

APPENDIX E -- S3: SUBSET OF AGENCIES DETAILED PROGRAM INFORMATION SURVEY

This data is being collected to conduct a detailed process evaluation of the Weatherization Assistance Program at the local level. The data you supply will be used to characterize local agency weatherization activities in Program Year 2010.

Public reporting burden for this collection of information is estimated to average sixteen hours per response, 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 (XXXX-XXXX), 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 (XXXX-XXXX), Washington, DC 20503.

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. Again, please note that the questions refer to PY 2010 unless otherwise noted.

PROGRAM CHARACTERIZATION

- 1. Please identify your state. _____
- 2. Please identify your local agency. _____

3. Please indicate the number of staff that supported your agency’s weatherization program and their work effort in Program Year 2010. In considering the number of staff, please include everyone who worked full- or part-time or who worked with the weatherization program as well as other agency programs.

Type of Administrative Function	Number of Agency Staff (# persons)	Agency Staff Work Effort (FTE)
Management/administration		

Auditing/inspection		
Home weatherization		
Other (specify)		

4. For the agency staff working on your agency's weatherization in each of the following functional areas in Program Year 2010, please indicate their level of experience with the weatherization program:

	Very High	High	Average	Low	Very Low
Management/administration					
Auditing/inspection					
Home weatherization					
Other (specify)					

5. For the in-house staff working in your agency's weatherization program in each of the functional areas listed below, please indicate the amount of turnover in staff **from the beginning of PY 2009 to the end of PY 2010**. (Please check appropriate box representing the level of turnover for each functional area.)

	No Turnover (all staff in this functional area at the beginning of PY 2009 were in the same functional area by the end of PY 2010)	Some turnover (1-15% of the staff in this functional area at the beginning of PY 2009 did not remain in the same functional area by the end of PY 2010)	Substantial turnover (more than 15% of the staff in this functional area at the beginning of PY 2009 remained in the same functional area at the end of PY 2010)
Management/administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field monitoring/Auditing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training and Technical Assistance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. For which of the following functional areas were there certification or licensing requirements in Program Year 2010 for the in-house or contractor staff serving your state's weatherization program? (Check all that apply)

	Certification or Licensing Requirement for In-house Staff	Certification or Licensing Requirement for Contractor Staff
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Management/ administration		
Auditing/inspection		
Home weatherization		
Other (specify)		

AUDIT

1. What was the primary method that your agency used in Program Year 2010 to select weatherization measures for clients' dwelling units (excluding health, safety, and repair measures and general heat waste measures)? (Check best answer)
- Priority list used for all dwelling units _____
 - Calculation procedure (e.g., spreadsheet, computerized audit) used for all dwelling units _____
 - Priority list applied to dwelling units meeting specified guidelines and calculation procedure used for remaining units _____
 - Other (specify) _____

2. Including PY 2010, for how many years had your agency used the weatherization measure selection method indicated above? _____

3. What types of credentials or experience were required of your staff or contractors who were engaged in measure selection in Program Year 2010? *Check all that apply.*
- Technical certification _____
 - Extensive weatherization work experience _____
 - Extensive weatherization supervision experience _____
 - Construction experience _____
 - Other (specify) _____

4. Please indicate the level of experience for the agency staff engaged in measure selection in Program Year 2010 in each of the following functional areas:

	Very High	High	Average	Low	Very Low
Performing weatherization work					
Supervising weatherization work					
Working in construction					
Performing pre-weatherization audits					

5. On average, approximately how many hours did it take to select weatherization measures for a typical dwelling unit served by your agency in Program Year 2010, by the major components listed below?

- Preparation/scheduling _____
- Travel _____
- On-site auditing _____
- Post-audit analysis and write-up _____
- Other _____
- TOTAL of all components _____

6. If your agency used a priority list for at least some dwelling units in Program Year 2010, how difficult was it for your staff to use that priority list? (Check best answer)

- Very Difficult
- Difficult
- Easy
- Very Easy

7. If your agency used a priority list in Program Year 2010, how effective was that list? (Check best answer)

- Very Ineffective
- Ineffective
- Effective
- Very Effective

8. If your agency used a calculation procedure for at least some dwelling units in Program Year 2010, what was the name of the procedure or procedures employed? *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) _____

9. If your agency used a calculation procedure in Program Year 2010, use the following scale to describe how difficult it was for your staff to use the applicable procedure(s). Circle best answer). 1= Very Difficult; 2=Difficult; 3= Easy; 4=Very Easy; 5 =N/A

• AK Warm	1	2	3	4	5
• EA-3	1	2	3	4	5
• EASY	1	2	3	4	5
• EA-QUIP	1	2	3	4	5
• HomeCheck	1	2	3	4	5
• Meadows	1	2	3	4	5
• REES	1	2	3	4	5
• REM/Rate	1	2	3	4	5
• SMOC-ERS	1	2	3	4	5
• TIPS	1	2	3	4	5
• TREAT	1	2	3	4	5
• Weatherization Assistant (NEAT/MHEA)	1	2	3	4	5
• WXEOR	1	2	3	4	5
• Other (specify) _____	1	2	3	4	5

