

## DF2: HOUSING UNIT INFORMATION SURVEY

**Thank you for your prompt response to this data request which is part of the ARRA-period evaluation of the Weatherization Assistance Program. Evaluation results will provide essential feedback to the weatherization community and inform policymakers about the program's effects on clients' energy consumption, cost savings, and non-energy benefits.**

This data form collects detailed information about homes weatherized by your agency in Program Year 2010. The information you supply will be used with billing history data to better understand energy savings attributable to the Weatherization Assistance Program under ARRA.

Please use this form (DF2) to provide information about any single family detached and attached houses, mobile homes, or individual units within multi-family buildings. The Building Information Survey (DF3) should be used to document information on small or large multifamily buildings in which the whole building and all units in the building were weatherized or are waitlisted. Refer to the definitions of each building type provided at the end of the survey because these definitions are slightly different than those commonly used within the Weatherization Assistance Program.

All of the information obtained from this survey will be protected and will remain confidential. The data will be analyzed in such a way that the information provided cannot be associated back to your state, your agencies, or the housing units and clients that your state served.

Thank you in advance for completing this survey.

Public reporting burden for this collection of information is estimated to average twenty hours per weatherization agency, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Office of the Chief Information Officer, Records Management Division, IM-11, Paperwork Reduction Project (\_\_\_\_\_), U.S. Department of Energy, 1000 Independence Ave SW, Washington, DC, 20585-1290; and to the Office of Management and Budget (OMB), OIRA, Paperwork Reduction Project (\_\_\_\_\_), Washington, DC 20503.

Form completed by: \_\_\_\_\_ Date: \_\_\_\_\_

### IDENTIFICATION

[Q1-5 will be pre-completed by the evaluation team]

1. Agency name: \_\_\_\_\_

2. State: \_\_\_\_\_

3. Agency job number: \_\_\_\_\_

4. Occupant name: \_\_\_\_\_

5a. Site address: \_\_\_\_\_ 5b. City: \_\_\_\_\_

### WEATHERIZATION INFORMATION

Weatherization dates (not audit or inspection dates):

6a. Started: \_\_\_\_\_

6b. Completed: \_\_\_\_\_  
(month) (day) (year)

***The start date is the first date that weatherization improvements were made to the home. The weatherization start date is not the date the audit or home assessment was conducted UNLESS energy efficiency improvements were made at the time of the audit. Client education and low-cost measures such as light bulbs and showerheads ARE considered energy efficiency improvements, and if any of those are implemented at the time of the audit, then the start date is the audit date.***

***The end date is the last date that weatherization improvements were made to the home, including any rework required after agency or state-level post-weatherization inspections. The date of the post-inspection should NOT be used as the weatherization end date unless the post-inspection was conducted on the last day that improvements were made to the home and no rework was required.***

7. Was this a “reweatherized” unit? (*check only one*)

- Yes
- No
- Don't know

***Check “yes” if the home was weatherized prior to PY 2010.***

8. Did this client file a complaint about the weatherization services you provided? **(check only one)**
- Yes
  - No
  - Don't know

## HOUSING UNIT

9. Building type – see definitions at the end of the survey: **(check only one)**
- Single-family detached house
  - Single-family attached house (e.g., side-by-side duplex, townhouse, row house)
  - Single-family – unknown whether attached or detached
  - Mobile home
  - Small multifamily building (2-4 units per building and not a SF attached house)
  - Large multifamily building (5 or more units per building and not a SF attached house)
  - Shelter
  - Don't know
10. Number of stories above grade: **(check only one)**
- 1
  - 2
  - 3
  - 4 or more
  - Don't know
  - Not applicable

***Please list the number of stories above ground-level. If there are half-stories, round up to the nearest whole number. For example, please check “2” for a 1.5-story split-level house.***

11. If single-family attached, number of units attached (adjacent) to this unit: **(check only one)**
- 1
  - 2
  - 3
  - 4 or more
  - Don't know
  - Not applicable

