. Each ECOS recommended measure should be checked for completion, satisfactory workmanship and appropriate photo documentation.

### 3. Quality Assurance Checklist (Final Inspection) Form

Review all work performed with the Client before completing any remaining portions of the Client Education Checklist (WAP 13), Health and Safety Checklist (WAP 10), Client Response form (WAP 09) and Quality Assurance Checklist (WAP 08). The Quality Control Inspector must ensure each of these documents is completed and signed.

If a Client will not sign the Client Response form, and the situation causing the Client's objection cannot be addressed, the state office should be contacted immediately and the Subgrantee must send a certified letter to the Client with the Fair Hearings and Appeals form (WAP 23) attached and copying the state office stating the position of the Subgrantee, referencing applicable program guidelines, and requesting that the Client Response form be signed and returned within two (2) weeks.

***NOTE: CLIENTS MUST BE PROVIDED A COPY OF THE SUBGRANTEE'S FAIR HEARING POLICY WHEN APPLYING FOR PROGRAM SERVICES, AND CAN RESPOND APPROPRIATELY IN WRITING IF IN DISAGREEMENT WITH THE SUBGRANTEE LETTER. THE SIGNED CLIENT RESPONSE FORM AND FINAL INSPECTION SHEET WILL SIGNIFY A COMPLETED DWELLING. THIS DWELLING IS THEN ELIGIBLE TO BE INCLUDED IN THAT MONTH'S PRODUCTION REPORT TO BE SUBMITTED TO THE DEPARTMENT BY THE 5<sup>TH</sup> DAY OF THE FOLLOWING MONTH.***

## QUALITY CONTROL INSPECTION

Follow the above detailed audit protocols for conducting a final inspection on the unit. In the client interview ascertain the satisfaction level of the client as it pertains to the agency delivering the work, the worker's installing the measures, the quality of the work performed and the results noticed, if any. Document the findings. When conducting a thorough inspection it is important to adhere to the following guidelines, though more detailed steps may be necessary.

### **The client file**

When performing a thorough review of the client file the inspector must confirm that the data collected on the building is complete and accurate and that it is entered into the audit software accurately. Items to make note of are:

- Appliance data especially size, fuel type, condition and usage.
- Source Fuel type.
- Energy usage.
- Existing conditions such as insulation levels and window condition.
- Square footage and area calculations.
- Site drawings.

### **The visual inspection**



One of the most important aspects of the inspection is the visual inspection conducted while walking around the unit. Some things to observe are:

- Overall condition of the building – note such things that might impact the effectiveness of the weatherization measures or may have impacted the installation of measures such as hoarding, pest infestation, animals, structural integrity, access to attic and crawl etc.
- Air sealing measures installed and missed opportunities.
- Position and condition of insulation, moisture barriers, dams, and chutes.
- Types of materials used and their proper application.
- Health and safety measures installed such as TNP overflow piping, ASHRAE compliant fans and dryer venting.
- General Heat waste measures such as pipe insulation and light bulbs.

### **Diagnostic testing**

Diagnostic testing is required on all units submitted for reimbursement. Testing is necessary to confirm proper operation of appliances and to ensure that desired results of the weatherization process are met. Gas leakage tests and ambient CO will be conducted on all units except those that are all electric or utilize wood as a fuel source. Diagnostic testing will be done using ANSI/BPI-1200-S-2015 Standard Practice for Basic Analysis of Buildings as a guide. Other tests may include:

- Blower door air infiltration – conducted on all units.
- Exhaust Flow – conducted on all installed exhaust fans as well as those previously existing such as bath exhaust and vent-a-hoods that exhaust to outside of the envelope.
- Combustion diagnostics to include CO in the flue of non-electric fueled appliances, steady state efficiency, heat rise, spillage and back drafting tests.
- Pressure pan duct analysis – conducted in addition to blower door subtraction to gauge air leakage in the duct system.
- Infrared Camera – may be used to enhance detection of voids in the air and thermal barriers.

### **Documentation**

Documentation is the key to any complete inspection. Pictures must be taken to document all measures installed as well as any discrepancies between the audit, final inspection and monitoring inspection. Picture documentation can protect against findings and call backs. Documents to be included in the client file are eligibility related, energy consumption, audit summary, work orders, material receipts, invoices from contractors and client satisfaction forms. In addition, WAP 08, 10 and 11 forms must be completed for all units inspected.

## D. Call Backs

See Policy  
Regarding the Use  
of DOE Program  
Funds to Pay for  
Call-Back/Add-On  
Work After Reported  
to DOE as a  
Completed Unit.  
(WPN 11-03,  
Effective December  
25, 2010 for all units  
completed after  
January 10, 2011)

Generally, once a unit has received a final inspection and been reported as complete, call backs for routine maintenance, repairs or warranty-type work cannot be reimbursed with DOE WAP funds. **Any required return visits or reworks related to workmanship omissions, missed opportunities or deficiencies must come at the expense of the agency or contractor using non-DOE funds.**

Missed Opportunities are defined as either Energy Conservation Measures (ECM's) or Health and Safety measures which should have been identified on the audit and performed as a part of a "whole-house" assessment but were not. (See WPN 12-5, page 5) The missed opportunity results in reduced "whole house" weatherization for the client. Missed Opportunities may compromise client Health and Safety or reduce the effective energy savings the program is required to achieve. It should be noted that once homes are inspected, completed and reported, returns to address missed measures or poor workmanship cannot be reimbursed using DOE funds. (Per WPN 11-3) The State of Arkansas will monitor "units-in-progress" to identify potential missed opportunities which can be addressed prior to completion of the unit. Subgrantees are reminded that it remains a crucial function of the assessment phase to effectively identify all cost-effective energy conservation measures (SIR of 1.0 or greater on the audit) and Health and Safety measures to ensure clients receive the full benefit of the Weatherization Assistance Program.

Missed opportunities are different from improperly installed measures. Improperly installed measures are those identified in the assessment/audit but are incomplete or performed poorly. As a result of improper installation, the effectiveness of the interaction of the measures is compromised. This reduces the energy savings the program is charged with achieving. Improperly installed Health and Safety measures compromise the Health and Safety of the residents in the unit being weatherized and as a result, do not provide the safeguards the WAP intended for the client.

**It should be stressed that quality installations to achieve the energy conservation or Health and Safety requirements of the program can be attained with proper installation. Subgrantees should be aware that failure to properly install recommended measures identified in the audit/assessment according to the Arkansas Weatherization Assistance Program Field Guide and/or Manufacturer's Recommended Installation Procedure is a workmanship "finding" by the state monitor. This could result in disallowed costs or units. This may also require reimbursement to the program for expenses associated with completed units which demonstrate poor workmanship.**

DOE has provided a process by which states can request approval from DOE to pay for significant and unanticipated call back work, however, it is a time-consuming process and will be offered as an option on a limited, case-by-case basis.



## VI. HEALTH & SAFETY

Arkansas Weatherization and Assistance Program's comprehensive Health and Safety Plan is divided into six sections:

*See Policy  
Regarding Health  
and Safety  
Guidance (WPN  
11-6, Effective  
January 12, 2011*

- A. Heating, Ventilation and Air Conditioning (HVAC);
- B. Appliances;
- C. General Building Structure;
- D. Physical Health and Safety (Client and Worker);
- E. General Hazards (Physical and Material); and
- F. Health and Safety Practices for Weatherization Workers.

This plan was developed as a collaborative effort between the State of Arkansas Energy Office (AEO), the Arkansas Weatherization Assistance Program Network, Northwest Arkansas Community College – Weatherization Training Center and Pulaski Technical College – Weatherization Training Center and Department of Energy Project Officer.

Health and Safety issues have become an important part of the Weatherization Assistance Program (WAP) as knowledge about the hazards within dwellings has increased since the Program's inception.

OSHA's Hazard Communication Standard (HCS) requires the development and dissemination of such information:

- Chemical manufacturers and importers are required to evaluate the hazards of the chemicals they produce or import, and prepare labels and safety data sheets to convey the hazard information to their downstream customers;
- All employers with hazardous chemicals in their workplaces must have labels and safety data sheets for their exposed workers, and train them to handle the chemicals appropriately.

Arkansas performs compliance monitoring for OSHA rules and regulations when performing monitoring on in progress units and ensures Subgrantees have a Hazard Communication Plan in place.

Arkansas will also adhere to the OSHA Confined Space Rule.

When a health or safety hazard is detected, it is the policy of the AEO administrator of the Arkansas Weatherization Assistance Program, to inform the client and address the hazard according to protocol.

Although WAP funds are primarily used for energy conservation, the Department considers establishing a healthy and safe home environment to be an important component to weatherization work. Therefore, the health and safety of the building, occupants and weatherization crews or contractors must not be compromised by any retrofit material, technique or practice.

This Health & Safety Plan shall apply to Arkansas Weatherization Assistance Programs. It is not intended to override federal, state or local health and safety regulations, codes or

ordinances. Such requirements, must be followed if they are more stringent, otherwise, the requirements in this plan will apply.

The expenditure limit for Health and Safety measures is twenty-four point four percent (24.4%) of the average per dwelling unit cost. The twenty-four point four percent (24.4%) limit for Health and Safety expenditures is agency wide and does not need to be applied evenly across homes. The Health and Safety expenditures are not a part of the average cost per unit. However, authorized (necessary) repairs that support weatherization, such as minor wiring, plumbing to space heater, **are part of the limit** (as adjusted by DOE) and need to bear whole house Savings to Investment Ratio (SIR) scrutiny.

Incidental repairs may be performed in conjunction with any of the priorities previously listed. Incidental repair costs must be included as part of the total unit cost when determining the maximum and average expenditure per dwelling unit.

An incidental repair is defined as those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to: 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.

If health and safety issues identified on an individual unit cannot be addressed within the allowable WAP limits then the unit would exceed the scope of this program and must be deferred.