10. If your agency used a calculation procedure in Program Year 2010, use the following scale to describe how effective you found the applicable procedure(s).1= Very Ineffective; 2=Ineffective; 3= Effective; 4=Very Effective; 5=N/A

a. AK Warm	1	2	3	4	5
b. EA-3	1	2	3	4	5
c. EASY	1	2	3	4	5
d. EA-QUIP	1	2	3	4	5
e. HomeCheck	1	2	3	4	5
f. Meadows	1	2	3	4	5
g. REES	1	2	3	4	5
h. REM/Rate	1	2	3	4	5
i. SMOC-ERS	1	2	3	4	5
j. TIPS	1	2	3	4	5
k. TREAT	1	2	3	4	5
l. Weatherization Assistant (NEAT/MHEA)	1	2	3	4	5
m. WXEOR	1	2	3	4	5
n. Other (specify) _____	1	2	3	4	5

11. If your agency used a calculation procedure for at least some dwelling units in Program Year 2010, did your state allow under DOE rules the installation of general heat waste measures

(low-cost/no-cost weatherization activities) in those units without the need for an energy justification?

_____ Yes

_____ No (go to Question 13)

12. Please indicate which of the following general heat waste measures your agency was allowed to install in Program Year 2010. *Check all that apply.*

- Weatherstripping _____
- Caulking _____
- Insulation for plugging air leaks _____
- Low-flow shower heads _____
- Low-flow faucet aerators _____
- Air filters _____
- Glass patching _____
- Lighting _____
- Hot water tank insulation (water heater wrap) _____
- Water pipe insulation _____
- Other (specify) _____

13. What was the *primary* justification used by your agency in Program Year 2010 for performing work specifically targeted at reducing air infiltration (i.e., air sealing work)? *Check best answer.*

- Work should be performed where the air leakage rate as measured by a blower door test is greater than a minimum number (e.g., minimum ventilation guideline) calculated for the dwelling unit in question _____
- Work should be performed to address occupant complaints _____
- All *significant* air leakage sites should be sealed _____
- Air sealing work should be performed on all dwelling units _____
- Other (specify) _____

14. What *other* justifications were used by your agency in Program Year 2010 for performing work specifically targeted at reducing air infiltration (i.e., air sealing work)? *Check all that apply.*

- Work should be performed where the air leakage rate as measured by a blower door test is greater than a minimum number (e.g., minimum ventilation guideline) calculated for the dwelling unit in question _____
- Work should be performed to address occupant complaints _____
- All *significant* air leakage sites should be sealed _____
- Air sealing work should be performed on all dwelling units _____
- Other (specify) _____

15. What was the *primary* method used by your agency in Program Year 2010 to identify air leakage sites to seal? *Check only one.*

- Auditor identified air leakage sites visually and communicated relevant information

- to crew _____
- Auditor identified air leakage sites using a blower door and/or pressure diagnostics and communicated relevant information to crew _____
- Crew identified air leakage sites visually _____
- Crew identified air leakage sites using a blower door and/or pressure diagnostics _____
- Other (specify) _____

16. What *other* methods were used by your agency in Program Year 2010 to identify air leakage sites to seal? *Check all that apply.*

- Auditor identified air leakage sites visually and communicated relevant information to crew _____
- Auditor identified air leakage sites using a blower door and/or pressure diagnostics and communicated relevant information to crew _____
- Crew identified air leakage sites visually _____
- Crew identified air leakage sites using a blower door and/or pressure diagnostics _____
- Other (specify) _____

17. In Program Year 2010, at what point did your agency stop performing air sealing work on a given dwelling unit? *Check all that apply.*

- When all identified air leakage sites were sealed _____
- When all *significant* air leakage sites were sealed _____
- When the air leakage rate as measured by a blower door test dropped below a minimum number calculated for the dwelling unit in question _____
- When a blower door test indicated that the most recent infiltration reduction measure installed in the dwelling unit was not cost effective _____
- Other (specify) _____

18. Did your agency do duct sealing work in Program Year 2010?

- _____ Yes
 _____ No (go to Question 22)

19. How did your agency determine when duct sealing work was needed for a particular dwelling unit in PY 2010? *Check all that apply.*

- All houses with ducts received duct sealing measures _____
- All houses with return air ducts get sealed _____
- Ducts were sealed in those cases where leakage sites were visible _____
- Ducts were sealed when a blower door test indicated the presence of leaks _____
- Ducts were sealed when duct diagnostics (blower door subtraction, duct blower, or pressure pan measurements) indicated that the leakage rate was greater than a minimum number calculated for the dwelling unit in question _____

20. What methods were used by your agency in Program Year 2010 to identify duct leakage sites to seal? *Check all that apply.*

- Auditor identified duct leakage sites visually and communicated relevant information to crew _____
- Auditor identified duct leakage sites using a blower door and communicated relevant information to crew _____
- Auditor identified duct leakage sites using duct diagnostics and communicated relevant information to crew _____
- Crew identified duct leakage sites visually _____
- Crew identified duct leakage sites using a blower door _____
- Crew identified duct leakage sites using duct diagnostics _____
- Other (specify) _____

21. In Program Year 2010, at what point did your agency stop performing duct sealing work on a given dwelling unit? *Check all that apply.*

- When all identified duct leakage sites were sealed _____
- When a blower door test indicated no more flow from the ducts _____
- When the duct leakage rate as measured by duct diagnostics dropped below a minimum number calculated for the dwelling unit in question _____
- Other (specify) _____