***For single family attached homes, please list the number of separate housing units that share at least one wall with this housing unit. For example, check “2” if housing unit is a row house with homes on either side. Check “1” for a side-by-side duplex.***

12. If mobile home, number of rooms that have been added on: **(check only one)**

- None
- 1
- 2
- 3
- 4 or more
- Don't know
- Not applicable

13. If small or large multifamily building, number of units in the building: **(check only one)**

- 2
- 3
- 4
- 5-9
- 10-19
- 20-29
- 30-49
- 50-99
- 100 or more
- Don't know
- Not applicable

14. Year house/building originally built: **(check only one)**

- 2000 or later
- 1990 to 1999
- 1980 to 1989
- 1970 to 1979
- 1960 to 1969
- 1950 to 1959
- 1940 to 1949
- 1930 to 1939
- 1920 to 1929
- 1910 to 1919
- 1900 to 1909
- Before 1900
- Don't know

Conditioned floor area at the time of weatherization:

15a. Heated floor area: \_\_\_\_\_ ft<sup>2</sup>  Don't know

15b. Air conditioned floor area: \_\_\_\_\_ ft<sup>2</sup>  Don't know

***Include the basement only if it is intentionally conditioned (heated and/or cooled).***

***If you only know the total square footage of the home, please select "don't know" rather than listing the total square footage.***

16. Primary fuel used to heat the unit during the winter before weatherization: ***(check only one)***

- Electricity
- Natural gas
- Propane/LPG
- Fuel oil
- Wood
- Other (specify: \_\_\_\_\_)
- Don't know

17. Primary fuel used for water heating before weatherization: ***(check only one)***

- Natural gas
- Propane/LPG
- Electricity
- Other (specify: \_\_\_\_\_)
- Don't know

18. Type of *primary* space-heating system before weatherization: ***(check only one)***

- Central (ducted) warm-air furnace (forced-air or gravity, any fuel including electricity)
- Heat pump
- Built-in electric units (e.g., electric baseboards, ceiling heat)
- Steam or hot water system (e.g., floor or baseboard radiators, convectors)
- Floor, wall, or pipeless (ductless) furnace (e.g., floor or wall furnace)
- Room/space heater (nonportable)
- Portable space heater
- Cooking stove
- None
- Don't know

***Select "steam or hot water system" for homes heated with boilers.***

19. If small or large multifamily building, was the primary space-heating system shared with other housing units? **(check only one)**

- Yes
- No
- Don't know
- Not applicable

20. Supplemental fuel(s) used to heat the unit during the winter before weatherization: **(check all that apply)**

- Electricity
- Natural gas
- Propane/LPG
- Fuel oil
- Wood
- Other (specify: \_\_\_\_\_)
- Don't know

21. Type of operable air conditioning system present before weatherization: **(check all that apply)**

- Central air conditioner/heat pump
- Window/wall units
- Evaporative cooling system ("swamp coolers")
- None
- Don't know

22. Number of window/wall air conditioning units: **(check only one)**

- None
- 1
- 2
- 3
- 4 or more
- Don't know

## AUDIT

29. Primary method used to select weatherization measures for this house (excluding health, safety, and repair measures and general heat waste measures): **(check only one)**

- Priority list
- Calculation procedure (e.g., spreadsheet, computerized audit)
- Other (specify: \_\_\_\_\_ )

30. If a calculation procedure was used, the name of the procedure(s): **(check all that apply)**

- AK Warm
- EA-3
- EASY
- EA-QUIP
- HomeCheck
- Meadows
- REES
- REM/Rate
- SMOC-ERS
- TIPS
- TREAT
- Weatherization Assistant (NEAT/MHEA)
- WXEOR
- Other (specify: \_\_\_\_\_ )
- Not applicable

## DIAGNOSTICS AND INSPECTIONS

If you know when a diagnostic/inspection procedure was performed, please check the appropriate box(es) in the first three response columns. If a diagnostic/inspection procedure was performed but you do not know when, please check the box in the “Performed?” column.

