

Findings from Survey Administered to Weatherization Training Centers



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March 2015

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Environmental Sciences Division

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ACRONYMS

ARRA	American Recovery and Reinvestment Act
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
BPI	Building Performance Institute
COAD	Corporation for Ohio Appalachian Development
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
HVAC	Heating, Ventilation and Air Conditioning
NREL	National Renewable Energy Laboratory
OSHA	Occupational and Safety and Health Administration
ORNL	Oak Ridge National Laboratory
RRP	Lead Renovation, Repair and Painting
WAP	Weatherization Assistance Program

ACKNOWLEDGEMENTS

The work presented in this report was funded by the U.S. Department of Energy's (DOE) Office of Weatherization and Intergovernmental Programs (OWIP). This report summarizes findings from a survey administered to the directors of weatherization training centers in 2011. The survey tool for this study was developed by staff from the Oak Ridge National Laboratory as one component of the National Evaluation of the Weatherization Assistance Program. We wish to acknowledge the assistance provided by the Energy Center of Wisconsin in administering this survey. We also thank Kelly Cutchin for comments on a draft of this report.

ABSTRACT

This report summarizes findings from a survey administered to directors of weatherization training centers in 2011. This report is just one component of a national evaluation of DOE's Weatherization Assistance Program (WAP) managed by Oak Ridge National Laboratory. The purpose of the survey is to document training center activities during the American Recovery and Reinvestment Act (ARRA) period and plans post-ARRA. ARRA funding led to a substantial increase in training center funding, staffing, classes and certifications offered, and individuals trained. Activity levels post-ARRA seemed to stabilize just about pre-ARRA levels, though one-third of the training centers reported a high risk of closure if new sources of funding could not be found. The training centers are split on their forecasts on demands for their services over the next several years. Close to 80 percent believe it will be difficult to recruit new trainees.

1. INTRODUCTION

The U.S. Department of Energy (DOE) administers the Weatherization Assistance Program (WAP). DOE supports a network of weatherization training centers to support this program. The main objectives of this study are to document the experiences of weatherization training centers in the United States during the American Recovery and Reinvestment Act of 2009 (ARRA) period and plans and expectations developed by the centers for the post-ARRA period. Briefly, WAP provides grants, guidance, and other support to Grantees: weatherization programs administered by each of the 50 states, the District of Columbia, territories and several Native American tribes. The Grantees, in turn, oversee a network of 900+ local weatherization agencies (Subgrantees): community action agencies, nonprofit organizations, and local government agencies that are eligible to receive weatherization funding from DOE. These weatherization agencies qualify eligible households, assess their homes' energy efficiency opportunities, install energy-saving measures, and inspect the work. The work performed includes air sealing, insulation upgrades, furnace replacements, and other dwelling-specific measures found to be cost-effective, as well as home improvements needed to ensure the health and safety of household occupants. The work is done at no cost to the eligible participants. The U.S. territories were brought into the weatherization network during ARRA.

In April 2009, the U.S. Congress passed ARRA (also referred to herein as the Recovery Act). Included in the hundreds of billions of dollars of programs, initiatives, and investments was \$5 billion for WAP. The national weatherization network was given approximately three years to spend these funds. Annually, this funding represents about six times more per year than Congress had been typically appropriating for WAP. The huge increase in funding was based on the assumption that weatherization was a 'shovel ready' program, capable of quickly ramping up production and, most importantly, employing significant numbers of individuals to weatherize low-income homes. In addition to providing more funds to weatherize more homes, this surge in funding allowed DOE to expand its network of weatherization training centers, which are the focus of this study.

This study is one component of the national evaluation of WAP conducted by Oak Ridge National Laboratory (ORNL) on behalf of DOE. The main purpose of the overall evaluation—and the collection of reports stemming from this work¹—are to provide a comprehensive review of Program performance to enable DOE to guide the future direction of the program, as well as to provide information to potential funders in order to support leveraging activities.

This study administered a survey to the 38 directors of weatherization training centers as of 2011. Thirty-five completed the survey. Of these, twelve are considered legacy training center (i.e., they were in existence before the ARRA period and had received DOE funding prior to ARRA) and twenty-three non-legacy centers (i.e., they were first established during the ARRA period and/or received their first DOE grant during the ARRA period). The training centers offer classes on a wide range of topics, from home auditing to the installation of insulation. Through training and testing, the centers award a wide range of professional certificates, such as the Building Performance Institute (BPI) Building Analyst Certification and BPI Manufactured Housing Certification. Section 2.0 presents the results pertaining to survey questions that focused on funding levels, training offered and numbers of individuals trained. Section 3.0 summarizes findings related to post-ARRA plans and future expectations with respect to the weatherization training market. Appendix A consists of two tables that list training topics and certifications by training center.