22. How did you determine when a particular refrigerator should be replaced in PY 2010? *Check all that apply.*

- Not allowed to replace refrigerators _____
- Energy use of existing refrigerator was metered _____
- Energy use of existing refrigerator was assumed base on rated/nameplate value _____
- Non-energy criteria were used (e.g., age, color, physical appearance) _____
- Refrigerator was replaced if it was no longer running or could not maintain desired temperature _____
- Other (specify) _____

22a. How did you determine when a particular air conditioner should be replaced in PY 2010? *Check all that apply.*

- Not allowed to replace air conditioner _____
- Energy use of existing air conditioner was metered _____
- Energy use of existing air conditioner was assumed base on rated/nameplate value _____
- Non-energy criteria were used (e.g., age, physical appearance) _____
- Air conditioner was replaced if it was no longer running or could not maintain desired temperature _____
- Other (specify) _____
- Not applicable _____

23. Which of the following diagnostic procedures did your agency perform in Program Year 2010? *Check all that apply.*

Pressure diagnostics:

- Blower door (house air leakage rate) _____

- Zonal pressure measurements _____
- Room-to-room pressure measurements (distribution balancing) _____
- Duct pressure pan measurements _____
- Duct blower measurements (duct air leakage rate) _____

Space-heating system:

- Flue gas analysis (steady-state efficiency measurements) _____
- Heat rise measurements _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____

Air-conditioning system:

- Refrigerant charge (e.g., superheat, subcooling) _____

HVAC components and cross-cutting diagnostics:

- Air handler flow rate _____
- Thermostat anticipator current _____
- Worst case draft/spillage (CAZ) _____

Hot-water (water-heating) system:

- Flue gas analysis (steady-state efficiency measurements) _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____
- Water flow rates (showerheads and faucets) _____

Other CO measurements:

- CO measurements in equipment rooms _____
- Cooking stove _____
- CO measurements in living areas _____

Other diagnostics and inspections:

- Refrigerator energy use _____
- Exhaust fan air flow rate measurement _____
- Infrared scanning (camera) _____
- Radon testing _____
- Lead testing _____
- Mold and mildew testing _____
- Moisture context testing _____
- Other (please specify) _____

24. Which of the diagnostic procedures listed below were initiated by your agency in PY 2010 and the two years prior to PY 2010? If your agency did not use a particular procedure, leave that item blank.

Pressure diagnostics:

- Blower door (house air leakage rate) _____
- Zonal pressure measurements _____
- Room-to-room pressure measurements (distribution balancing) _____
- Duct pressure pan measurements _____
- Duct blower measurements (duct air leakage rate) _____

Space-heating system:

- Flue gas analysis (steady-state efficiency measurements) _____
- Heat rise measurements _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____

Air-conditioning system:

- Refrigerant charge (e.g., superheat, subcooling) _____

HVAC components and cross-cutting diagnostics:

- Air handler flow rate _____
- Thermostat anticipator current _____
- Worst case draft/spillage (CAZ) _____

Hot-water (water-heating) system:

- Flue gas analysis (steady-state efficiency measurements) _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____
- Water flow rates (showerheads and faucets) _____

Other CO measurements:

- CO measurements in equipment rooms _____
- Cooking stove _____
- CO measurements in living areas _____

Other diagnostics and inspections:

- Refrigerator energy use _____
- Exhaust fan air flow rate measurement _____
- Infrared scanning (camera) _____
- Radon testing _____
- Lead testing _____
- Mold and mildew testing _____
- Moisture context testing _____
- Other (please specify) _____

25. What types of credentials or experience were required of your staff who performed diagnostic procedures in Program Year 2010? *Check all that apply.*

- Technical certification _____
- Extensive weatherization work experience _____
- Extensive weatherization supervision experience _____
- Construction experience _____
- Other (specify) _____

26. Approximately how many hours did your agency spend on performing diagnostic procedures for a typical dwelling unit served by your agency in Program Year 2010? _____

27. Please indicate the cost, amount of training needed, amount of time needed and effectiveness of the following types of diagnostic procedures relative to each other for PY 2010. Please use the following scale: 1 – very low; 2 -- low; 3 – medium; 4 – high; 5 – very high.

Cost	Training Needed	Time Needed	Effectiveness
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Pressure diagnostics:

Blower door (house air leakage rate)

Zonal pressure measurements

Room-to-room pressure measurements
(distribution balancing)

Duct pressure pan measurements

Duct blower measurements (duct air leakage rate)

Space-heating system:

Flue gas analysis (steady-state efficiency
measurements)

Heat rise measurements

CO measurements in flues

Draft/spillage (normal operation)

Air-conditioning system:

Refrigerant charge (e.g., superheat, subcooling)

HVAC components and cross-cutting diagnostics:

Air handler flow rate

Thermostat anticipator current

Worst case draft/spillage (CAZ)

Hot-water (water-heating) system:

Flue gas analysis (steady-state efficiency
measurements)

CO measurements in flues

Draft/spillage (normal operation)

Water flow rates (showerheads and faucets)

Other CO measurements:

CO measurements in equipment rooms

Cooking stove

CO measurements in living areas

Other diagnostics and inspections:

Refrigerator energy use

Exhaust fan air flow rate measurement

Infrared scanning (camera)

Radon testing

Lead testing

Mold and mildew testing

Moisture context testing

Other (please specify

CLIENT EDUCATION

1. Which of the following client education approaches did your agency use in Program Year 2010? (Check all that apply)

- Provide literature at time of client intake _____
- Provide video, CD or DVD at time of client intake _____
- Provide in-person instruction at time of client intake _____
- Provide hardware kit at time of client intake _____
- Provide literature at time of audit _____
- Provide video, CD or DVD at time of audit _____
- Provide in-person instruction at time of audit _____
- Provide hardware kit at time of audit _____
- Provide literature at time of weatherization _____
- Provide video, CD or DVD at time of weatherization _____
- Provide in-person instruction at time of weatherization _____
- Provide hardware kit at time of weatherization _____
- Provide literature at separate client education visit _____
- Provide video, CD or DVD at separate client education visit _____
- Provide in-person instruction at separate client education visit _____
- Provide hardware kit at separate client education visit _____
- Provide literature at time of inspection _____
- Provide video, CD or DVD at time of inspection _____
- Provide in-person instruction at time of inspection _____
- Provide hardware kit at time of inspection _____
- Group training class _____
- Other (please specify) _____

2. Which of the following broad topics did your agency cover with clients in Program Year 2010? (Check all that apply)

- Thermostat management _____
- HVAC system operation/maintenance _____
- Distribution system adjustment and zoning _____
- Cooling load reduction _____
- Windows _____
- Insulation _____
- Ventilation _____
- Mold _____
- Refrigerator _____
- Hot water use _____
- Water heating system operation/maintenance _____
- Lighting _____
- Laundry _____
- Kitchen appliance operation _____
- Other baseload electric use _____
- Energy Star _____
- Safety monitors (e.g., CO monitors, smoke alarm) _____
- Energy bills _____
- Other (please specify) _____

3. Which of the following people provided client education for your agency in Program Year 2010? *Check all that apply.*

- a. In-house manager _____
- b. In-house education specialist _____
- c. Contractor education specialist _____
- d. Intake staff person _____
- e. Auditor _____
- f. In-house weatherization crew chief _____
- g. Contractor weatherization crew chief _____
- h. In-house weatherization crew member _____
- i. Contractor weatherization crew member _____
- j. Inspector _____
- k. Other (please specify) _____

4. If in-person instruction was provided by your agency in Program Year 2010, who was your preferred target? (Check best answer)

- _____ Applicant
- _____ Other adult member of household
- _____ Child living in household
- _____ Adult not living in household
- _____ Other (please specify _____)

5. If in-person instruction was provided by your agency in Program Year 2010, was it typically provided to a single person or multiple persons? *Check best answer.*

- single person
- multiple persons

6. What types of credentials or experience were required of those who provided client education for your agency in Program Year 2010? *Check all that apply.*

- College degree _____
- Technical certification _____
- Extensive experience in performing weatherization work _____
- Extensive experience in supervising weatherization work _____
- Educational background _____
- Other (please specify) _____

7. Which of the client education approaches listed below were initiated by your agency during the ARRA period? (Check all that apply)

- Provide literature at time of client intake _____
- Provide video, CD or DVD at time of client intake _____
- Provide in-person instruction at time of client intake _____
- Provide hardware kit at time of client intake _____
- Provide literature at time of audit _____
- Provide video, CD or DVD at time of audit _____
- Provide in-person instruction at time of audit _____
- Provide hardware kit at time of audit _____
- Provide literature at time of weatherization _____
- Provide video, CD or DVD at time of weatherization _____
- Provide in-person instruction at time of weatherization _____
- Provide hardware kit at time of weatherization _____
- Provide literature at separate client education visit _____
- Provide video, CD or DVD at separate client education visit _____
- Provide in-person instruction at separate client education visit _____
- Provide hardware kit at separate client education visit _____
- Provide literature at time of inspection _____
- Provide video, CD or DVD at time of inspection _____
- Provide in-person instruction at time of inspection _____
- Provide hardware kit at time of inspection _____
- Group training class _____
- Other (please specify) _____

8. Please indicate the cost, amount of training needed, amount of time needed and effectiveness of the following types of client education approaches relative to each other for PY 2010. Please use the following scale: 1 – very low; 2 – low; 3 – medium; 4 – high; 5 – very high.

Cost	Training Needed	Time Needed	Effectiveness
Provide video, CD or DVD at time of client intake			
Provide in-person instruction at time of client intake			
Provide hardware kit at time of client intake			
Provide literature at time of audit			
Provide video, CD or DVD at time of audit			
Provide in-person instruction at time of audit			
Provide hardware kit at time of audit			
Provide literature at time of weatherization			
Provide video, CD or DVD at time of weatherization			
Provide in-person instruction at time of weatherization			
Provide hardware kit at time of weatherization			
Provide literature at separate client education visit			
Provide video, CD or DVD at separate client education visit			
Provide in-person instruction at separate client education visit			
Provide hardware kit at separate client education visit			
Provide literature at time of inspection			
Provide video, CD or DVD at time of inspection			
Provide in-person instruction at time of inspection			
Provide hardware kit at time of inspection			
Group training class			
Other (please specify)			