Diagnostic measurement or inspection	Diagnostic/inspection performed during:			Performed?
	Audit/house assessment	Measure installation	Post-inspection	
Pressure diagnostics:				
31a. House air leakage (blower door measurement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31b. Zonal pressure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31c. Room-to-room pressures (distribution system balancing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31d. Duct pressure pan measurements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31e. Duct blower measurement (duct air leakage rate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31f. Blower door subtraction meas. (duct air leakage rate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Space-heating system:				
32a. Flue gas analysis (steady-state efficiency measurement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32b. Heat rise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32c. CO level in flue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32d. CO level of equipment room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32e. Draft/spillage (normal operation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32f. Worst case draft/spillage (CAZ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32g. Safety inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air-conditioning system:				
33a. Refrigerant charge (e.g., superheat or subcooling)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33b. Safety inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HVAC components:				
34a. Air handler flow rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34b. Thermostat anticipator current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hot-water (water-heating) system:				



Diagnostic measurement or inspection	Diagnostic/inspection performed during:			Performed?
	Audit/house assessment	Measure installation	Post-inspection	
35a. Flue gas analysis (steady-state efficiency measurement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35b. CO level in flue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35c. CO level of equipment room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35d. Draft/spillage (normal operation)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35e. Worst case draft/spillage (CAZ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35f. Hot water temperature	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35g. Shower head flow rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35h. Faucet flow rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35i. Safety inspection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other CO measurements:				
36a. Cook stove	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36b. Kitchen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36c. Main living area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other diagnostics and inspections:				
37a. Refrigerator energy use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37b. Exhaust fan air flow rate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37c. Infrared scanning (camera)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37d. Radon testing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37e. Other (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37f. Other (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37g. Other (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Record the diagnostic measurements taken on **THIS** housing unit: *(fill in all that were taken)*

***For diagnostics that were performed multiple times, please provide the measurements that are closest to the pre-weatherization and post-weatherization conditions of the home.***

Diagnostic measurement	Pre-weatherization	Post weatherization
House air leakage (blower door measurement):		
38a. Air leakage rate	cfm	cfm
38b. House WRT outside pressure difference <sup>1</sup>	Pa	Pa
Duct leakage (pressure pan measurements):		
39a. Sum of pressure pan readings <sup>2</sup>	Pa	Pa
39b. Number of registers included in sum <sup>3</sup>		
39c. House WRT outside pressure difference <sup>4</sup>	Pa	Pa
Duct leakage (duct blower measurements) <sup>5</sup> :		
40a. Total duct leakage rate	cfm	cfm
40b. Duct leakage to the outside	cfm	cfm
40c. Duct WRT outside pressure difference <sup>6</sup>	Pa	Pa
Steady-state efficiency (flue gas analysis):		
41a. Primary space-heating system	%	%
41b. Secondary space-heating system	%	%
41c. Hot water heater	%	%

<sup>1</sup> Report the pressure differential at which the blower door test was performed. A typical value is 50 Pascals. Do not report baseline pressure (typically less than 5 Pascals).

<sup>2</sup> Total all of the individual measurements taken at registers in the home. The value for each register should be between 0 and 50 Pascals.

<sup>3</sup> Total the number of registers at which the test was performed.

<sup>4</sup> Report the pressure differential at which the test was performed (from blower door). A typical value is 50 Pascals.

<sup>5</sup> If total duct leakage (inside the home and to the outside) was measured with a Duct Blaster™ or similar equipment, report results in 40a. If duct leakage to the outside was measured, report this result in 40b. Most agencies will report results in “a” or “b,” but not both.

<sup>6</sup> Report the house-to-outside pressure differential (from blower door) at which the leakage-to-outside test was performed. A typical value is 25 Pascals.