Subgrantees must test for high carbon monoxide (CO) levels and acceptable levels must be reached before weatherization work can start. Maximum acceptable CO readings are as follows:

Carbon Monoxide Action Levels	
Ambient inside of building	9 ppm as measured
Central Furnace (all categories)	400 ppm air free
Boiler	400 ppm air free
Floor Furnace	400 ppm air free
Gravity Furnace	400 ppm air free
Wall Furnace (BIV)	200 ppm air free
Wall Furnace (Direct Vent)	400 ppm air free
Vented Room Heater	200 ppm air free
Unvented Room Heater	200 ppm air free
Water Heater	200 ppm air free
Oven/Broiler	225 ppm as measured
Clothes Dryer	400 ppm air free
Refrigerator	25 ppm as measured
Gas Log (gas fireplace)	25 ppm as measured in vent
Gas Log (installed in wood burning fireplace)	400 ppm air free in firebox

### **Air-Free Carbon Monoxide**

A measurement of CO in an air sample or flue gas that takes into account the amount of excess air (oxygen, O<sub>2</sub>) in the sample, incorporating an adjustment to the as-measured CO ppm value, thus simulating air-free (oxygen-free) conditions in the sample. Usually measured in units of parts per million (ppm).

### **Amendments to Arkansas Weatherization Assistance Program Health and Safety Plan**

From time to time, this plan may be amended and/or revised by the AEO to reflect changes in state or federal regulations, advances in technology, and/or innovative approaches to weatherization. The AEO encourages agencies to submit suggested changes to these practices that will result in the delivery of services in a more cost-effective manner while continuing to provide high quality work. Suggested changes **must** be accompanied by supporting documentation.

Amendments to these standards will not become effective until the following program year, unless a Program Notice is received from Department of Energy (DOE). The following conditions are where amendments or revisions will become effective immediately:

- a. Changes in State or federal law or regulations mandate immediate implementation; or
- b. AEO determines that an emergency situation exists, such as a potential threat to life, limb, or personal property, and the proposed amendment and/or revision is necessary for the protection of the health and welfare of Arkansas citizens.

The following sections provide procedures that include a method used to determine when DOE funds will be used to address specific health and safety issues, and how to treat problems that cannot be addressed with DOE funds as well as required training for field workers to identify and test for the presences of health and safety hazards.

## **A. Heating, Ventilation and Air Conditioning (HVAC)**

### **1. Ventilation**

**Action/Allowability:** 2016 (or most current) ASHRAE 62.2 is required to be met to the fullest extent possible, when performing weatherization. Implementing ASHRAE 62.2 2016 is not required where acceptable indoor air quality already exists as defined by ASHRAE 62.2 2016. Existing fans and blower systems should be updated if not adequate.

**Testing:** ASHRAE 62.2 2016 evaluation, fan flow, and follow up testing are required to ensure compliance.

**Client Education/Occupant Health Concerns:** Provide client with information on function, use, and maintenance of ventilation system and components. Include disclaimer that ASHRAE 62.2 does not account for high polluting sources or guarantee indoor air quality.

**Training:** ASHRAE 62.2 2016 training required including proper sizing, evaluation of existing and new systems, depressurization tightness limits, critical air zones and other areas included in ASHRAE 62.2 2016.

**Identify Measures:**

- a) Repair or modify existing ventilation if needed;
- b) Install new ventilation system, if needed.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 2. Whole-Building Mechanical Ventilation Rate

The required mechanical ventilation rate,  $Q_{fan}$ , shall be the rate  $Q_{tot}$  in Section 4.1.1 plus the required additional airflow calculated in accordance with Section A3. If the air tightness of the building envelope has been measured, the required mechanical ventilation rate may be reduced as described in Section 4.1.2. In these cases, Section A3 shall be applied before Section 4.1.2 when determining the final mechanical ventilation rate. For existing buildings, if  $Q_{fan}$  is less than or equal to 15 cfm, then whole-building ventilation is not required.

## 3. Combustion Gases

**Action/Allowability:** Proper venting to the outside for combustion appliances, including gas dryers is required. Correction of venting is allowed when testing indicates a problem.

**Testing:** Combustion appliances, including furnaces, boilers, space heaters, gas fireplaces, cook stoves, gas dryers and water heaters, must be tested to determine if CO emissions are within allowable CO levels.

- a) Inspect venting of combustion appliances to confirm adequate clearances, use of proper venting materials and complete venting to the exterior of the dwelling. Gas dryers must be vented to the outside with rigid material.
- b) Test naturally drafting appliances for draft and spillage under worst case conditions before and after air tightening.
- c) Inspect cooking burners for operability and flame quality.
- d) Conduct visual inspection of gas dryer vent.

**Client Education/Occupant Health Concerns:** Provide 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 CO.

**Training:** How to perform appropriate testing; determine when a building is excessively depressurized, and the difference between air free and as-measured. Drilling and patching double walled vent pipe.

**Identify Measures:** Maintenance, repair and replacement of PRIMARY heating systems are allowed. Only maintenance and repair is allowed for SECONDARY systems with DOE funds. Capital Intensive funds (LIHEAP funds) may be used to replace secondary heating systems.

- a) Clean gas cook stove, repair or replace appliances with combustion gas problems;
- b) Clean, repair or replace to correct hazardous conditions;
- c) Replacement of cook stoves is not allowed, *see Appliances and Water Heaters*.

**Deferral Policy:** If the unacceptable CO reading is from a cook stove, other funding sources must be utilized to rectify the situation before weatherization; follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

#### 4. Air Conditioning and Heating Systems

**Action/Allowability:** Arkansas considers “red tagged”, inoperable, or non-existent heating systems to constitute a Health & Safety issue. Evaluation of the home for replacement, repair, or installation is required, unless prevented by other guidance herein. Air conditioning system replacement, repair, or installation is allowed in homes of at-risk occupants.

The Energy Auditor determines the most cost effective and energy efficient way to assure that the dwelling being weatherized will be capable of providing the household with a controlled environment.

Switching out an existing heating and/or cooling appliance with a new one may not be the best option or even an allowable process, i.e., unvented combustible fuel space heaters. Also, the condition of the dwelling or the size of the household may dictate a different measure to provide.

DOE will not permit any DOE-funded weatherization work other than incidental repairs on electric space heaters. DOE allows the use of other funding sources for the replacement of electric space heaters (e.g. Capital Intensive (LIHEAP), other leveraged funds) but the Department does not encourage the repair or maintenance of these units because of:

- The high cost of electricity as compared to fossil fuels;
- Lower output ratings (size);
- Risk of fire hazards; and
- Inadequate electrical systems in older homes frequently cannot safely carry the power required to operate an electric heater.

Work on such systems may make local agencies liable for inadequate electric wiring and damages that may result.

Electric space heaters may only be left in a home as secondary heating source when the unit has a tag indicating compliance with ANSI Z21.11.2.

**Testing:** Make sure systems are present, operable, and performing.

**Client Education/Occupant Health Concerns:** Discuss and provide information on appropriate use and maintenance of units and proper disposal of bulk fuel tanks when not removed.

**Training:** Training curriculum at the Weatherization Training Center addresses CO testing of heating systems. Intermediate Weatherization, Heating, Ventilation, and Air Conditioning (HVAC), Crew Leader, and Weatherization Energy Auditor include details regarding said testing.

**Identify Measures:**

- a) "Red tagged" inoperable system, send HVAC tech.
- b) Request waiver from AEO to install heat and/or AC system.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 5. Space Heaters, Stand Alone Electric

**Action/Allowability:** Repair, replacement, or installation is not allowed. Removal is recommended.

**Testing:** Check circuitry to ensure adequate power supply for existing space heaters.

**Client Education/Occupant Health Concerns:** Inform client of hazards and collect a signed waiver if removal is not allowed. Place document in clients' file.

**Training:** Awareness of guidance.

**Identify Measures:**

- a) Allowable as secondary heat source only but recommend removal; collect a signed waiver from Client stating that dangers have been discussed if removal is not allowed.
- b) In "NO HEAT" situations, Arkansas WAP requires evaluation for safe heating system and removal of stand alone space heaters. When "NO HEAT" situation is encountered during an energy audit, a waiver must be required from state WAP office approving heat to be installed.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 6. Space Heaters, Unvented Combustion

**Action/Allowability:** Removal is required, except as 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:** Testing for air-free carbon monoxide (CO) is allowed. Check units for ANSI Z21.11.2 label.

**Client Education/Occupant Health Concerns:** Inform Client of dangers of unvented space heaters – CO, moisture, NO<sub>2</sub>, CO can be dangerous even if CO alarm does not sound.

**Training:** How to perform air-free CO testing. Understanding the dangers of unvented space heaters.

**Identify Measures:**

- a) 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;
- b) Install vented space heater as primary heating source (if needed);
- c) Replace secondary heat source as allowable with ANSI Z21.11.2 compliant unit. Grantees are expected to utilize LIHEAP funding for this type of measure, if the grantee does not have access to LIHEAP funding for this job, they may request approval from the state to use DOE funding.

**Deferral Policy:**

- a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP;
- b) Follow all appropriate Deferral and Referral policies and protocols if Client does not allow removal of unvented, unsafe or non ANSI Z21.11.2 compliant unit.

## **7. Space Heaters, Vented Combustion**

**Action/Allowability:** Should be treated as furnaces.

**Testing:** Venting should be tested consistent with furnaces.

**Client Education/Occupant Health Concerns:** Discuss and provide information on appropriate use and maintenance of units and proper disposal of bulk fuel tanks when not removed.

**Training:** Proper testing methods for safe operation (draft and CO) should be conducted and for steady state efficiency if possible.



**Identify Measures:** Repair or remove vented space heater due to problems regarding the operation of the unit or high CO readings.

**Deferral Policy:**

- a) Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP, and/or when there are problems affecting the heat system/furnace that are beyond the scope of the DOE WAP, such as certain electrical problems. For additional deferral criteria, see deferral section.
- b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 8. Solid Fuel Heating (Wood Stoves, etc.)