9. On average, approximately how many minutes were spent in Program Year 2010 on client education in a typical dwelling? _____

TRAINING

1. On which of the following weatherization topics did agency staff working on your agency's weatherization efforts receive training in Program Year 2010? *Check all that apply.*

- (1) Diagnostic procedures _____
- (2) Insulation _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (3) Space heating, ventilation, air conditioning _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (4) Infiltration measures _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (5) Doors and windows _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (6) Hot water heating _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (7) Baseloads (e.g., lighting, refrigerators) _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____

1a. On which of the following administrative-related topics did agency staff working on your agency's weatherization efforts receive training in Program Year 2010? *Check all that apply.*

- (1) Management _____
- (2) Client education _____
- (3) Auditing/estimating _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (4) Monitoring/quality control _____
- (5) Financial topics _____
- (6) Outreach and communications _____
- (7) Other (please specify) _____

1b. On which of the following health and safety topics did agency staff working on your agency's weatherization efforts receive training in Program Year 2010? *Check all that apply.*

- Fire safety
- Indoor air quality
- Measures to increase security of housing unit
- Measures to reduce common household hazards
- Mold and mildew
- Lead
- Asbestos
- Vermiculite
- General crew safety
- Other health and safety
- Other (please specify)

2. On which of the following diagnostic procedures did agency staff working on your agency's weatherization efforts receive training in Program Year 2010? *Check all that apply.*

Pressure diagnostics:

- Blower door (house air leakage rate) _____
- Zonal pressure measurements _____
- Room-to-room pressure measurements (distribution balancing) _____
- Duct pressure pan measurements _____
- Duct blower measurements (duct air leakage rate) _____

Space-heating system:

- Flue gas analysis (steady-state efficiency measurements) _____
- Heat rise measurements _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____

Air-conditioning system:

- Refrigerant charge (e.g., superheat, subcooling) _____

HVAC components and cross-cutting diagnostics:

- Air handler flow rate _____
- Thermostat anticipator current _____
- Worst case draft/spillage (CAZ) _____

Hot-water (water-heating) system:

- Flue gas analysis (steady-state efficiency measurements) _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____
- Water flow rates (showerheads and faucets) _____

Other CO measurements:

- CO measurements in equipment rooms _____
- Cooking stove _____
- CO measurements in living areas _____

Other diagnostics and inspections:

- Refrigerator energy use _____
- Exhaust fan air flow rate measurement _____
- Infrared scanning (camera) _____
- Radon testing _____
- Lead testing _____
- Mold and mildew testing _____
- Moisture context testing _____
- Other (please specify) _____

3. How many of your agency's staff were trained at the following events in Program Year 2010?

- _____ National Weatherization Program Conference
- _____ Affordable Comfort Conference
- _____ Other national conference
- _____ Regional weatherization conference
- _____ Your state's weatherization conference
- _____ Some other relevant conference in your state
- _____ Weatherization conference given by another state
- _____ Some other relevant conference given by another state
- _____ Any state or regional training center class
- _____ Manufacturer's training school class
- _____ Utility training class
- _____ Training classes provided by your agency or those agencies you work for
- _____ One-time state-sponsored class
- _____ Any other class not sponsored by your state (e.g., another state, trade organization)
- _____ Visit to an agency you do not work for training
- _____ Instruction provided by your state to your individual agency or those agencies you work for
- _____ In-person expert visit just to your agency (e.g., peer exchange, consultant)
- _____ Web cast
- _____ Other (please specify)

4. Which of the following weatherization topics listed below were agency staff first trained on in PY 2010 and two years prior to PY 2010? (Check all that apply)

- (1) Diagnostic procedures _____
- (2) Insulation _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (3) Space heating, ventilation, air conditioning _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (4) Infiltration measures _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (5) Doors and windows _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (6) Hot water heating _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (7) Baseloads (e.g., lighting, refrigerators) _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____

4a. Which of the following administrative-related topics listed below were agency staff first trained on in PY 2010 and in the two years prior to PY 2010? If your agency did not receive training on a particular subject, leave that item blank.

- (1) Management _____
- (2) Client education _____
- (3) Auditing/estimating _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (4) Monitoring/quality control _____
- (5) Financial topics _____
- (6) Outreach and communications _____
- (7) Other (please specify) _____

4b. Which of the following health and safety topics listed below were agency staff first trained on in PY 2010 and in the two years prior to PY 2010? (Check all that apply)

- Fire safety
- Indoor air quality
- Measures to increase security of housing unit
- Measures to reduce common household hazards
- Mold and mildew
- Lead
- Asbestos
- Vermiculite
- General crew safety
- Other health and safety
- Other (please specify)

5. On which of the following weatherization topics did your agency provide training to your own in-house staff in Program Year 2010? (Check all that apply)

- (1) Diagnostic procedures
- (2) Insulation
 - single family dwellings
 - multifamily dwellings
 - mobile homes
- (3) Space heating, ventilation, air conditioning
 - single family dwellings
 - multifamily dwellings
 - mobile homes
- (4) Infiltration measures
 - single family dwellings
 - multifamily dwellings
 - mobile homes
- (5) Doors and windows
 - single family dwellings
 - multifamily dwellings
 - mobile homes
- (6) Hot water heating
 - single family dwellings
 - multifamily dwellings
 - mobile homes
- (7) Baseloads (e.g., lighting, refrigerators)
 - single family dwellings
 - multifamily dwellings
 - mobile homes

