

memorandum

DATE: January 15, 2010
REPLY TO:
ATTN OF: EE-2K
SUBJECT: Approval of Audit Procedures and Weatherization Priority Lists for Single-Family Homes and Mobile Homes in Pennsylvania
TO: Angela S. Young, Division Director, Intergovernmental Projects & Outreach Division, Project Management Center, National Energy Technology Laboratory

To ensure that the energy audit procedures used in the U.S. Department of Energy's (DOE's) Weatherization Assistance Program possess sufficient technical rigor, states must submit their energy audit procedures to DOE for approval every five years. As part of their energy audit procedures, states may use prioritized lists of prescriptive weatherization measures also known as priority lists.

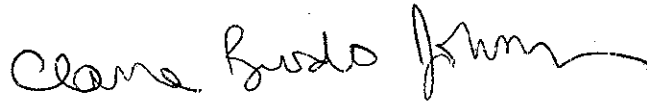
DOE approved Pennsylvania's overall energy auditing procedures and priority list for single-family homes on October 18, 2001. DOE approved Pennsylvania's energy auditing procedures for mobile homes on October 16, 2001 and priority list for mobile homes on April 27, 2005. On October 16, 2009, the Commonwealth of Pennsylvania requested that DOE approve its energy audit procedures and priority lists for single-family homes and mobile homes that it recently developed using the Weatherization Assistant 8.5. DOE received the following materials to assist in its review of Pennsylvania's request:

- Development of a Measure Prioritization List for Pennsylvania, 1/14/2010;
- Priority Lists of Simplified Regions of Additional Measures, 1/8/2010;
- Weatherization Standards and Field Guide for Pennsylvania, July 2008 Edition;
- NEAT and MHEA data base file including input data and set-up parameters; and
- Development of a Measure Prioritization List for Pennsylvania, 9/30/2009.

The request has been reviewed in accordance with Weatherization Program Notice 01-4 and was found to comply with §440.21 of the final rule. Therefore, Pennsylvania's energy audit procedures and priority lists for single-family homes and mobile homes are approved pending the conditions described below

- The approval of the energy audit procedures does not constitute approval of measures not listed in Appendix A, or not otherwise approved by the Department, for expenditure of Weatherization funds.
- The approval of the energy audit procedures does not constitute approval of a state's health and safety plan or the materials listed therein for purposes of allowable expenditures.

Please provide this information to the Commonwealth of Pennsylvania. If there are any questions, please contact Erica Burrin at (304) 285-4094.



Claire Johnson
Acting Program Manager
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cc: Greg Davoren, Energy Program Specialist, Project Management Center, National Energy
Technology Laboratory
Jordan Kelso, Engineer, D&R International

Table 6a. PA WAP Single Family Home Measures Selection Priority List

BUILDING SHELL RETROFITS

Air Seal as per blower door guided protocols
 Duct Sealing as per blower door guided or duct diagnosis protocols

INSULATION	Existing Condition	
Ducts (in unconditioned spaces)	No Insulation	add R-11 wrap
Open Attic Ceilings	No Insulation	add R-38
Kneewall (in finished attic)	No Insulation	add R-11-13 batt or fill cavity where dimensions allow add batts or fill cavity where dimensions allow up to 12 inches in depth
Roof Rafter (in finished attic)	No Insulation	fill to 3.5 lbs/cu.ft. with loose fill insulation where dimensions will allow
Closed Wall Cavities (adjacent to unconditioned spaces)	No Insulation	add R-15 batt and cover with air barrier
Open Wall Cavities (adjacent to unconditioned spaces)	No Insulation	fill to 3.5 lbs/cu.ft. with loose fill insulation
Closed Floor Cavities (adjacent to unconditioned spaces)	No Insulation	add R-19 batt
Open Floor Cavities (uncond. basements and crawl spaces)	No Insulation	
Closed Ceiling Cavities (adjacent to unconditioned spaces)	No Insulation	fill cavity where dimensions allow up to 12 inches in depth
Sill Box (rim joist) (conditioned basements)	No Insulation	add R-11 polystyrene and seal
Open Attic Ceilings	R-11 existing	add R-30
Open Attic Ceilings	R-19 existing	add R-19

BASELOAD MEASURES

Lighting replace incandescent and halogen lamps with CFL lamps as per PA WX Standards
 Domestic Hot Water measures add R-11 wrap, pipe insulation, and other water heating measures where
 Refrigerator Replacement replace as per PA WX standards using WAPTAC tool

MECHANICAL RETROFITS

Install automatic setback thermostat with double setback if possible
 Repair or replace as per Health & Safety and efficiency protocols in PA WX Standards and Field Guide
 If cost effective to replace use 90+ unless structurally impossible

WINDOWS AND DOORS

Missing or Deteriorated windows beyond repair Replace windows with Energy Star labeled windows

Table 6b. PA WAP Mobile Home Measure Selection Priority List

BUILDING SHELL RETROFITS

Air Seal as per blower door guided protocols
 Duct Sealing as per blower door guided or duct diagnosis protocols

INSULATION	Existing Condition	
Wall System (fiberglass batts or loose fill fiberglass only)	No Insulation	add R-11-13 batts or fill cavity where dimensions allow
Roof System (loose fill fiberglass only)	No Insulation	fill cavity where dimensions allow
Floor System (loose fill fiberglass only)	No Insulation	fill cavity where dimensions allow
Floor System (loose fill fiberglass only)	1.5" Insulation existing	fill cavity where dimensions allow
Floor System (loose fill fiberglass only)	2" existing	fill cavity where dimensions allow
Roof System (loose fill fiberglass only)	1" foam core existing	fill cavity where dimensions allow
Roof System (loose fill fiberglass only)	1.5" foam core existing	fill cavity where dimensions allow
Floor System (loose fill fiberglass only)	3.5" existing	fill cavity where dimensions allow
Wall System (fiberglass batts or loose fill fiberglass only)	1.5" existing	add R-11-13 batts or fill cavity where dimensions allow
Roof System (loose fill fiberglass only)	1" foam + 1.5" existing	fill cavity where dimensions allow
Roof System (loose fill fiberglass only)	1" foam + 2" existing	fill cavity where dimensions allow

BASELOAD MEASURES

Lighting replace incandescent and halogen lamps with CFL lamps as per PA WX Standards and Field Guide
 Domestic Hot Water measures add R-11 wrap, pipe insulation, and other water heating measures where manufacturer specs allow and as per PA WX Standards and Field Guide
 Refrigerator Replacement replace as per PA WX standards using WAPTAC tool

MECHANICAL RETROFITS

Install automatic setback thermostat with double setback if possible
 Repair or replace as per H&S and efficiency protocols in PA WX Standards and Field Guide
 If cost effective to replace use 90+ unless structurally impossible

WINDOWS AND DOORS

Missing or Deteriorated window units beyond repair replace with Energy Star labeled slider or double hung units and self-storing storm windows
 Deteriorated doors beyond repair replace with factory replacement types