**Action/Allowability:** 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.

**Testing:** Required inspection of chimney and flue and combustion appliance zone depressurization.

### a) Wood Stove Clearances

Stoves that are listed by a testing agency like Underwriters Laboratory have installation instructions stating their clearance from combustibles. Unlisted stoves must adhere to clearances specified in NFPA 211.

### b) Stove Clearances

Look for metal tags on the wood stove that list minimum clearances. Unlisted stoves must be at least thirty-six (36) inches away from combustibles. However, listed wood stoves may be installed to as little as six (6) inches away from combustibles if they incorporate heat shields and combustion design that direct heat away from the back and sides. Ventilated or insulated wall protectors may also decrease unlisted clearance from one-third to two-thirds, according to NFPA 211. Always follow the stove manufacturer's or heat-shield manufacturer's installation instructions.

### c) Floor Construction and Clearances

Wood stoves must rest on a floor on noncombustible construction. An example of a noncombustible floor is one composed of only masonry material sitting on dirt. This floor must extend no less than eighteen (18) inches beyond the stove in all directions. Approved floor protectors or the stove-bottom heat shields of listed stoves can allow the stove to rest on a floor containing combustible materials. The floor would need a minimum of one-quarter inch of grouted tile or an approved floor protector extending eighteen (18) inches away from the stove in all directions.



d) **Vent-Connector and Chimney Clearance**

Interior chimneys require a 2-inch clearance from combustibles and exterior chimneys require a 1-inch clearance up to two-thirds. Type-L double wall vent pipe requires only a 9-inch clearance from combustibles.

**Client Education/Occupant Health Concerns:** Provide client education for every recipient of a new stove which outlines the safe operation and proper maintenance of the unit including recognizing depressurization.

**Training:** How to perform CAZ depressurization test and proper inspection.

**Identify Measures:** System must be operational and inspected using all test protocols before any other weatherization begins. Wood stoves may *only* be considered if recommended by the ECOS audit. The energy audit must drive the decision regarding whether a wood stove should be replaced. Additionally, local agencies must:

- a) Ensure wood stove installations, maintenance and inspections are performed by qualified personnel only:
  - a. Must be installed in accordance with manufacturer's recommendations.
- b) Ensure that only wood stoves which are certified and labeled by the National Fire Protection Association under 86M-1986 and 211-1984, the International Conference of Building Officials, or other equivalent listing organizations may be purchased with DOE funds and that electrical parts are certified and labeled by Underwriters Laboratory. These organizations require the manufacturer to test the heater and include detailed instructions for safe installation. After July 1990, stoves must also be certified to meet the Environmental Protection Agency (EPA) emission standards or local Standards if they are stricter;
- c) Ensure that only a wood stove certified and labeled for mobile homes may be installed in a mobile home. The label should reference the Department of Housing and Urban Development's (HUD) Mobile Home Standard and name the independent testing laboratory. Installation must be done in accordance with the manufacturer's recommendations;
- d) Ensure that the inclusion of wood stoves is coordinated with State and County fire marshals (or equivalent) to ensure that restrictions and codes are met. All applicable permits must be obtained, and all work must receive approval from subsequent inspections; and
- e) Wood stoves must be removed from manufactured homes if not approved for use with manufactured homes.

***Deferral Policy:***

- a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
- b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP if Client does not allow removal and/or replacement with listed unit.

## **B. Appliances**

### **1. Appliances and Water Heaters**

***Action/Allowability:*** Replacement of water heaters is allowed on a case-by- case basis. Replacement and installation of other appliances are not allowable health and safety costs. Repair and cleaning are allowed. *Also see Air Conditioning and Heating Systems and Combustion Gases and Refrigerant.*

***Testing:*** Determine whether appliances/water heaters are performing safely. Combustion safety testing is required when combustion appliances are present. In every home that has fuel burning devices that have the capability of malfunction and/or "spill" such as water heaters, stoves/cookers, fireplaces or gas heating there is a risk of a carbon monoxide build up which could result in carbon monoxide poisoning.

***Client Education/Occupant Health Concerns:***

- a) Discuss and provide information on appropriate use and, maintenance of appliances/water heaters. The Client acknowledges that staff has explained and demonstrated how to use their appliance and/or water heater prior to finalizing weatherization work in their home. The Client Education Checklist is signed by the Client; this document is placed in the Clients' file.
- b) Arkansas WAP does not consider cook stoves to be a form of safe home heat, and educate clients against using cook stoves for home heating.

***Training:*** Awareness of guidance and diagnostic training and testing.

***Identify Measures:***

- a) Test all combustion appliances;
- b) Clean, repair and/or replace appliances with combustion gas problems.

***Deferral Policy:*** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 2. Refrigerant

**Action/Allowability:** Reclaim refrigerant per Clean Air Act 1900, Section 608, as amended by 40 CFR82, 5/15/93.

**Testing:** Arkansas WAP Subgrantees shall ensure that sub-contractors who would be charged with refrigerant reclamation (e.g., removal of old refrigerators or air conditioning units) follow all EPA testing protocols and are EPA-approved section 608 type I certified or universal certified.

**Client Education/Occupant Health Concerns:** Clients should not disturb refrigerant.

**Training:** EPA-approved section 608 type I or universal certification.

**Identify Measures:**

- a) Proper disposal by WAP. (Disposal of refrigerants must be in accordance with EPA's safe disposal requirements).
- b) WAP agency must have signed agreement with the company providing refrigerator/air conditioners stating guaranteeing removal of old appliances and proper disposal of refrigerants according to EPA requirements.

**Deferral Policy:**

- a) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
- b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP if Client does not allow removal of old air conditioner and/or refrigerator.

## C. General Building Structure

### 1. Building Structure and Roofing

**Action/Allowability:** Building rehabilitation is beyond the scope of the Weatherization Assistance Program. Minor roof repair is allowed by DOE in order to protect installed measures.

**Testing:** While conducting the initial audit, the building structure will be inspected for structural integrity to ensure that access to areas necessary for weatherization is safe for entry and performance of assessment, work, and inspection.

- a) The Energy Auditor must have access to all aspects of the structure in order to adequately and appropriately gather data for the ECOS energy audit. Clothing, dogs, trash or other impediments restricting access to

any portion or portions of the dwelling that block necessary access may constitute a deferral.

- b) Minor repairs to protect DOE or LIHEAP materials installed may be used to protect the energy saving investment. However, building rehabilitation is beyond the scope of the WAP. Dwellings whose structural integrity is in question should be referred to other appropriate local and state agencies.
- c) Incidental repairs necessary to effectively perform or preserve weatherization materials are allowed.

**Client Education/Occupant Health Concerns:** Notify client of structurally compromised areas.

**Training:** How to identify structural and roofing issues.

**Identify Measures:** Incidental repairs as cost allowable.

**Deferral Policy:**

- a) Weatherization services may need to be delayed until the dwelling can be made safe for crews and occupants.
- b) Homes with structural problems that create or exacerbate Health & Safety issues **MUST** be deferred.
- c) Homes with conditions that require more than incidental repair should be deferred. *See Mold and Moisture guidance below.*

## 2. **Drainage-Gutters, Down Spouts, Extensions, Flashing, Sump Pumps, Pumps, Landscape, etc.**

**Action/Allowability:** Major drainage issues are beyond the scope of the Weatherization Assistance Program.

**Testing:** Conduct visual inspection.

**Client Education/Occupant Health Concerns:** Importance of cleaning and maintaining drainage systems. Provide information on proper landscape design.

**Training:** How to recognize drainage issues.

**Identify Measures:** Incidental repairs may be performed as preventive measures. Major drainage issues are beyond the scope of the WAP.

**Deferral Policy:** Homes with conditions that may create a serious health concern that require more than incidental repair should be deferred. *See Mold and Moisture guidance.*

### 3. Window and Door Replacement, Window Guards

**Action/Allowability:** Replacement, repair, or installation is not an allowable health and safety cost or an efficiency measure unless cost justified. Window guards are not allowed.

**Testing:**

- a) Perform lead testing;
- b) Pulling an acceptable SIR.

**Client Education/Occupant Health Concerns:** Provide information on lead risks.

**Training:** Awareness of guidance.

**Identify Measures:**

- a) Broken or missing glass in windows must be replaced or repaired. Those merely cracked should receive minimal treatment.
- b) Any other measures must be cost effective as determined by the energy audit.
- c) Must follow LSW (Lead-Safe Work) requirements for pre-1978 homes when working on windows and doors.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## D. Physical Health & Safety (Client and Worker)

### 1. Code Compliance

**Action/Allowability:** 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.

**Testing:** Visual inspection. Local code enforcement inspections.

**Client Education/Occupant Health Concerns:** Inform Client of observed code compliance issues.

**Training:** How to determine what code compliance may be required. Subgrantees are required to check with the local code enforcement office in the city or county where the weatherization job is located if:

- a) any circumstances in the home are suspected to be out of compliance with applicable code, so that Client may be informed of problems that are beyond the scope of the weatherization program, and

- b) any weatherization measure to be installed is governed by codes, including license required of installers and permits necessary for the work to be done.

**Identify Measures:** Follow all State and Local Codes when installing weatherization measures.

Acquire all required permits and licenses pertinent to installing weatherization measures. These vary by jurisdiction and it is the responsibility of each Subgrantee agency to know what the codes are in each of the areas they work in, as well as what permits and licenses are required in each of the areas they work in.

**Deferral Policy:** Condemned properties and properties where “red tagged” health and safety conditions exist that cannot be corrected under this guidance should be deferred.

## 2. Occupant Preexisting or Potential Health Conditions

**Action/Allowability:** 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 based on severity of risk. Temporary relocation of at-risk occupants may be allowed on a case by case basis. At-risk is defined as an elderly person, disabled person, child or other person with medical problems affected by heat, cold, poor air quality or disruption of the home environment. A physician’s statement is required for Health & Safety measures if the medical condition is the reason that the measure is being installed. Otherwise, Client may self-report health issues so that necessary accommodations may be made during the weatherization process.