## MEASURES INSTALLED

If you know whether in-house crew or a contractor installed a given measure, please check the appropriate box in the first two response columns. If a measure was installed but you do not know whether it was installed by in-house crew or a contractor, please check the box in the “Installed?” column.

Measure	Installed by		Installed?
	In-house crew	Contractor	
Air sealing work:			
42a. General house caulking and weatherstripping (e.g., doors, windows)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42b. Air sealing emphasizing bypasses (leaks identified by auditor and/or crew <b>without using a blower door</b> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42c. Air sealing emphasizing bypasses (leaks identified by auditor and/or crew <b>with aid of a blower door</b> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42d. Air distribution system (duct) sealing or repair <sup>7</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42e. Repairs to broken windows, doors, or other major holes in the building shell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42f. Other non-window air sealing work (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42g. Other non-window air sealing work (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insulation:			
43a. Attic insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If attic insulation was installed, please provide quantity: 43b. _____ square feet or 43c. _____ pounds  43d. What was the R value of attic insulation prior to weatherization? _____ (Leave blank if unknown. Enter 0 if there was no existing insulation.)			
43e. Wall insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If wall insulation was installed, please provide quantity: 43f. _____ square feet or 43g. _____ pounds			
43h. Floor insulation <sup>8</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43i. Rim or band joist insulation (sill box)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43j. Foundation wall insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43k. Duct insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<sup>7</sup> Check 42d if duct sealing or duct repair was performed. Check 46d if new ductwork was installed. Check 49c if new vents, grills or registers were installed.

<sup>8</sup> Exclude mobile home belly insulation, which should be listed under 43o.

Measure	Installed by		Installed?
	In-house crew	Contractor	
43l. White roof coat applied to mobile home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43m. Mobile home skirting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43n. Mobile home belly insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43o. Other insulation (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43p. Other insulation (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Windows:			
44a. New window (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44b. New window (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44c. If new windows were installed, please provide quantity: _____			
44d. Window glass repair or replacement not included under air sealing major holes in building shell (42e)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44e. Repair of window sashes or frames			
44f. Window screen repair/replacement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44g. Window lock replacement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44h. Storm window installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44i. Window shading (e.g., awning, film, sun screen)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44j. Other window treatments (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44k. Other window treatments (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Doors:			
45a. New door (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45b. New door (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45c. Door lock (new or replacement)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45d. Door or door framing repair not included under air sealing major holes in building shell (42e)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45e. Storm door installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45f. Other door treatments (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45g. Other door treatments (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central space heating systems (e.g., furnaces, boilers): <sup>9</sup>			

<sup>9</sup> Include central heating systems installed through programs other than WAP, such as emergency heating system replacements funded by LIHEAP.

Measure	Installed by		Installed?
	In-house crew	Contractor	
46a. New heating system (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46b. New heating system (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46c. Space-heating system repair (e.g., controls, safety items, flues)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46d. New ductwork installed			
46e. Space-heating system tune-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46f. Vent damper installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46g. Intermittent ignition device installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46h. Other heating system modification (specify: _____) <sup>10</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46i. Other heating system modification (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air-conditioning systems:			
47a. New air conditioner (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47b. New air conditioner (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47c. Air conditioner repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47d. Air conditioner recharge/tune-up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47e. Ceiling or whole-house fans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47f. Other air-conditioning system modification (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47g. Other air-conditioning system modification (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ventilation:			
48a. New bathroom exhaust fan installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48b. New kitchen exhaust fan installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48c. Repair to kitchen or bathroom exhaust fan (including ductwork)			
48d. Whole-house ventilation system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48f. Other ventilation system improvements (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48g. Other ventilation system improvements (specify: _____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<sup>10</sup> Check 42d if duct sealing or duct repair was performed. Check 46d if new ductwork was installed. Check 49c if new vents, grills or registers were installed.