5a. On which of the following administrative-related topics did your agency provide training to your own in-house staff in Program Year 2010? (Check all that apply)

- (1) Management _____
- (2) Client education _____
- (3) Auditing/estimating _____
 - single family dwellings _____
 - multifamily dwellings _____
 - mobile homes _____
- (4) Monitoring/quality control _____
- (5) Financial topics _____
- (6) Outreach and communications _____
- (7) Other (please specify) _____

5b. On which of the following health and safety topics did your agency provide training to your own in-house staff in Program Year 2010? (Check all that apply)

- _____ Fire safety
- _____ Indoor air quality
- _____ Measures to increase security of housing unit
- _____ Measures to reduce common household hazards
- _____ Mold and mildew
- _____ Lead
- _____ Asbestos
- _____ Vermiculite
- _____ General crew safety
- _____ Other health and safety
- _____ Other (please specify)

6. On which of the following diagnostic procedures did your agency provide training to your staff in Program Year 2010? (Check all that apply)

Pressure diagnostics:

- Blower door (house air leakage rate) _____
- Zonal pressure measurements _____
- Room-to-room pressure measurements (distribution balancing) _____
- Duct pressure pan measurements _____
- Duct blower measurements (duct air leakage rate) _____

Space-heating system:

- Flue gas analysis (steady-state efficiency measurements) _____
- Heat rise measurements _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____

Air-conditioning system:

- Refrigerant charge (e.g., superheat, subcooling) _____

HVAC components and cross-cutting diagnostics:

- Air handler flow rate _____
- Thermostat anticipator current _____
- Worst case draft/spillage (CAZ) _____

Hot-water (water-heating) system:

- Flue gas analysis (steady-state efficiency measurements) _____
- CO measurements in flues _____
- Draft/spillage (normal operation) _____
- Water flow rates (showerheads and faucets) _____

Other CO measurements:

- CO measurements in equipment rooms _____
- Cooking stove _____
- CO measurements in living areas _____

Other diagnostics and inspections:

- Refrigerator energy use _____
- Exhaust fan air flow rate measurement _____
- Infrared scanning (camera) _____
- Radon testing _____
- Lead testing _____
- Mold and mildew testing _____
- Moisture context testing _____
- Other (please specify) _____

7. For each broad subject listed in the left-most column of the following table, put a check mark in the appropriate cell(s) to indicate which training method(s) you believe were most effective for imparting key skills and information in that area to your agency's in-house or contractor weatherization staff in PY 2010:

	Conferences	Primarily Field training	Primarily Classroom training	Agency visits	Web casts	Other (specify)
Subject						
Management						
Weatherization skills and methods						
Auditing/ Estimating						
Monitoring/ quality control						
Financial topics						
Outreach and communications						
Health and safety						
Diagnostic procedures						
Procedures for selecting weatherization measures						
Client education						
Other (specify)						

8. For each broad subject listed in the left-most column of the following table, please indicate the quality of training received in Program Year 2010 at the training venues listed in the column headings. Please leave cells blank were your agency did not receive training during this period of time. Please use the following scale: 1-very low; 2 - low; 3-medium; 4- high; 5-very high

	National Weatherization Program Conference	Affordable Comfort Conference	Regional Weatherization Conference	State Weatherization Conference	State/Regional Training Center	Training Provided by Your Own Agency
Subject						
Management						
Weatherization skills and methods						
Auditing/Estimating						
Monitoring/quality control						
Financial topics						
Outreach and communications						
Health and safety						
Diagnostic procedures						
Procedures for selecting weatherization measures						
Client education						
Other (specify)						

9. For those staff working in your agency who needed to have knowledge about the following list of weatherization topics in PY 2010, how well trained were they in each area in PY 2010? Please use the following scale: 1– not at all well trained; 2 – not well trained; 3 – moderately well trained; 4 –well trained; 5 – very well trained; 6 – not applicable *Circle best answer.*

(1) Diagnostic procedures	1	2	3	4	5	6
(2) Insulation						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(3) Space heating, ventilation, air conditioning						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(4) Infiltration measures						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(5) Doors and windows						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(6) Hot water heating						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(7) Baseloads (e.g., lighting, refrigerators)						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6

9a. For those staff working in your agency who needed to have knowledge about the following list of administrative-related topics, how well trained were they in each area in PY 2010? Please use the following scale: 1– not at all well trained; 2 – not well trained; 3 – moderately well trained; 4 –well trained; 5 – very well trained; 6 – not applicable *Circle best answer.*

(1) Management	1	2	3	4	5	6
(2) Client education	1	2	3	4	5	6
(3) Auditing/estimating						
-- single family dwellings	1	2	3	4	5	6
-- multifamily dwellings	1	2	3	4	5	6
-- mobile homes	1	2	3	4	5	6
(4) Monitoring/quality control	1	2	3	4	5	6
(5) Financial topics	1	2	3	4	5	6
(6) Outreach and communications	1	2	3	4	5	6
(7) Other (please specify)	1	2	3	4	5	6