**Testing:** Require occupant to reveal known or suspected health concerns as part of initial application for weatherization. Screen occupants again during audit.

**Client Education/Occupant Health Concerns:** Provide client information of any known risks. Provide worker contact information so client can inform of any issues.

**Training:** How to assess occupant preexisting conditions and determining what action to take if the home is not deferred; awareness of potential health hazards.

**Identify Measures:** Weatherization agencies including subcontractors are required to take all reasonable precautions against performing work on homes that will subject the occupants or themselves to health and/or safety risks.

In cases where an occupant’s health is fragile, or an occupant has been identified to have a health condition, including allergies, and/or the crew work activities

would themselves constitute a health and/or safety hazard, the occupant(s) at risk shall be required to leave during the performance of the work activities.

In cases where an occupant is identified as having an allergy to a specific weatherization material, that material will not be installed. If comparable alternative materials are available and the occupant has no known allergy to the alternative materials and they meet DOE regulations, crews may substitute the alternative material(s). If no safe alternative material meeting DOE standards is available, the measure shall not be installed. A request to install alternative materials must be submitted to AEO for approval. This must be well documented in the client file.

***Deferral Policy:***

- a) Failure or the inability to take appropriate actions must result in deferral.
- b) A dwelling unit should not be weatherized where there is a major code violation or where there is a potentially harmful situation that may adversely affect the occupants or agency's weatherization crew and/or other staff.
- c) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

**3. Occupational Safety and Health Administration (OSHA) and Crew Safety**

***Action/Allowability:*** Workers must follow OSHA standards and Material Safety Data Sheets (MSDS) and take precautions to ensure the health and safety of themselves and other workers. MSDS must be posted wherever workers may be exposed to hazardous materials.

***Testing:*** Grantees must perform assessments to determine if crews are utilizing safe work practices. Training will be made available at the Arkansas Weatherization Training Center.

***Client Education/Occupant Health Concerns:*** WAP Workers must follow OSHA standards and Material Safety Data Sheets (MSDS) and take precautions to ensure the health and safety of Clients, themselves and other workers. MSDS must be posted wherever workers may be exposed to hazardous materials.

***Training:*** Use and importance of personal protection equipment.

- a) OSHA 10-hour training is required for all weatherization workers.
- b) OSHA 30-hour training is required for crew leaders and Weatherization Directors.

***Identify Measures:*** All crew leaders, energy auditors and AEO field staff must complete training by July 1, 2018.

***Deferral Policy:***



- a) Weatherization work may be deferred if doing the work would put crews at undue health and safety risk.
- b) Referral should be made when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations, or conditions that pose a health or safety risk to crews and/or Clients. Examples of referral agencies include, but are not limited to, local housing authority agencies, other CAA local agencies, landlords, other appropriate funding sources.
- c) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

#### 4. **Injury Prevention of Occupants and Weatherization Workers—Measures Such as Repairing Stairs and Replacing Handrails**

**Action/Allowability:** Workers must take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks. Minor repairs and installation may be conducted only when necessary, to effectively weatherize the home; otherwise these measures are not allowed.

**Testing:** Observe if dangers are present that would prevent weatherization.

**Client Education/Occupant Health Concerns:** Inform Client of observed hazards and associated risks.

**Training:** Awareness of potential hazards.

**Identify Measures:** Workers will take all reasonable precautions against performing work on homes that will subject workers or occupants to health and safety risks *see Other Health and Safety Practices section*.

- a) If crews encounter a situation where a staircase is deemed unsafe, for example, and the staircase is necessary to reach the area where the crews need to perform the weatherization work, and repairing the staircase requires only minor repair work and installation measures, crews shall perform the minor repair work so that they may safely perform the weatherization work to the home.
- b) Injury Prevention Issues are addressed in the Client Education Checklist (WAP 13) and Health and Safety Checklist (WAP 10). A copy of the Client Education Checklist is placed in the clients' file.

**Deferral Policy:** If the repair work required is deemed to be beyond the scope of the DOE WAP (major repair is required such as rebuilding an entire staircase), the weatherization work to that area of the home shall be deferred until the home owner has satisfactorily installed the required repair(s). Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.



## E. General Hazards Physical & Material

### 1. Spray Polyurethane Foam (SPF)

**Action/Allowability:** Use EPA recommendations (available online at [http://www.epa.gov/dfe/pubs/projects/spf/spray\\_polyurethane\\_foam.html](http://www.epa.gov/dfe/pubs/projects/spf/spray_polyurethane_foam.html)) when working within the conditioned space or when SPF fumes become evident within the conditioned space. When working outside the building envelope, isolate the area where foam will be applied, take precautions so that fumes will not transfer to inside conditioned space, and be sure that exhaust fumes remain outside the home. Fumes may accumulate if there is inadequate ventilation, and a fire may ignite.

**Testing:** Check for penetrations in the building envelope including while blower door is running. Sensory inspection inside the home for fumes during foam application.

**Client Education/Occupant Health Concerns:** Precautions for using Spray Polyurethane Foam is addressed in the Client Education Checklist (WAP 13) and Health and Safety Checklist (WAP 10). A copy of the Client Education Checklist is placed in the Clients' file.

**Training:**

- a) Training on use of various products with specification for each application type. MSDS sheets. Temperature sensitivity.
- b) Workers using foam products must receive training on the proper use of these various products and understand the specification for each application type.
- c) Documentation of installers viewing an installation video or online training and verification of reading and understanding product use information must be kept at the Subgrantee agency.

**Identify Measures:**

- a) Comply with all applicable codes, OSHA, NIOSH and MSDS and Instructions.
- b) MSDS sheets are mandatory for any foam product used and a thorough understanding of the temperature sensitivity of the product in use is required.
- c) Liquid Foam Air Sealant. Liquid closed-cell polyurethane foam is a versatile air sealing material. Closed-cell foam is packaged in a one-part injectable variety and a two-part sprayable variety. It has a very high R-value per inch and is ideal for insulating and air sealing small, poorly insulated, and leaky areas in a single application. Installation is easy compared to other materials to accomplish the same air sealing tasks. However, cleanup is difficult enough that you probably don't want to clean up multiple times on the same job. Instead identify all the spots needing foam application, make a list, and foam them one after another.

- d) **One-Part Foam:** This gap filler has tenacious adhesion. One-part foam is best applied with a foam gun rather than the disposable cans. Cleanup is difficult if you get careless. When squirted skillfully into gaps, this material reduces air leakage, thermal bridging, and air convection through the assemblies to which it is applied. One-part foam isn't effective or easy to apply to gaps over about one (1) inch or to bottomless gaps. This product can leave small air leaks unless applied with skill.
- e) **Two-Part Foam:** Good for bridging gaps larger than one (1) inch. Two-part foam has become very popular for use with polyurethane foam board to sealing large openings. Cut foam board to close-enough tolerances around obstacles and fill the edges with the two-part foam. Two-part foam should be sprayed to at least an inch of thickness when it serves as an adhesive for foam board patches over large holes for strength.
- f) **Foam Construction Adhesive:** Polyurethane foam dispensed from foam guns is an excellent adhesive for joining many kinds of building materials. It works well in joining foam sheets together into thick slabs for access doors through insulated building assemblies.

***Deferral Policy:***

- a) Deferral should be exercised when existing code violations are present and correcting them would be beyond the scope of the DOE WAP.
- b) Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.
- c) If any household members have any respiratory problems use alternative sealing materials.
- d) Alternative sealing materials may be used.

## **2. Electrical, Knob-and-Tube Wiring**

***Action/Allowability:*** Minor electrical upgrades and repairs necessary in order to install specific weatherization measures and where health or safety of the occupant is at risk are allowed. Arkansas state code prohibits installing insulation over knob-and-tube wiring. Thus, insulating over knob-and-tube wiring is not allowable in Arkansas.

***Testing:*** Visual inspection for knob-and-tube wiring. Voltage drop and voltage detection testing are allowed. Check for alterations that may create an electrical hazard.

***Client Education/Occupant Health Concerns:*** Provide information on overloading circuits, over-current protection, and basic electrical safety/risks.

***Training:*** How to identify electrical hazards; Local code compliance.

***Identify Measures:*** Arkansas WAP will screen for the presence of knob-and-tube wiring during the application process (Client Application-WAP 02). If the applicant acknowledges the presence of knob-and-tube wiring at the time of

application, the client will be referred to the appropriate agency for assistance to remedy this problem. The client may possibly have new wiring by the time the client's name is at the top of the priority list.

### 3. **Electrical, Other than Knob-and-Tube Wiring**

**Action/Allowability:** Minor electrical repairs are allowed where health or safety of the occupant is at risk. Upgrades and repairs are allowed when necessary to perform specific weatherization measures.

**Testing:** Visual inspection - Voltage drop and voltage detection testing are allowed.

**Client Education/Occupant Health Concerns:** Provide information on over-loading circuits, electrical safety/risks.

**Training:** How to identify electrical hazards; Local code compliance.

**Identify Measures:** Energy audit must identify electrical hazards. Repair of problems must be by a licensed electrician.

- a) Frayed, loose, or damaged wiring.
- b) Missing junction boxes where wires meet: must be installed prior to insulating.
- c) Light fixtures hanging by wire.
- d) Electrical outlet or switch with loose wires or other issues.
- e) Appliances or electrical equipment incorrectly wired or otherwise incorrectly connected to electrical power.
- f) Electrical problems/upgrades necessary to install weatherization measures.