Measure	Installed by		Installed?
	In-house crew	Contractor	
HVAC accessories:			
49a. New programmable (setback) thermostat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49b. New standard thermostat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49c. New duct vents, grills, or registers installed <sup>11</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49d. Standard air filter installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49e. High efficiency particulate arresting (HEPA) air filter installed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49f. Other HVAC accessories (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49g. Other HVAC accessories (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water-heating system:			
50a. New water heater (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50b. New water heater (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50c. Water-heating system repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50d. Water-heater tank insulation wrap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50e. Pipe insulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50f. Installed low-flow showerhead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50g. Installed low-flow device on faucet (aerator)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50h. Water heater temperature reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50i. Other water heating system measure (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50j. Other water heating system measure (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other baseloads:			
51a. Indoor lighting (energy efficient bulb or fixture)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51b. Outdoor lighting (energy efficient bulb or fixture)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51c. Lighting (indoor/outdoor location not recorded)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51d. Refrigerator (justified because cost effective)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51e. Refrigerator (justified for reason other than cost effectiveness)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51f. If new refrigerator is installed, how many old refrigerators were removed? _____			
51g. If new refrigerator is installed, how many stand-alone freezers			

<sup>11</sup> Check 42d if duct sealing OR duct repair was performed. Check 46d if new ductwork was installed.

Measure	Installed by		Installed?
	In-house crew	Contractor	
were removed? _____			
51h. Other baseload measure (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51i. Other baseload measure (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and safety and repair:			
52a. Smoke alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52b. CO monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52c. Attic ventilation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52d. Roof repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48e. Clothes dryer vent repair or replacement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52f. Ceiling repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52g. Wall repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52h. Floor repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52i. Foundation repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52j. Ground vapor barrier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52k. Gutter or downspout (installed or repaired)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52l. Grading of lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52m. Plumbing repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52n. Sewer repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52o. Electrical repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52p. Stair repair	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52q. Install/repair non-skid material on stairs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
52r. Install/repair safety gate at stairs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
52s. Install/repair grab bar in bathroom	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
52t. Install/repair non-skid material in bathtub	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
52u. Install/repair metal chimney liner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52v. Lead abatement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52w. Asbestos abatement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52x. Removal or safe storage of household poisons	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52y. Other health and safety/repair items (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Measure	Installed by		Installed?
	In-house crew	Contractor	
52z. Other health and safety/repair items (specify: _____ )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Client education:			
53a. Did the occupants receive an in-home visit in which energy education was provided?		Yes No Don't know	
53b. Did the occupants participate in a classroom training in which energy education was provided?		Yes No Don't know	

### SERC Addendum

Identify the SERC measures that were installed on **THIS** housing unit: (*check all that apply*)

Measure	Installed by		Installed?
	In-house crew	Contractor	
<b>RENEWABLE ENERGY</b>			
S1.1 Solar PV	<input type="checkbox"/>		
S1.2 PV: Shingles	<input type="checkbox"/>		
S1.3 Wind: Small-scale Residential	<input type="checkbox"/>		
S1.4 Passive Solar Panel			
<b>HOT WATER SYSTEMS</b>			
S2.1 Solar HW	<input type="checkbox"/>		
S2.2 Tankless/On-demand HW	<input type="checkbox"/>		
S2.3 Condensing HW	<input type="checkbox"/>		
S2.4 Heat Pump/Hybrid HW	<input type="checkbox"/>		
S2.5 Combination HW and Boiler	<input type="checkbox"/>		
S2.6 Other hot water	<input type="checkbox"/>		
<b>HVAC SYSTEMS</b>			
S3.1 Heat Pumps: Geothermal/Ground-Source	<input type="checkbox"/>		
S3.2 Heat Pumps: Air	<input type="checkbox"/>		
S3.3 Heat Pumps: Mini Split System Ductless	<input type="checkbox"/>		
S3.4 Replacement of Improperly Sized HVAC Equipment	<input type="checkbox"/>		
S3.5 Solar Thermal (Home Heat)	<input type="checkbox"/>		
S3.6 Wood Pellet Stoves	<input type="checkbox"/>		
S3.7 Ultra Cooling Systems	<input type="checkbox"/>		
S3.8 Central AC Units	<input type="checkbox"/>		
S3.9 Window AC Units	<input type="checkbox"/>		
S3.10 Micro-combined Heat and Power	<input type="checkbox"/>		
S3.11 High-efficiency Furnaces	<input type="checkbox"/>		