¹ Several additional reports will be issued as part of the national evaluation that address indoor air quality in weatherized homes; energy savings and non-energy benefits attributable to weatherization activities; a process evaluation report; a series of case studies for WAP agencies; a program characterization and eligible population report; and an occupant/client satisfaction report. See <http://weatherization.ornl.gov>

2. WEATHERIZATION TRAINING CENTERS DURING THE ARRA PERIOD



Figure 2.1 Training center run by COAD. Various heating systems, model home for hands-on training, and classroom learning.

Weatherization training centers offer in-class and hands-on training. Figure 2.1 presents several images of the training center run by the Corporation for Ohio Appalachian Development (COAD).

The survey instrument asked for the respondent to list all training topics and certifications offered by their training center. These responses were tallied to estimate the total number of topics and certifications covered for each center. Respondents sometimes listed generalized categories of training topics or certifications, e.g. “BPI” without further specification. This left the actual number unspecified, so such cases were either cross-referenced with website listings or simply counted as a single item. The number of training topics and certifications appear to be positively correlated (Figure 2.2).

Respondents reported offering a wide variety of trainings on more than 50 topics. While the topics mentioned most frequently covered technical aspects specific to home retrofits, more general trainings on building science, health and safety, and career development were not uncommon. Supported certifications had a narrower scope as a whole, focusing almost exclusively on weatherization. A handful of major national standards organizations made up the majority of supported certifications, yet statewide and regional certifications were also quite ubiquitous. Aside from state and regional certifications (about 41 percent and 16 percent of training centers, respectively), the most frequently offered certifications came from three organizations. About 84 percent of training centers supported at least one certification from BPI, 41 percent offered at least one Occupational Safety and Health Administration (OSHA), and 41 percent offered U.S. Environmental Protection Agency’s (EPA) Lead Renovation, Repair and Painting (RRP)

certification. During the ARRA period, National Renewable Energy Laboratory (NREL) and numerous industry experts developed blueprints for the four Home Energy Professional Certifications, which were designed to cover the four most common job classifications for WAP professionals. These were first licensed to BPI in 2012 and were quickly adopted by many training centers. About 51 percent of training

centers reported supporting at least one of these certifications with several others expressing plans to incorporate the Home Energy Professional Certifications. Tables A-1 and A-2 in the appendix show the training topics and certifications offered by each training center.

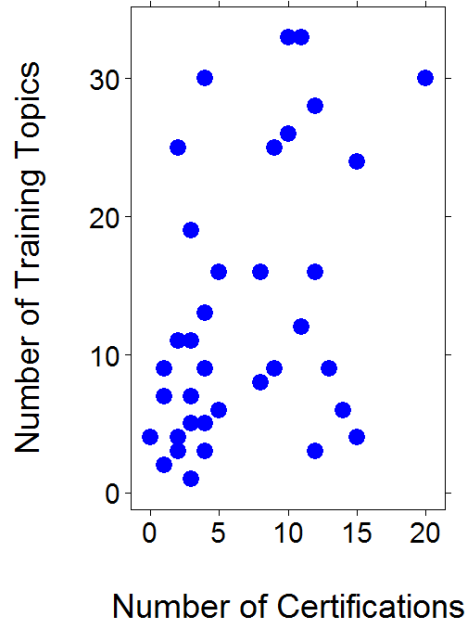


Figure 2.2 Reported Number of Training Topics and Certifications Offered by Training Centers

Respondents were asked a few questions to elicit the magnitude of ARRA’s impact on training centers. Responses to these questions are contained in Tables 2.1, 2.2, and 2.3, that present results for all responding training centers, the non-legacy training centers, and the legacy training centers, respectively. With the influx of ARRA funds, the average training center’s budget jumped to more than seven times the average pre-ARRA budget, increasing the average budget share consisting of DOE funds by about 40 percent.² When the ARRA period came to an end, training center budgets and the DOE proportion thereof expectedly decreased significantly. Training center staff size showed a similar trend, increasing fourfold on average during ARRA, then dropping post-ARRA. While the average training center experienced large declines in budget size, DOE budget share, and staff size at the close of the ARRA period, a comparison of these figures before and after ARRA shows an increase across the board. Over this period, average DOE budget share increased about 8 percent. Average budget increased by 60 percent from \$184,000 before ARRA to \$270,000 after ARRA. On average, staff size rose by 94 percent from 3.0 members before ARRA to 4.7 members after ARRA.