**Deferral Policy:** Any electrical problem that is beyond the scope of WAP.

### 4. **Fire Hazards**

**Action/Allowability:** Correction of fire hazards is allowed when necessary to safely perform weatherization.

**Testing:** Check for fire hazards in the home during the audit and while performing weatherization.

**Client Education/Occupant Health Concerns:** Inform client of all observed hazards.

**Training:** How to identify fire hazards.

**Identify Measures:** At all times crews are to look for potential fire hazards:

- a) Combustion appliances shall be checked for inadequate clearances between the appliances (including venting systems) and combustible materials.
- b) Chimneys and wood stove flues shall be checked for potentially dangerous levels of creosote build-up.
- c) Observations of fire hazards (existent/nonexistent) will be noted on the Health and Safety Checklist (WAP 10) and placed in the Clients' file.

**Deferral Policy:** Local agencies may use health and safety funds to remedy potential fire hazards prior to and during the course of weatherization work within reasonable limits. If the issue cannot be remedied, crews may defer weatherization work until the owner or other qualified agency has remedied the potential fire hazard problem.

## 5. Smoke, Carbon Monoxide Detectors, and Fire Extinguishers

**Action/Allowability:** Installation of smoke/CO detectors is allowed where detectors are not present or are inoperable. Replacement of operable smoke/CO detectors is not an allowable cost. Providing fire extinguishers is allowed only when solid fuel is present.

**Testing:** Check for operation.

**Client Education/Occupant Health Concerns:** Provide Client with verbal and written information on use of smoke/CO detectors and fire extinguishers where allowed.

**Training:** Where to install detectors; Local code compliance.

### **Identify Measures:**

- a) Check any existing smoke/CO detectors for functional/accurate operation.
- b) Install smoke/CO detectors when accurately operating units do not already exist.
- c) Provide fire extinguishers when clients are heating with solid fuel, such as wood.
- d) Must follow all local codes when installing smoke/CO detectors.

**Deferral Policy:** No Deferrals

## 6. Asbestos - In Siding, Walls, Ceilings, etc.

**Action/Allowability:** In Arkansas, no handling and/or altering of asbestos materials is allowed. All precautions must be taken not to damage siding. Siding suspected of containing asbestos should never be cut or drilled or removed from the home; if asbestos is present the agency is required to insulate through home interior.

**Testing:** Inspect exterior wall surface and subsurface for asbestos siding prior to drilling or cutting.

**Client Education/Occupant Health Concerns:** Inform the Client that suspected asbestos siding is present and how precautions will be taken.

Clients are educated on asbestos dangers. A copy of “*Asbestos In Your Home*” is given to each Client during the initial audit process. These actions are documented on the Client Education Check List (WAP 13) and placed in the Client’s file.

**Training:** AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

**Identify Measures:** Keep activities to a minimum in any areas having damaged material that may contain asbestos. Do not further disturb the material. If necessary, weatherization work to that area may have to be deferred.

**Deferral Policy:** If weatherization work would create a hazard, the home **must** be deferred. Client must be informed in writing of the potential hazard. Clearance statement by Asbestos Hazards Emergency Response Act (AHERA) certified professional must be obtained by Client before weatherization can occur. A copy of the statement/report must be kept in the Client’s file.

## 7. Asbestos - In Vermiculite

**Action/Allowability:** When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as not using blower door tests and utilizing personal air monitoring while in attics. Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization. Encapsulation by an appropriately trained asbestos control professional is allowed. Removal is not allowed.

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

**Client Education/Occupant Health Concerns:** Clients should be instructed not to disturb suspected asbestos containing material. Provide asbestos safety

information to the Client. Formally notify Client if test results are positive for asbestos and signed by the Client. Precautions' regarding handling asbestos is given to the Client during the initial audit of the home. Documentation of this instruction is maintained in the Client's file (Client Education Checklist WAP 13).

**Training:** AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

**Identify Measures:**

- a) When vermiculite is present, unless testing determines otherwise, take precautionary measures as if it contains asbestos, such as **not** using blower door tests and utilizing personal air monitoring while in attics.
- b) Where blower door tests are performed, it is a best practice to perform pressurization instead of depressurization.
- c) Removal is **not** allowed.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

## 8. Asbestos – On Pipes, Furnaces, Other Small Covered Surfaces

**Action/Allowability:** 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.

**Testing:** AHERA testing is allowed by a certified tester.

**Client Education/Occupant Health Concerns:** Clients will be instructed not to disturb suspected asbestos containing material. Provide asbestos safety information to the client.

Precautions regarding asbestos is given to the Client during the initial audit of the home. Documentation of the instruction is maintained in the Client's file (Client Education Checklist WAP 13).

**Training:** AHERA course for testing and asbestos control professional training for abatement. How to identify asbestos containing materials.

**Identify Measures:**

- a) Inspect pipe and other coverings for asbestos. It is difficult to tell whether a material contains asbestos simply by looking at it, unless it is labeled. If in doubt, treat the material as if it contains asbestos.
- b) Do not disturb materials containing asbestos unless necessary during the installation of energy saving measures.

- c) Check state and local codes prior to removal and replacement of asbestos containing materials. All local, state and federal requirements and regulations shall be followed by Arkansas Subgrantees.

**Deferral Policy:** Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

9. **Biologicals and Unsanitary Conditions – Odors, Mustiness, Bacteria, Viruses, Raw Sewage, Rotting Wood, etc.**

**Action/Allowability:** Remediation of conditions that may lead to or promote biological concerns and unsanitary conditions is allowed. Addressing bacteria and viruses is not an allowable cost.

**Testing:** Sensory inspection.

**Client Education/Occupant Health Concerns:** Inform Client of observed conditions. Provide information on how to maintain a sanitary home and steps to correct deferral conditions.

Safety and preventive measures regarding any observed biological and unsanitary conditions are addressed with the Client during the initial audit of the home. The Client is also given a copy of "A Brief Guide to Mold, Mildew and Moisture, and Your Home." The Client acknowledges receipt of this information and signs off on the Client Education Checklist (WAP 13). Documentation of the instruction is maintained in the client file.

**Training:** How to recognize conditions and when to defer. Worker safety when coming in contact with these conditions.

**Identify Measures:**

- a) Assess the cost-effectiveness and necessity of remediation of these conditions on a case by case basis with prior approval from AEO;
- b) The use of personal protective equipment shall be strictly enforced. Respirators, protective eyewear, and protective clothing will be worn when biological agents are present or suspected in order to eliminate or minimize crew exposure;
- c) Caution should be taken when selecting air tightness limits for dwellings with these conditions. Since these conditions are often related to moisture, Arkansas requires local agency crews to assess moisture conditions as part of the initial energy audit procedure;
- d) Virus and bacteria remediation is **not** allowable.

**Deferral Policy:** There will be times when weatherization measures may need to be delayed until the problem can be remedied by the home owner or another qualified agency. Referral to the local Health Department may be warranted.



## 10. Formaldehyde, Volatile Organic Compounds (VOC), and Other Air Pollutants

**Action/Allowability:** Removal of pollutants is allowed and is required if they pose a risk to workers. If pollutants pose a risk to workers and removal cannot be performed or is not allowed by the Client, the unit must be deferred.

**Testing:** Sensory inspection.

**Client Education/Occupant Health Concerns:** Inform Client of observed condition and associated risks. Provide Client written materials on safety and proper disposal of household pollutants.

**Training:** Arkansas WAP staff are trained to take all reasonable precautions against performing work on homes that will subject them or occupants to health and safety risks.

**Identify Measures:** Arkansas WAP crews shall take every precaution necessary to minimize exposure to air pollutants. When using chemicals and products that may contain any of the pollutants within this category, strict adherence to label instructions and precautions shall be required. When possible known pollutants shall be removed safely and disposed of properly.

**Deferral Policy:** If the pollutant cannot be removed due to Client unwilling to allow its removal, and exposure cannot be safely and adequately minimized, weatherization work may have to be deferred to ensure the safety of the crew. This action will be noted in the Client's Deferral/Denial Letter, a copy will be placed in the Clients' file.

Clients must be informed by evaluators and/or workers of observed hazards and associated risks (where applicable).

## 11. Mold and Moisture

**Action/Allowability:** Limited water damage repairs that can be addressed by weatherization workers and correction of moisture and mold creating conditions are allowed when necessary in order to weatherize the home and to ensure the long term stability and durability of the measures.

**Testing:** Visual assessment is required and diagnostics such as moisture meters are recommended pre and prior to final inspection. Mold testing is not an allowable cost.

All units must be inspected for problems associated with excess moisture. Identification of potential moisture problems shall be documented in the Client file. If possible, and within the scope of the DOE WAP, repair minor moisture problems that will diminish the effectiveness of weatherization measures.



- a) Humidity inside the home should measure less than sixty-five percent (65%).
- b) When test shows more than sixty-five (65%) humidity, the weatherization technician should work with the Client to eliminate the source of the excess moisture. A spot or continuous vent fan should be installed when the source of the problem cannot be eliminated.
- c) Clothes dryers should be vented to the outside of the dwelling. Venting for dryers must be rigid metal. UL 181 listed flexible duct may be utilized for transitional ducts from appliance to permanent duct. It may not pass through walls, floors or ceilings.
- d) DOE recommended optimum relative humidity level in cold climates = 35 – 50% RH; 40 – 60% RH in hot-humid climates.