9b. For those staff working in your agency who needed to have knowledge about the following list of health and safety topics, how well trained were they in each area in PY 2010? Please use the following scale: 1– not at all well trained; 2 – not well trained; 3 – moderately well trained; 4 –well trained; 5 – very well trained; 6 – not applicable *Circle best answer.*

(1) Fire safety	1	2	3	4	5	6
(2) Indoor air quality	1	2	3	4	5	6
(3) Measures to increase security of housing unit	1	2	3	4	5	6
(4) Measures to reduce common household hazards	1	2	3	4	5	6
(5) Mold and mildew	1	2	3	4	5	6
(6) Lead	1	2	3	4	5	6
(7) Asbestos	1	2	3	4	5	6
(8) Vermiculite	1	2	3	4	5	6
(9) General crew safety	1	2	3	4	5	6
(10) Other health and safety	1	2	3	4	5	6
(11) Other (please specify)	1	2	3	4	5	6

9c. For categories receiving answers of (1)-not at all well trained, or (2)-not well trained to the above questions, what were the barriers for receiving this training:

- a. Funding
- b. Time
- c. Not a priority
- d. Not available
- e. Other_____

10. For those staff working in your agency who needed to have knowledge about the following list of diagnostic topics, how well trained were they in each area in PY 2010? Please use the following scale: 1– not at all well trained; 2 – not well trained; 3 – moderately well trained; 4 – well trained; 5 – very well trained; 6 – not applicable *Circle best answer.*

Pressure diagnostics:

- Blower door (house air leakage rate) 1 2 3 4 5 6
- Zonal pressure measurements 1 2 3 4 5 6
- Room-to-room pressure measurements 1 2 3 4 5 6
- Duct pressure pan measurements 1 2 3 4 5 6
- Duct blower measurements (duct air leakage rate) 1 2 3 4 5 6

Space-heating system:

- Flue gas analysis (steady-state efficiency measurements) 1 2 3 4 5 6
- Heat rise measurements 1 2 3 4 5 6
- CO measurements in flues 1 2 3 4 5 6
- Draft/spillage (normal operation) 1 2 3 4 5 6

Air-conditioning system:

- Refrigerant charge (e.g., superheat, subcooling) 1 2 3 4 5 6

HVAC components and cross-cutting diagnostics:

- Air handler flow rate 1 2 3 4 5 6
- Thermostat anticipator current 1 2 3 4 5 6
- Worst case draft/spillage (CAZ) 1 2 3 4 5 6

Hot-water (water-heating) system:

- Flue gas analysis (steady-state efficiency measurements) 1 2 3 4 5 6
- CO measurements in flues 1 2 3 4 5 6
- Draft/spillage (normal operation) 1 2 3 4 5 6
- Water flow rates (showerheads and faucets) 1 2 3 4 5 6

Other CO measurements:

- CO measurements in equipment rooms 1 2 3 4 5 6
- Cooking stove 1 2 3 4 5 6
- CO measurements in living areas 1 2 3 4 5 6

Other diagnostics and inspections:

- Refrigerator energy use 1 2 3 4 5 6
- Exhaust fan air flow rate measurement 1 2 3 4 5 6
- Infrared scanning (camera) 1 2 3 4 5 6
- Radon testing 1 2 3 4 5 6
- Lead testing 1 2 3 4 5 6
- Mold and mildew testing 1 2 3 4 5 6
- Moisture context testing 1 2 3 4 5 6
- Other (please specify) _____ 1 2 3 4 5 6

10a. For categories receiving answers of (1)-not at all well trained, or (2)-not well trained to the above question, what were the barriers for receiving this training:

- a. Funding
- b. Time

- c. Not a priority
- d. Not available
- e. Other _____

11. Overall, how well trained were your agency's weatherization crews in PY 2010? (Check best answer)

- _____ Very well trained
- _____ Well trained
- _____ Neither well nor poorly trained
- _____ Poorly trained
- _____ Very poorly trained

12. What were the barriers that prevented your crews from receiving all the training they need? (Check all that apply)

- _____ Lack of training funds
- _____ Cannot take crews out of the field long enough for training
- _____ Training not available at the right times
- _____ Training not available at the right places
- _____ Available training is poor in quality

INSPECTION

1. Which of the following types of post-weatherization quality control inspection did your agency perform on your weatherized dwelling units in Program Year 2010? *Check all that apply.*

- Visual inspection of installed measures _____
- Verification of insulation depths/quantities _____
- Verification of operation of measures installed _____
- Assessment of quality of measures installed _____
- Identification of needed measures that were not installed _____
- Blower door test _____
- Heating system efficiency test (flue gas analysis) _____
- Draft/spillage tests of heating systems _____
- Carbon monoxide (CO) monitoring _____
- Infrared scanning _____
- Identification of unresolved health and safety issues _____
- Discussion with occupants _____
- Other (specify) _____

2. Please indicate which types of post-weatherization quality control inspection listed below were initiated since ARRA PY 2009. *Check all that apply.*

- Visual inspection of installed measures _____
- Verification of insulation depths/quantities _____
- Verification of operation of measures installed _____

- Assessment of quality of measures installed _____
- Identification of needed measures that were not installed _____
- Blower door test _____
- Heating system efficiency test (flue gas analysis) _____
- Draft/spillage tests of heating systems _____
- Carbon monoxide (CO) monitoring _____
- Infrared scanning _____
- Identification of unresolved health and safety issues _____
- Discussion with occupants _____
- Other (specify) _____

3. Which of the following post-weatherization quality and control inspection topics listed below were agency staff trained on in PY 2010? Check all that apply.