S3.12 Heat Recovery Ventilators	<input type="checkbox"/>		
S3.13 Biomass Thermal Units Installed	<input type="checkbox"/>		
S3.14 Evaporative Cooling System	<input type="checkbox"/>		
S3.15 Vented Space Heating	<input type="checkbox"/>		
S3.16 Solar Powered Attic Ventilation	<input type="checkbox"/>		
S3.17 Energy Recovery Ventilator	<input type="checkbox"/>		
<b>ROOFING: COOL ROOF</b>			
S4.1 Roofing: Cool Roof Technology Installed	<input type="checkbox"/>		
<b>APPLIANCES</b>			
S5.1 Energy Star Clothes Washer	<input type="checkbox"/>		
S5.2 Energy-Efficient Clothes Dryer	<input type="checkbox"/>		
S5.3 Energy-Efficient Refrigerator	<input type="checkbox"/>		
S5.4 Appliance Energy Meters	<input type="checkbox"/>		
<b>INSULATION</b>			
S6.1 Insulation: Aerogel/super	<input type="checkbox"/>		
S6.2 Insulation: Foam Injection Technology	<input type="checkbox"/>		
S6.3 Insulation: Masonry Foam	<input type="checkbox"/>		
S6.4 Insulation: Radiant Barrier Attic	<input type="checkbox"/>		
S6.5 Insulate: Spray Foam	<input type="checkbox"/>		
S6.6 Insulation: Reflective Attic Insulation	<input type="checkbox"/>		
<b>WHOLE-HOUSE RETROFIT</b>			
S7.1 Centralized Building Controls	<input type="checkbox"/>		
S7.2 Deep Energy Retrofits	<input type="checkbox"/>		
S7.3 High-Performance Space Conditioning Retrofits	<input type="checkbox"/>		
S7.4 High-Performance Building Envelope Retrofits	<input type="checkbox"/>		
S7.5 Cold Energy Retrofits	<input type="checkbox"/>		
S7.6 Warm Energy Retrofits	<input type="checkbox"/>		
S7.7 Foundation Improvements	<input type="checkbox"/>		
<b>OUTREACH</b>			
S8.1 Home Energy Saver Workshops	<input type="checkbox"/>		
S8.2 Households Touched by Behavioral Change Message	<input type="checkbox"/>		
<b>EQUIPMENT</b>			
S9.1 Monitoring: In-Home Energy Monitors	<input type="checkbox"/>		
<b>OTHER</b>			
S10.1 Units with Window Upgrades	<input type="checkbox"/>		<input type="checkbox"/>
S10.2 Outdoor Solar Security Lighting	<input type="checkbox"/>		<input type="checkbox"/>
S10.3 Ceiling Fans	<input type="checkbox"/>		<input type="checkbox"/>
S10.4 LED Lights	<input type="checkbox"/>		<input type="checkbox"/>
S10.5 Energy Star Doors	<input type="checkbox"/>		<input type="checkbox"/>

54. If a new space-heating system was installed, indicate the primary fuel used to heat the unit during the winter after weatherization: **(check only one)**

- Natural gas
- Propane/LPG
- Kerosene (#1 fuel oil)
- Fuel oil (#2 fuel oil)
- Electricity
- Wood
- Coal
- Other (specify: \_\_\_\_\_)
- Don't know
- Not applicable

55. If a new space-heating system was installed, indicate the type of *primary* space-heating system after weatherization: **(check only one)**