Examples of where mold problems may be found in the home:

- Dirty air conditioners
- Dirty humidifiers
- Bathroom without vents or windows
- Kitchen without vents or windows
- Dirty refrigerator drip pans
- Laundry room with unvented dryer
- Unventilated attic
- Carpet on damp basement floor
- Bedding
- Closet on outside wall
- Dirty heating/air conditioning system
- Water damage (around windows, roof, or basement)

Molds can be a problem in mobile homes:

- Small volume – less dilution of relative humidity
- Many cold surfaces for condensation
- Many sources of process wood – mold food
- Roofing – no ventilation or ventilation poor distributed
- Crawlspace – no ventilation or poorly distributed/tight skirting; plumbing leaks

***Client Education/Occupant Health Concerns:*** All local agencies must include some form of notification or disclaimer to the Client upon the discovery to the Client upon the discovery of a mold condition and what was specifically that was done to the home that is expected to alleviate the condition and/or that the work performed should not promote new mold growth. In addition, educate the Client concerning:

- a) Symptoms related to mold exposure:
  - Nasal and sinus congestion
  - Sore throat, coughing
  - Shortness of breath, chest tightness
  - Eye irritation

- Headache
- Fatigue
- Rashes
- Known asthma trigger

b) Sources of home moisture:

- Shower (excludes towels and spillage) – 1.0 pint (pt)/10 minute shower
- Clothes drying (vented indoors) – 5.0 pt/load
- Combustion (unvented space heater) – 7.6 pt/gallon kerosene
- Cooking dinner (family of four) – 1.2 pt (1.6 if gas cooking)
- Floor mopping – 1.5 pt/50 sq. ft.
- Respiration (family of four) – 0.4 pt/hour
- Desorption of materials: seasonal – 6 to 17 pt/day
- New construction – 10+ pt/day
- Ground moisture migration = Up to 100 pt/day

**Training:** National curriculum on mold and moisture or equivalent.

**Identify Measures:** All units must be inspected for problems associated with excess moisture. Identification of potential moisture problems shall be documented in the Client file. Vent dryers to the outside. Gas dryers must be vented with rigid material.

**Deferral Policy:** Most typically, deferral may be needed.

Where severe Mold and Moisture issues cannot be addressed, deferral is required.

When possible, referral should be made when problems are identified that are beyond the scope of the DOE WAP, such as electrical or other code violations or severe health and safety issues such as severe mold which cannot be adequately addressed within the scope of the DOE WAP.

## 12. Pests

**Action/Allowability:** Pest removal is allowed only where infestation would prevent weatherization. Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses health and safety concern for workers. Screening of windows and points of access is allowed to prevent intrusion.

**Testing:** Assessment of presence and degree of infestation and risk to worker.

**Client Education/Occupant Health Concerns:** Inform Client of observed condition and associated risks.

**Training:** Training is provided at the WTC regarding how to assess presence and degree of infestation, associated risks, and need for deferral.

**Identify Measures:**

- a) Initial assessment of presence and degree of infestation and risk to workers.
- b) Determine whether the pest infestation would prevent or hamper the weatherization work.
  - i. If yes, inform Client to take the necessary steps to remove the pest infestation problem so that the weatherization work can proceed. Document the Client file.
  - ii. WAP may not use toxic and poisonous chemicals inside the Clients' home.

**Deferral Policy:** Infestation of pests may be cause for deferral where it cannot be reasonably removed or poses health and safety risks for workers.

### 13. Radon

**Action/Allowability:** Whenever site conditions permit, exposed dirt must be covered with a vapor barrier except for mobile homes. In homes where radon may be present, precautions should be taken to reduce the likeliness of making radon issues worse.

**Testing:** DOE allows testing in locations with high radon potential. **Arkansas is not currently identified as an area with high radon potential.**

**Client Education/Occupant Health Concerns:** Provide Client with EPA consumer's guide to radon. Safety and preventive measures regarding Radon is provided to the Client during the initial audit of the home. The Client is also given a copy of "*A Citizen's Guide to Radon or A Consumer's Guide to Radon Reduction.*" The Client acknowledges receipt of this information and signs off on the Client Education Checklist (WAP 13). Documentation of the instruction is maintained in the Client file.

**Training:** What is it, how it occurs. What factors may make radon worse. Weatherization measures that may be helpful; Vapor barrier installation; Training is provided at the WTC.

**Identify Measures:** Install vapor barrier except in mobile homes.

**Deferral Policy:** Deferral not applicable.

#### 14. **Lead Based Paint** (see Lead Safe Work Practices)

See Policy Regarding  
WAP Activities and  
Federal Lead-Based  
Paint Regulations  
(WPN 02-6, Effective  
July 12, 2002)

**Action/Allowability:** 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:** Testing is allowed. Job site set up and cleaning verification is required by a Certified Renovator.

**Client Education/Occupant Health Concerns:** The head of household of every home to be weatherized receives the informational pamphlet: "*Renovating Right*". The inspector also conducts a client education segment as part of the initial inspection to assure that the occupants are fully aware of the hazards posed by Lead Based Paint exposure. This procedure is documented by using a signed receipt from the head of household which confirms that the information was not only distributed, but also explained. This receipt is kept in the Client file.

**Training:** All weatherization crews working on pre-1978 homes must receive LSW training and be accompanied by an EPA Certified Renovator. Grantee Monitors/Inspectors must be Certified Renovators and receive LSW training.

**Identify Measures:**

- a) Test areas where weatherization work is likely to occur.
- b) Follow the proper DOE LSW protocols, OSHA regulations and EPA regulations in all pre-1978 homes.
- c) Don't just assume that all mobile homes are categorically exempt. Any home built before 1978, or any mobile home remodeled using paints and varnishes prior to 1978, may contain lead-based paint. These paints should be considered "guilty until proven innocent" by way of testing.

**Deferral Policy:** When it is determined that the level of lead present in the home is so high that it presents a hazard to workers, the weatherization work should be deferred until a licensed lead abatement professional has eliminated the health hazard. Follow all appropriate Deferral and Referral policies and protocols, if determined to be beyond the scope of the DOE WAP.

#### **Lead Work Safety (LWS) Practices**

See Policy Regarding  
Lead Safe  
Weatherization  
Guidance (WPN 08-  
06, Effective  
September 22, 2008)

Presence of lead based paint associated with dwellings built before 1978. State policy mandates that all personnel working directly on dwellings shall participate in an eight (8) hour Lead Workers Safety class. Moreover, the presence of lead is an inspection issue and current procedures are designed to identify the presence of lead on Work Orders and work safely in those situations.

With respect to Lead Based Paint issues, Arkansas WAP uses an approach that addresses Client safety and awareness, worker safety and awareness, and on-site practices.

The head of household of every home to be weatherized receives the informational pamphlet: "*Renovating Right*". The inspector also conducts a client education segment as part of the initial inspection to assure that the occupants are fully aware of the hazards posed by Lead Based Paint exposure. This procedure is documented by using a signed receipt from the head of household which confirms that the information was not only distributed, but also explained. This receipt is kept in the Client file.

AEO's monitoring staff will have oversight responsibility in this area. While Lead Safe Work practices have long been built into the program, the monitors will focus more directly on this area as they conduct their monitoring visits. Program operators will be required to show that all Lead Based Paint protocols: information sharing, Lead safe work practices, proper equipment, and so forth are up to date and in compliance to all regulations whatever they turn out to be. Those programs that are not in compliance, and fail to comply once identified, will face the most serious sanctions that can be leveled: reduced allocation to start with, loss of contract if necessary. Special attention will be aimed at those programs failing to meet requirements in the area of Lead Safe Work Practices since it poses such tangible consequences for the households that are served.

Subgrantees must follow EPA's lead; Renovation, Repair and Painting (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.

Arkansas' current status is as follows: all Subgrantees have applied for and received Lead Renovator Firm status. All evaluators (inspectors) have acquired Lead Renovator (RRP) certification as well as select crew leaders. Private contractors must also meet the requirement of having adequate RRP certified employees among their ranks. As new contractors apply to work on weatherization projects the EPA requirements are explained during the application process. No private contractors will be awarded work on any pre-1978 dwellings that don't meet the EPA rules.

Private contractors will be required to furnish proof of RRP and Lead Renovator Firm status as a condition of working for the weatherization programs. The monitoring staff will routinely check that documentation is on file at each agency verifying compliance to the EPA rules.

All weatherization crews working on pre-1978 homes must receive the 8-hour LSW training or a certified renovator must be assigned to the project and be readily available.

State Monitors must be Lead Renovator (RRP) and receive the 8-hour LSW training by July 1, 2018.

The certified renovator must be physically present at the work site while signs are being posted, containment is being established, and the work area is being cleaned after the renovation to ensure that these tasks are performed correctly. Although the certified renovator is not required to be on-site at all times, while the renovation project is ongoing, a certified renovator must nonetheless regularly direct the work being performed by other workers to ensure that the work practices are being followed. When a certified renovator is not physically present at the work site, the workers must be able to contact the renovator immediately by telephone or other mechanism. In addition, the certified renovator must perform the post-renovation cleaning verification.

## VII. INCIDENTAL REPAIRS

See 10 CFR 440

Incidental repairs may be performed in conjunction with any of the priorities previously listed. Incidental repair costs must be included as part of the total unit cost when determining the maximum and average expenditure per dwelling unit.

An incidental repair is defined as those repairs necessary for the effective performance or preservation of weatherization materials. Such repairs include, but are not limited to: 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.

See WPN 12-09

An incidental repair measure includes incidental repair materials and installation, which are performed because they are deemed necessary for the effectiveness of one or more energy conservation measures. The ECM's that require the installation of an IRM must be documented in the client file. The IRM costs are not added to an individual or partial group of ECM costs. The total cost of the IRM's is added to the cost of the package of Weatherization measures to calculate the whole unit (SIR).

**Weatherization Materials**—Materials that are purchased for installation in a building that are anticipated to have a direct impact on saving energy. A definition of approved weatherization materials can be found in Federal Regulations 10 CFR §440.3. Weatherization materials must be listed and must comply with the standards in 10 CFR Part 440, Appendix A.