² Average changes between periods were calculated by averaging temporal differences for cases in which entries for both time periods are valid. Due to missing responses, average changes between time periods may differ from average figures within time periods.

Table 2.1 Training Center Averages before, during, and after the ARRA Period – All Training Centers

	Pre-ARRA	ARRA	Post-ARRA	Pre-ARRA to ARRA	ARRA to Post-ARRA	Pre-ARRA to Post-ARRA
What percentage of your Wx training program was supported by DOE funds? ³	23.53	86.78	30.15	63.59	-56.63	7.56
What was your Center's budget?	\$184,919	\$1,078,191	\$270,417	\$945,542	-\$811,780	\$97,362
Percentage Change in Budget	-	-	-	717%	-70%	60%
How many staff did your Center employ?	3.07	9.22	4.72	6.15	-4.69	1.55
Percentage Change in Staff	-	-	-	416%	-44%	53%

Table 2.2 Training Center Averages before, during, and after the ARRA Period – Non-legacy Grant Recipients

	Pre-ARRA	ARRA	Post-ARRA	Pre-ARRA to ARRA	ARRA to Post-ARRA	Pre-ARRA to Post-ARRA
What percentage of your Wx training program was supported by DOE funds?	14.75	89.71	32.62	75.65	-57.09	19.50
What was your Center's budget?	\$62,579	\$874,067	\$197,474	\$832,440	-\$672,597	\$142,389
Percentage Change in Budget	-	-	-	380%	-69%	67%
How many staff did your Center employ?	2.57	7.60	4.20	5.02	-3.63	1.50
Percentage Change in Staff	-	-	-	209%	-41%	67%

Table 2.3 Training Center Averages before, during, and after the ARRA Period – Legacy Training Centers

	Pre-ARRA	ARRA	Post-ARRA	Pre-ARRA to ARRA	ARRA to Post-ARRA	Pre-ARRA to Post-ARRA
What percentage of your Wx training program was supported by DOE funds?	37.09	80.00	23.64	42.91	-56.36	-13.45
What was your Center's budget?	\$403,955	\$1,312,830	\$400,113	\$1,022,769	-\$912,718	\$32,532
Percentage Change in Budget	-	-	-	766%	-69%	62%
How many staff did your Center employ?	4.11	12.63	5.87	8.52	-6.76	1.76
Percentage Change in Staff	-	-	-	676%	-48%	43%

³ Includes direct grants from DOE and DOE funds allocated by their state weatherization programs.

Table 2.4 presents survey results pertaining to individuals trained. The first column presents the number of individuals trained at the peak of the ARRA period. The second column presents the respondents' best estimates of annual trainees post-ARRA. These results are presented for all the training centers and broken out by non-legacy and legacy centers. Overall, the centers see the number of trainees dropping by more than half post-ARRA. The legacy training centers expect to continue to train about four times more individuals per year than the non-legacy centers.

Table 2.4 Average Annual Weatherization Trainees during and after the ARRA Period

All Training Centers	Peak-ARRA	Post-ARRA (expected)	Peak-ARRA to Post-ARRA
How many Wx trainees per year?	654.33	330.41	-434.23
Percentage Change	-	-	-61%

Non-Legacy Training Centers	Peak-ARRA	Post-ARRA (expected)	Peak-ARRA to Post-ARRA
How many Wx trainees per year?	348.33	129.40	-285.14
Percentage Change	-	-	-61%

Legacy Training Centers	Peak-ARRA	Post-ARRA (expected)	Peak-ARRA to Post-ARRA
How many Wx trainees per year?	1270.73	625.91	-644.82
Percentage Change	-	-	-59%

Figure 2.3 documents the actions taken by the training centers in aggregate to ramp up during the ARRA period. As intended, the increase in funding during ARRA resulted in an increase in the number of training courses offered. Almost all of the responding centers hired new staff, purchased additional training equipment and made improvements to the center's infrastructure. Over 80 percent of the centers took the opportunity to offer non-traditional and innovative training.