- Central (ducted) warm-air furnace (forced-air or gravity, any fuel including electricity)
- Heat pump
- Built-in electric units (e.g., electric baseboards, ceiling heat)
- Steam or hot water system (e.g., floor or baseboard radiators, convectors)
- Floor, wall, or pipeless (ductless) furnace (e.g., floor or wall furnace)
- Room/space heater (nonportable)
- Portable space heater
- Cooking stove
- None
- Other (specify: \_\_\_\_\_)
- Don't know
- Not applicable

**Select "steam or hot water system" for homes heated with boilers.**

56. If a new space-heating system was installed and justified for reasons other than cost effectiveness, identify the reason it was replaced: **(check all that apply)**

- Cost of repair/retrofit exceeded 50% of replacement cost
- Existing heating system was not running
- Existing heating system was old (e.g., at end of life, too old to be repaired/adjusted)
- To switch fuel
- To convert from a steam system to a hot water system
- Heat exchanger was cracked
- Boiler was leaking
- Safety switches/controls were not operational and could not be repaired
- To replace unvented space heater(s)
- Existing heating system was not safe to run for other reason (specify: \_\_\_\_\_)
- Other (specify: \_\_\_\_\_)

57. Please identify any cost-effective energy-efficiency measures (not repair or health and safety measures) recommended by your energy audit procedures that you were unable to install in this housing unit because of insufficient funds: **(check all that apply)**

- Air sealing
- Duct sealing
- Attic insulation
- Wall insulation
- Floor/foundation insulation
- Duct insulation
- New window(s)
- Storm windows(s)
- Door(s)
- Storm door(s)
- New space-heating system
- Space-heating system tune-up
- New air conditioner(s)
- Air conditioner tune-up(s)
- HVAC thermostat
- New water heater
- Water heater insulation wrap
- Water flow devices (e.g., showerheads, faucet aerators)
- Lighting
- Refrigerator
- Other: \_\_\_\_\_
- None

***This question only applies in states where there is a per-home spending limit. If there is not a per-home spending limit in your state, check "none."***

58. If energy efficiency measures were checked in the previous question, provide a rough estimate of the cost for installing all the measures checked: \$\_\_\_\_\_

59. Please identify any repair or health and safety measures recommended by your audit procedures that you were unable to install in this housing unit because of insufficient funds: **(check all that apply)**

- New window(s)
- Window glazing(s)
- Window screen(s)
- Window lock(s)
- Window repair
- New door(s)
- Door lock(s)
- Door repair
- New space-heating system
- Space-heating system repair

- New air conditioner(s)
- Air conditioner repair
- Ceiling or whole-house fan(s)
- Exhaust fan(s) or ventilation system
- New water heater
- Water-heating system repair
- Refrigerator
- Smoke alarm
- CO monitor
- Attic ventilation
- Roof, wall, floor, or foundation repair
- Plumbing/sewer repair
- Electrical repair
- Other: \_\_\_\_\_
- None

***This question only applies in states where there is a per-home spending limit. If there is not a per-home spending limit in your state, check "none."***

60. If repair or health and safety measures were checked in the previous question, provide a rough estimate of the cost for installing all the measures checked: \$\_\_\_\_\_

**COSTS**

61. Provide the total cost of weatherizing this housing unit. Include **ALL** sources of funding. Do **NOT** include program management costs (e.g., intake, audits, final inspections or program administration) or installation-related overhead costs (e.g., vehicles, equipment and training).

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62. Divide the total costs spent on this housing unit (from Question 61) into the categories below.

62a. Material costs	
62b. Labor costs	
62c. Enter total job cost if above categories are not known	
62d. Total (should match Q61 total)	[Auto-tally]

63. Divide the labor costs (from Question 62) into the categories below. If labor costs for in-house crew are not tracked at the job level please leave 63a blank.