Examples:

<b>Energy Conservation Measure (ECM)</b>	<b>Ancillary Items</b> (cost must be included in SIR for associated individual ECM)	<b>Incidental Repair Measure (IRM)</b> (Cost must be included in SIR for whole unit package of ECM)	<b>Health and Safety Measure</b> (Separate cost justification. Not included in SIR)
Attic insulation	Eave baffles, hatch dam, dams for heat producing devices	Attic vents. Minor roof repair to preserve insulation. (if identified as IRM in Grantee Plan)	Minor repair of leaking roof that may create moisture/mold issue in attic insulation. (if identified as H/S measure in Grantee Plan)
Wall insulation	Sealing high and low openings in balloon framing	Sealing unusual openings as in void areas between double ceilings. Minor roof repair to preserve insulation. (if identified as IRM in Grantee Plan)	Minor repair of leaking roof that may create moisture/mold issue in new wall insulation. (if identified as H/S measure in Grantee Plan)
Air Sealing	Fasteners for patches	Unusually large (defined by Grantee), such as more than 1 sheet of sheetrock, patching materials and labor	
Attic hatch – (a required part of the larger air sealing ECM, sealing the access opening with a rigid lid and weatherstripping)	Items to complete proper construction such as: hold down clasps, handles, caulk for ceiling-to hatch frame seal, insulation	Demolition and/or framing for a new hatch, new ceiling trim and stop	

Crawlspace or knee wall access door (a required part of the larger air sealing ECM, sealing the access opening with a rigid door and weatherstripping)	Hinges, latches, insulation	Demolition of deteriorated existing frame, new framing, new trip and stop	
Caulking, weatherstripping existing windows (done as a part of the larger air sealing ECM)	Backer rod, cleaning off old caulk	Primer or sealer, replacing deteriorated framing, other prep repair	
Vinyl replacement windows for double hung sashes	Fasteners, interior and exterior caulk materials & labor	Replace broken stops, replace or repair rotted jambs and wall framing	
Replacement or repair of heating/cooling systems	All typical accessories for proper installation	Flue repair, providing combustion air from outside the CAZ as needed	All, including flue repair and combustion air from outside CAZ as needed, if the system is inoperable, per Grantee H&S plan
Heating/cooling system replacement	Include all associated costs within replacement cost	Construction of separate CAZ per code requirement	Include all associated costs if ASIR disqualifies as ECM, per Grantee H&S plan
CFL		Replace hazardous light socket or fixture. (if identified as IRM in Grantee Plan)	Replace hazardous light socket or fixture. (if identified as H&S measure in Grantee Plan)



## VIII. CAPITAL-INTENSIVE EFFICIENCY

*See 10 CFR 440*

LIHEAP funding for Capital Intensive furnace or cooling efficiency modifications includes those major heating and cooling modifications which require a substantial amount of funds, including replacement and major repairs, but excludes such items as tune-ups, minor repairs, and filters.

AEO requires that replacement HVAC systems be required by the ECOS audit as an Energy Conservation Measure (ECM); however, the energy audit cannot determine if there is a cracked heat exchanger, etc.; therefore, in these circumstances, AEO allows LIHEAP funds to be used to address the HVAC system. Please see guidance in the heat and air section of this manual in addressing this measure.

Additionally, the state has chosen to address space heaters not covered by DOE policy in this category. Using LIHEAP funds, a Subgrantee can replace defective space heaters with models meeting ANSI Z21.11.2. Please refer to the heat and air section of this manual for further guidance.

The primary use of LIHEAP Capital Intensive funds is to replace an unvented space heater with a vented one if it is the primary source of heat. The funds can also be used to remove secondary space heaters that are not compliant. If after a clean and tune up of a furnace, it is found to be not repairable, a request can be made to AEO to replace the furnace. On any amount over \$2,500 a waiver must be approved with justification provided for the request.

## **IX. DENIAL/DEFERRAL/REFERRAL**

The decision to defer work in a dwelling is difficult but necessary in some cases. This does not mean that assistance will never be available, but that work must be postponed until the problems can be resolved and/or alternative sources of help are found. Note that Subgrantees, which include crews and contractors, are expected to pursue reasonable options on behalf of the Client, including referrals, and to use good judgment in dealing with difficult situations.

The following are reasons for deferrals: Beyond the Scope; Health & Safety; Energy Audit; Client Denials & Referrals.

WAP 23 must be given to the Client with the denial/deferral form. Refer to Health & Safety Plan (Section 7.V.B.) for specific guidance on reasons for denial, deferral/referral, and other special situations.

### **Creating Deferrals in ECOS**

If the Auditor has determined that a building must be deferred he/she must complete the following steps in ECOS:

- Step 1: Click on Priority List;
- Step 2: Click “Create Audit” on desired client;

#### **In the Building:**

- Step 3: Click on “Audit Summary”;
- Step 4: Check box – “Deferral of Service”;
- Step 5: Add comments in the “Deferral of Services Comment” box; and
- Step 6: Upload WAP 23 (Fair Hearing form) and WAP 35 (Deferral form) & photographs.

### **Billing Deferrals in ECOS**

Have the Auditor determine how much time was spent in driving to the deferred unit and how much time was spent during the pre-audit and back to agency if no other audit was conducted. If another unit was audited, then the distance from the deferred unit to the next unit can only be counted. The same holds true if the deferred unit was the second unit seen that day. In addition to on-site time spent, the Auditor must determine how much time was spent inputting data into the system at the office. Once the Auditor’s time has been aggregated, the fiscal staff must input the salary/fringe in two (2) places:

- Step 1: Capture all time in Program Support, under
  - a. On-Site Salary and On-Site Fringe (in the field); and/or
  - b. Off-Site Personnel/Fringe (office time).

If multiple Auditors were present for the site visit both salaries/fringe should be captured, however, only one (1) Auditor can account for time in the office inputting the data.

### Beyond the Scope:

Under the WAP program there are many reasons to deny a home for being “beyond the scope,” of the program. In order to understand what is beyond the scope of the WAP program, assessors must first understand what the actual purpose and scope of WAP is. The official definition of the purpose and scope can be found in the Code of Federal Regulations (CFR) 10 440.1. The CFR reads as follows:

*“This part implements a weatherization assistance program to increase the energy efficiency of dwellings owned or occupied by low-income persons or to provide such persons renewable energy systems or technologies, reduce their total residential expenditures, and improve their health and safety, especially low-income persons who are particularly vulnerable such as the elderly, persons with disabilities, families with children, high residential energy users, and households with high energy burden.”*

In some instances homes need major repairs to improve the health and well-being of the individuals, however these major repairs may not increase the energy efficiency of the dwelling, or provide renewable energy systems or technologies. In these cases the home must be deferred.

### Health & Safety:

Under the DOE WAP program there are many reasons to deny a home for Health and Safety Reasons. The AEO has developed Health and Safety Guidance to assist the Subgrantee in the decision making process.

The Health and Safety Plan provides guidance on how to perform the mechanical, visual, and sensory inspections. When WAP funding cannot alleviate the Health and Safety hazards prior to the installation of Energy Conservation Measures (ECM) the home should be deferred. Documentation for the deferrals may include but are not limited to the following:

- **Appliances** - If a cook stove is deemed a health and safety hazard (i.e., fire hazard or excess carbon monoxide) and the hazard cannot be resolved, the Client should be informed and the home temporarily deferred for thirty (30) days to allow the Client an opportunity to bring the appliance into compliance. The primary method of inspection will include combustion testing and a visual inspection. If the home fails the combustion tests and visual inspection, the home should be deferred. Documentation for denial should include test results and/or photos supporting the visual inspection.
- **Asbestos** - Asbestos can be found in many materials of the home. Asbestos can be found in the siding, ceilings, vermiculite, or pipe insulation. When a home has asbestos siding, insulating walls should be accomplished through the inside of the home. Asbestos in vermiculite may be encapsulated but this may be cost prohibitive. Asbestos on pipes may be removed by an AHERA certified professional but this too may be cost prohibitive. In cases where too much asbestos is present, a home should be deferred. Documentation should include cost estimates to remove the asbestos and photographic evidence.
- **Biologicals & Unsanitary Conditions** - Visual and sensory inspection should be performed for the purpose of detection of health and safety hazards such as: bacteria,

viruses, raw sewage, rotting wood, garbage and mustiness. Cases where a known biological agent is present and may create a serious risk to occupants or weatherization crews/contractors, the home should be deferred. Documentation should include written notes by the assessor as well as photographic evidence supporting the visual inspection.

### Energy Audit

Under the DOE WAP program there are many reasons to deny a home. One of the reasons for denial is that a home may not benefit from WAP services. As described in 10 CFR §440.21 the energy audit must describe the cost effectiveness tests before materials can be installed in an eligible dwelling unit. If a home does not pass the cost effectiveness test of the energy audit the dwelling is not eligible for WAP services. In order to understand the cost effectiveness of a home, an auditor must know how to read the ECOS audit reports.

### *Reading the ECOS Reports*

In order for the home to be eligible to receive WAP services, the whole house **“Cumulative SIR” must have a SIR of 1.0 or greater.**

The report that the auditor is most interested in is the **Energy Saving Measure Economics** table. This table can be divided into three parts:

- 1) Repairs needed to complete the weatherization measures
- 2) The Weatherization Measures
- 3) Health and Safety items

### Repairs

Repair items should always appear at the top of the Energy Saving Measure Economics table. Repairs mean those incidental repairs necessary for the effective performance or preservation of weatherization materials. These measures do not provide energy savings and show a Cumulative SIR of 0.

### Client Denials and Referrals

There will be some instances where a weatherization applicant is qualified on paper, but after the first visit the applicant has to be denied for home related reasons (for example, home was not structurally sound causing any weatherization to be ineffective). The denied Clients, however, remain in need.

The AEO has attempted to address this issue by including agencies on the Policy Advisory Council (PAC) who address housing related issues and developing a Memorandum of Understanding (MOU) with another federal program that address housing related issues. The biggest challenge will be in finding a match between those in need and those organizations capable of assisting those people. In light of that, it is recommended that “denied files” (based on physical challenges) not be “dead-ended” at the agency/program that denied them. Instead, the essential aspects of the file, and reason for denial, be made into a PDF file and emailed

(along with a few photos, if appropriate) to members of the established support network (city, county, non-profits) who may be able to assist the potential client.

The existing community support network can evaluate the case and determine what action is possible and appropriate. This process may also strengthen and reinforce the existing communication paths between these officers and agencies.

**Recommendation Summary:** Turn files denied for physical reasons into referral *emailable* files and send them to sister agencies and other non-profit organizations that possibly may be able to assist.