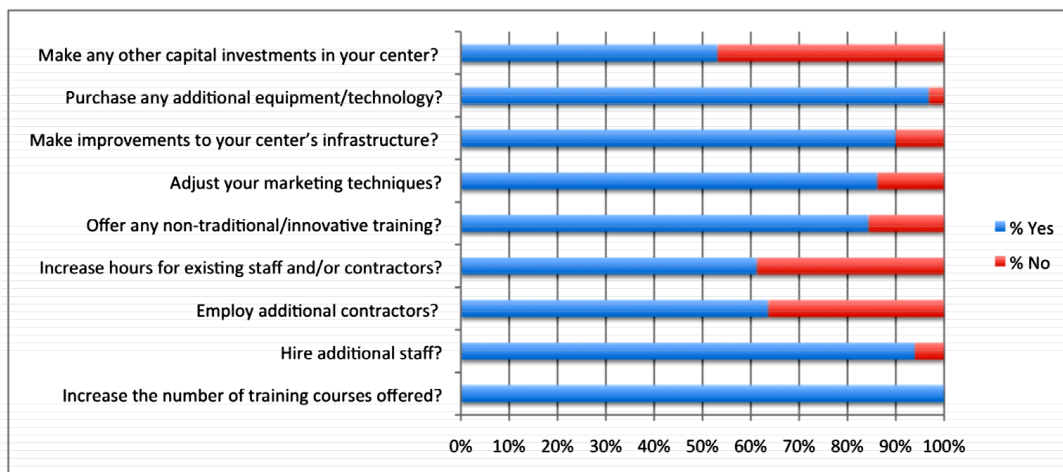


Figure 2.3 Actions Taken to Ramp Up Weatherization Training Program during the ARRA Period

As a whole, training centers unanimously found DOE support useful in their ARRA period training and planning (Table 2.5). Respondents most commonly attributed this usefulness to breadth and depth of information supplied by DOE. Trainings, workshops, and conferences were the most commonly listed methods by which DOE provided useful support. Conference calls often proved useful as well. Respondents noted the reliability and responsiveness of DOE Project Officers, several of whom were mentioned by name. Training centers particularly found DOE’s assistance with networking to be valuable. The major complaint from the respondents focused on the timing of DOE programs/training/funding (Table 2.6). This is explainable in part because the process of contracting with the new centers took some time and extended significantly into the ARRA period.

Table 2.5 Selected Aspects of What Worked Well Regarding ARRA Period DOE Support

DOE Support...	Frequency
Was timely	3
Built useful networks	7
Was informative	14
Was well standardized	1
Was nice	1
Was useful through conference calls	6
Was reliable	5
Helped with certifications	4
Was useful through Instructional Systems Design	3
Was useful through training/workshops/conferences	14

Table 2.6 Selected Aspects of What Did Not Work Well Regarding ARRA Period DOE Support

	Frequency
No complaints for DOE support	5
Wx Training Platform did not work well	1
DOE expectations were unclear	2
Multiple Project Officers did not work well	2
Reporting information did not work well	2
Timing of programs/training/funding did not work well	5
DOE's curriculum did not work well	4
DOE's assistance was not relevant to the center	3
DOE's assistance was not necessary	1

The survey also posed questions regarding DOE support for the training centers post-ARRA. As documented in a separate evaluation report, appropriations for WAP several years post-ARRA were exceedingly low.⁴ This reduction in funding not only made it impossible for DOE to maintain its level of support of the training centers at the ARRA level but also constrained the amount of training and technical assistance DOE could provide to the training centers as well as to the WAP Grantees and Subgrantees. Despite these constraints, close to 70 percent of responding centers judged DOE support for

⁴ Tonn, Rose and Hawkins (2015). National Weatherization Assistance Program Characterization Describing the Recovery Act Period. ORNL/TM-2014/593, Oak Ridge National Laboratory, Oak Ridge, TN, March.

post-ARRA planning to be adequate. Table 2.7 documents aspects of interactions with DOE concerning post-ARRA planning that are working. Tables 2.8 and 2.9 document aspects needing further support. It is not surprising that needing help to secure more funding leads these lists.