63a. In house crew labor <sup>1</sup>	
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63b. Contractor labor	
63c. Profit/overhead <sup>2</sup>	
63d. Enter total labor costs if above categories are not known	
63e. Total (should match Q62 total)	[Auto-tally]
<sup>1</sup> Crew-based labor costs should be based on the crew's fully loaded hourly rate (rather than the crew's take-home pay rate) which may include costs associated with medical and other insurance, workers compensation, vacations, and other benefits. These labor costs should include the crew's time for traveling to and from the job site.  <sup>2</sup> If contractor profit and overhead are included in the contractor's material and labor costs, then leave 63b blank.	

64. Provide estimates of non-monetary contributions to this weatherization job.

64a. Volunteer Hours <sup>1</sup>	
64b. Apprentice Hours <sup>2</sup>	
64c. Estimated Value of Material In-Kind Contributions	
64d. Estimated Value of Other In-Kind Contributions	
<sup>1</sup> An example of a volunteer is an unpaid person working on weatherizing a Habitat for Humanity Home. <sup>2</sup> An example of an apprentice would be a student whose program of education requires hands-on, real-life work on weatherization jobs.	

65. Divide the total costs spent on this housing unit (from Question 61) into the categories below.

65a. Cost effective energy-related measures (SIR > 1.0)	
65b. Health and safety and other non-cost effective measures	
65c. Incidental repairs	
65d. Enter total job cost if above categories are not known	
65e. Total (should match Q61 total)	[Auto-tally]

66. Divide the total costs spent on this housing unit (from Question 61) into these funding source categories below.

66a. DOE-Normal Appropriation/Formula WAP funds	
66b. DOE SERC Funds	
66c. DOE WIPP Funds	
66d. Non-DOE (leveraged) funds	
66e. Total (should match Q61 total)	[Auto-tally]

***Energy Assistance Program (LI-EAP) funding should be considered Non-DOE funds if it is tracked separately.***

67. Provide the amounts spent on the major measure categories below.

67a. HVAC measures	
67b. Water heating measures	
67c. Replacement windows and doors	
67d. All other building shell measures (insulation, air sealing, etc.)	

## Housing Type Definitions

***Single Family Detached*** – House that provides living space for one family or household, is contained within walls that go from the basement (or the ground floor, if there is no basement) to the roof, and has no walls that are shared (or built in contact) with another household. A manufactured house assembled on site is a single family detached housing unit, not a mobile home.

***Single Family Attached*** – House that provides living space for one household, is contained within walls that go from the basement (or the ground floor, if there is no basement) to the roof, has at least one wall that is shared (or built in contact) with an adjacent household, and has an independent outside entrance. An attached house does not have any other households living above or below, and does not share basement or attic space with other housing units. Also, an attached house does not share a heating or cooling system with any other housing units. Examples include row houses, townhouses, condominiums and side-by-side duplexes that do not have shared attics, basements or HVAC equipment.

***Small Multi-family (2-4 units)*** – Building with two to four housing units (i.e., building that is divided into living quarters for two, three, or four families or households) in which one household lives above or beside another and does not meet the single family attached house definition. Includes houses originally intended for occupancy by one family (or for some other use) that have since been converted to separate dwellings for two to four families. Typical arrangements in these types of living quarters are separate apartments downstairs and upstairs or one apartment on each of three or four floors.

***Large multifamily (5 or More Units per Building)*** – Building with five or more housing units (i.e., building that contains living quarters for five or more families or households) that does not meet the single family attached house definition.

***Mobile Home*** – Home that is built on a movable chassis, is moved to the site, and may be placed on a permanent or temporary foundation. If rooms are added to the structure, it is considered a mobile home if the added floor area is less than the mobile home's original floor area; otherwise, it is a single family detached house. A manufactured house assembled on site is a single family detached house, not a mobile home.

***Shelter*** - Structure whose principal purpose is to house individuals on a temporary basis who may or may not be related to one another and who are not living in nursing homes, prisons, or similar institutional care facilities.