The following is a model walk-away policy intended to list the more common conditions and situations a Subgrantee may encounter while delivering weatherization services. This list is not intended to be all inclusive of those instances in which a Subgrantee may choose not to weatherize a unit. In some instances, corrective measures by the client may allow program services to proceed. At a minimum, the Subgrantee walk-away policy should contain the following:

#### **A. Documentation**

In the event a Subgrantee cannot or chooses not to weatherize a dwelling unit, it must notify the Client and owner/authorized agent in writing and include the following items. It is suggested that Subgrantees develop guidelines and a standardized form for such situations.

The form should include the following:

- Client's name and address, dates of the audit/assessment and when the Client was informed;
- The nature and extent of the problem(s) and how the problem(s) relate to the determination to not weatherize the unit;
- Any corrective action required before weatherization services can be initiated;
- A time limit for correcting problems so that weatherization services may be rescheduled;
- The right of appeal; and
- All correspondence justifying the decision to "walk-away" must be kept in the Client file.

## **B. Withholding of Weatherization Services**

A Subgrantee may withhold weatherization services under the following conditions:

- A dwelling unit is vacant.
- A dwelling unit is for sale.
- A dwelling unit is scheduled for demolition.
- A dwelling unit is found to have serious structural problems that would make weatherization impossible or impractical.
- A dwelling unit is deemed by the auditor to pose a threat to the health or safety of the crew or subcontractor.
- A mobile home is improperly installed (for example, inadequate supports).
- A dwelling unit is uninhabitable (for example, such as a burned out apartment).
- When there are minor children in the dwelling but no adult Client or adult agent of the Client, Subgrantee personnel must not enter the dwelling.
- An adult Client or adult agent of the Client need not be present if the estimator or crew foreman feels satisfied with a signed note from an adult Client or adult agent of the Client stating their permission to enter the dwelling occupied by the minor children.
- The Client is uncooperative with the Weatherization Subgrantee, either in demanding that certain work be done and refusing higher priority work which is needed, or by being abusive to the work crew or subcontractor, or by being unreasonable in allowing access to the unit, every attempt should be made to explain the program and the benefits of the work. If this fails, work should be suspended and the State Weatherization Office consulted.
- Obvious discrepancies are found between the information supplied by the Client on the application and observed conditions at the time of weatherization. The Subgrantee must resolve these discrepancies before weatherization work can continue.
- If, at any time prior to the beginning of work (materials installed in a unit), the Subgrantee determines that the Client is no longer eligible or Subgrantee personnel believe that circumstances may have changed, the unit shall not be weatherized until updated information can be obtained from the Client.
- There are rats, bats, roaches, reptiles, insects, animals or other vermin that are inappropriately or not properly contained on the premises.
- There is health or safety hazards that must be corrected before weatherization services may begin including, but not limited to:
  - The presence of animal feces and/or other excrement,
  - Disconnected waste water pipe,
  - Hazardous electrical wiring, or
  - Unvented combustion appliances.
- There are illegal drugs or illegal activities occurring on the premises.
- The Client or owner is physically or verbally abusive to Subgrantee personnel.
- The dwelling unit or parts thereof are being remodeled and weatherization work is not coordinated with a housing rehabilitation program.

See Weatherization  
Health and Safety  
Guidance (WPN 11-6,  
Effective January 12,  
2011

- The eligible household moves from the dwelling unit where weatherization activities and services are in progress. In such a case, the Subgrantee must determine whether to complete the work and the circumstances must be documented in the Client file.

**C. Deferral conditions may include:**

- The Client has known health conditions that prohibit the installation of insulation and other weatherization materials.
- The building structure or its mechanical systems, including electrical and plumbing, are in such a state of disrepair that failure is imminent and the conditions cannot be resolved cost-effectively.
- The house has sewage or other sanitary problems that would further endanger the Client and weatherization installers if weatherization work were performed.
- The house has been condemned or electrical, heating, plumbing, or other equipment has been “red tagged” by local or state building officials or utilities.
- Moisture problems are so severe they cannot be resolved under existing health and safety measures and with minor repairs.
- Dangerous conditions exist due to high carbon monoxide levels in combustion appliances, and cannot be resolved under existing health and safety measures.
- The Client is uncooperative, abusive, or threatening to the crew, subcontractors, auditors, inspectors, or others who must work on or visit the house.
- The extent and condition of lead-based paint in the house would potentially create further health and safety hazards.
- In the judgment of the energy auditor, any condition exists which may endanger the health and/or safety of the work crew or subcontractor, the work should not proceed until the condition is corrected.
- Knob-and-Tube Wiring (KTW) is permissible under DOE WAP; however, Arkansas Building Code does not allow the installation of insulation over KTW.

## Appendix A: Reference Materials

1. **Forms and Resources** are on a disk that has been distributed to each Subgrantee.
2. **SWS Field Guide for Single-Family Homes.**
3. **10 CFR Part 440:** Weatherization Assistance for Low-Income Persons  
[http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr440\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr440_main_02.tpl)
4. **10 CFR Part 600:** Financial Assistance Rules  
[http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr600\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title10/10cfr600_main_02.tpl)  
10 CFR Part 440 – Available on line.
5. **Arkansas State Plan** – DOE WAP
6. **OMB Super Circular:** Audits of States, Local Governments, and Non-Profit Organizations  
[http://www.whitehouse.gov/sites/default/files/omb/assets/a133/a133\\_revised\\_2007.pdf](http://www.whitehouse.gov/sites/default/files/omb/assets/a133/a133_revised_2007.pdf)  
[http://www.whitehouse.gov/omb/circulars/a133\\_compliance?supplement?2010](http://www.whitehouse.gov/omb/circulars/a133_compliance?supplement?2010)
7. **40 CFR 745:** Lead-Based Paint Poisoning Prevention in Certain Residential Structures  
<http://www.eap.gov/lead/pubs/renovation.htm>
8. **36 CFR Part 800:** Protection of Historic Properties  
[http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title36/36cfr800\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title36/36cfr800_main_02.tpl)
9. **Weatherization Program Notices (WPN):**  
<http://www.waptac.org/Rules-0024&-Guidance/Program-Guidance.aspx>



## Appendix B: Arkansas Weatherization Forms

Number	Name	Purpose	Frequency
<b>WAP 01</b>	Invoice and Expenditure Reports	Request reimbursement of actual expenses	5 <sup>th</sup> of each month
<b>WAP 02*</b>	Application	New Client intake	As needed
<b>WAP 03</b>	Advances	Request advance payment of anticipated expenses	5 <sup>th</sup> of each month
<b>WAP 04</b>	Production Reports	Report unit completion, training and equipment purchases	5 <sup>th</sup> of each month
<b>WAP 06</b>	Vehicles/Equipment Purchases	Request to purchase vehicles and equipment over \$5,000	As needed
<b>WAP 07</b>	Monitoring Report	Record observations and findings of compliance monitors	As needed
<b>WAP 07a</b>	File Review Addendum	Record Observations and findings of compliance monitors	As needed
<b>WAP 07b</b>	Home Inspection Addendum	Record observations and findings of compliance monitors	As needed
<b>WAP 08*</b>	Final Inspection Checklist	Record condition of home after weatherization	As needed
<b>WAP 09*</b>	Client Response Form	Allow Clients to confirm completion of work and provide feedback	As needed
<b>WAP 10*</b>	Health and Safety Checklist	Record all health and safety test results before and after weatherization	As needed
<b>WAP 11*</b>	Pressure Pan Duct Leakage Test	Record major source(s) of air leaks in home	As needed
<b>WAP 12*</b>	Fair Hearing Withdrawal	Record Client choice to withdraw from the waiting list/weatherization program	As needed
<b>WAP 13*</b>	Client Education Checklist	Verify Client was informed about energy-saving measures and weatherization work	As needed
<b>WAP 14</b>	ECOS Tool	Record unit data for entry into ECOS Audit	As needed
<b>WAP 16*</b>	Building Check and Job Order Sheet	Record work to be done and materials to be used on a unit	As needed
<b>WAP 17*</b>	Lessor/Rental Plan Agreement	Document landlord/property owner agreement with three-year rental/property sale restrictions	As needed
<b>WAP 19</b>	Refrigerator Replacement Agreement	Document procedures for removing and disposing of obsolete refrigerators	As needed

Number	Name	Purpose	Frequency
<b>WAP 20</b>	Sample Client Notification Letter re: Income Documentation	Notify Clients of income documentation requirements	As needed
<b>WAP 21</b>	Weatherization Budget	Used to apply for WX Funding	Annually
<b>WAP 22</b>	Weatherization Budget	Used to apply for WX Funding	Annually
<b>WAP 23*</b>	Fair Hearings Notice and Request	Notifies Clients of Fair Hearing Rights and allows them to request a Fair Hearing	As needed
<b>WAP 25</b>	Grant Agreement	Used to formalize grant terms and conditions with between Subgrantees and AEO	Annually
<b>WAP 26*</b>	Lead Test Kit Documentation Form	Used to document lead tests and results	As needed
<b>WAP 27</b>	Lead-Safety Training Log	Used to document training of non-EPA-certified workers	As needed
<b>WAP PROC A</b>	Bidder Checklist	Used to inform bidders what documents are needed to complete the application process	As needed
<b>WAP PROC B</b>	General Instructions	Used to explain general terms and conditions of procurement process	As needed
<b>WAP PROC C</b>	Bidder/Contractor Application	Used by Bidders to submit bids	As needed
<b>WAP PROC D-H</b>	Materials and Labor Bid Response Sheets	Used by bidders to submit bids	As needed
<b>WAP PROC I-M</b>	Bid Evaluation and Certification Sheets	Used by agency staff to review/evaluate bids	As needed
<b>WAP PROC N</b>	Procurement Procedures		As needed
<b>WAP PROC O</b>	Legal Notice/Advertisement		As needed

\*Used in Client files.