- Visual inspection of installed measures _____
- Verification of insulation depths/quantities _____
- Verification of operation of measures installed _____
- Assessment of quality of measures installed _____
- Identification of needed measures that were not installed _____
- Blower door test _____
- Other diagnostic tests _____
- Identification of unresolved health and safety issues _____
- Discussion with occupants _____
- Other (specify) _____

4. Please indicate the cost, amount of training needed, amount of time needed and effectiveness of the following types of post-weatherization quality control inspection procedures relative to each other for PY 2010. Please use the following scale: 1 – very low; 2 – low; 3 – medium; 4 – high; 5 – very high.

Cost	Training Needed	Time Needed	Effectiveness
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- Visual inspection of installed measures**
- Verification of insulation depths/quantities**
- Verification of operation of measures installed**
- Assessment of quality of measures installed**
- Identification of needed measures that were not installed**
- Blower door test**
- Other diagnostic tests**
- Identification of unresolved health and safety issues**
- Discussion with occupants**
- Other (please specify)**

5. Approximately how many hours did it take to perform a typical post-weatherization quality control inspection in Program Year 2010, by the major components listed below?

- Scheduling _____
- Travel _____
- On-site work _____
- Post-inspection analysis and write-up _____
- Other _____
- TOTAL of all components _____

6. Which of the following parties were involved in performing your agency's post-weatherization quality control inspections in Program Year 2010? *Check all that apply.*

- In-house manager _____
- In-house inspection specialist _____
- Contractor inspection specialist _____
- In-house weatherization crew chief _____
- Contractor weatherization crew chief _____
- In-house weatherization crew member _____
- Contractor weatherization crew member _____
- Other (please specify) _____

6a. Which party was primarily responsible for post-weatherization quality control inspections? Check best answer.

- In-house manager _____
- In-house inspection specialist _____
- Contractor inspection specialist _____
- In-house weatherization crew chief _____
- Contractor weatherization crew chief _____
- In-house weatherization crew member _____
- Contractor weatherization crew member _____
- Other (please specify) _____

7. About how many agency weatherization office staff went into the field to monitor local weatherization agencies in your state in Program Year 2010? *{Note: do not include people who do quality assurance at the local agency level for the local agencies.}*

- Agency staff _____
- Agency contractors _____
- Other (please specify) _____

8. What types of credentials or experience did your agency's post-weatherization quality control inspectors have in Program Year 2010? *Check all that apply.*

- Technical certification _____
- Extensive experience performing pre-weatherization audits _____
- Extensive experience performing weatherization work _____
- Extensive experience supervising weatherization work _____
- Construction experience _____

- Other (please specify) _____

9. Please indicate the level of experience for the agency staff engaged post-weatherization quality control inspections in Program Year 2010 in each of the following functional areas:

	Very High	High	Average	Low	Very Low
Performing weatherization work					
Supervising weatherization work					
Working in construction					
Performing pre-weatherization audits					

10. For those dwelling units for which post-weatherization quality control inspections were performed by your agency in Program Year 2010, typically how many days after weatherization completion did the initial inspection take place? _____

11. In those cases where a Program Year 2010 post-weatherization quality control inspection revealed a problem with the job performed, what action was most commonly taken in response to that finding? *Check one.*

- Sent original crew or contractor back to correct problem _____
- Sent different crew or contractor to correct problem _____
- Sent crew supervisor to correct problem _____
- Sent someone from state office to correct problem _____
- No action taken _____
- Other (please specify) _____

12. What *other* actions were taken in Program Year 2010 in response to the discovery of a problem with the weatherization job performed? *Check all that apply.*

- Sent original crew or contractor back to correct problem _____
- Sent different crew or contractor to correct problem _____
- Sent crew supervisor to correct problem _____
- Sent someone from state office to correct problem _____
- No action taken _____
- Other (please specify) _____

13. In Program Year 2010, how many of the dwelling units weatherized by your agency required some additional work as a result of the findings of your post-weatherization quality control inspections? _____

13a. Of those requiring some additional work, how many had work done that probably resulted in more energy savings? _____

14. What were the three most common problems found in the dwelling units inspected by your agency in Program Year 2010?

- 1) _____
- 2) _____
- 3) _____

15. In Program Year 2010, did your agency use findings from your post-weatherization quality control inspections to provide feedback to your in-house or contractor crews on workmanship or related issues? _____

16. To what extent does post-weatherization quality control inspection affect the quality of future weatherization work?

- (1) No extent
- (2) Little extent
- (3) Moderate extent
- (4) Substantial extent
- (5) Very substantial extent

17. Did the observation of problems with the quality of weatherization work lead to changes in weatherization training for your staff?

- (1) Yes
- (2) No

17a. If Yes, what changes were made? _____

18. Did your agency observe weatherization training sessions to help identify potential problem areas for inspecting in the field (e.g., with respect to installation of measures that trainees seem to have trouble understanding)?

- (1) Yes
- (2) No

18a. If Yes, briefly describe how your in-field inspection activities were affected by your training session observations.