Table 2.7 Selected Aspects of What Is Working for Post-ARRA Planning

	Frequency
Correspondence with DOE	8
Connecting center with other organizations	3
Developing business plans with DOE	6
DOE help in receiving accreditations	6
Meetings and conferences	2
Calls and webinars	2

Table 2.8 Selected Aspects of Further Support Needed for Post-ARRA Planning

	Frequency
Need help with securing more funding	15
Need help with accreditation	4
Need help developing business plans	4
Need help connecting with other organizations	2
Need help expanding to other sectors	3
Need DOE to mandate training	4

Table 2.9 Selected Responses Regarding How DOE Could Assist with the Post-ARRA Transition

DOE could assist...	Frequency
With funds	14
With business sustainability planning	6
With training and technical assistance	3
Connecting with other organizations	7
By mandating certifications	6
With promotion	1
With information sharing	3

3. POST-ARRA PLANS AND OUTLOOK

This survey was administered in 2011. At that time, it was known that ARRA funding would be spent within a couple of years. It was not known that continued regular appropriations would be as reduced as they turned out to be. Thus, analyses of answers to questions about plans post-ARRA to assist DOE in helping the training centers seem late in coming. Nevertheless, there are some interesting insights to be gained from the answers.

Figure 3.1 and Tables 3.1 and 3.2 present the results from several questions that addressed training center plans post-ARRA. Of note, the centers will try as best as possible to maintain their classes and infrastructure and find new leveraging partners. Also of note, over 80 percent of the centers will attempt to transition into non-low-income programs. Amongst many reasons for WAP receiving such a large level of ARRA funding was the intent to use the low-income weatherization program to train and provide experience to weatherization staff so that after ARRA they would indeed transition into the larger home retrofit sector. It appears as though the training centers are moving in concert with that vision. Still, in light of these intentions, over one-third of the training centers reported they were at risk of closing if new funding could not be found.

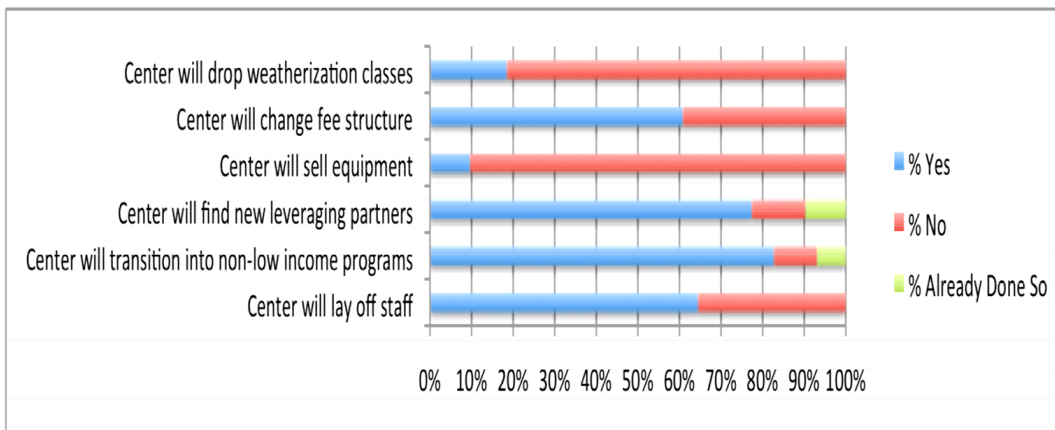


Figure 3.1 Plans for Ramping Down Weatherization Training Program Post-ARRA

Table 3.1 Selected Responses for Ramping Down Weatherization Training Program Post-ARRA

	Frequency
Center will reassign staff	6
Center will offer weatherization classes less frequently	9
Center is unsure how it will ramp down its weatherization training program	1
Center will not ramp down its weatherization training program	5
Center will offer more online classes	1
Center will consolidate operations/facilities	8

Table 3.2 Selected Changes in Post-ARRA Weatherization Training

	Frequency
Staff will travel or conduct online weatherization classes	3
New classes will be offered	4
Less WAP-specific classes will be offered	4
Shorter classes will be offered	1
Courses offered will be more advanced	4
Courses will accommodate private demand	2
Course attendance will be smaller	4
Courses will be offered less frequently	4
Course topics will be dropped	4
Course fees will change	2
Unsure how weatherization courses will change post-ARRA	1

Hampering centers' movement into the larger home retrofit space are centers' own assessments in changes in demand for weatherization training at the local level (Figure 3.2) and national level (Figure 3.3) over the next five years. The respondents are about evenly split between predicting increases versus decreases in the demand for weatherization training. Also hampering future plans is the realization that almost 80 percent of the training center respondents report that recruiting individuals for weatherization training will be a problem in the coming years, in part because the potential recruits may also perceive a lack of subsequent job opportunities (See Table 3.3). Table 3.4 and 3.5 report on the types of individuals the centers hope to attract for weatherization training and the range of jobs they would be trained to perform.

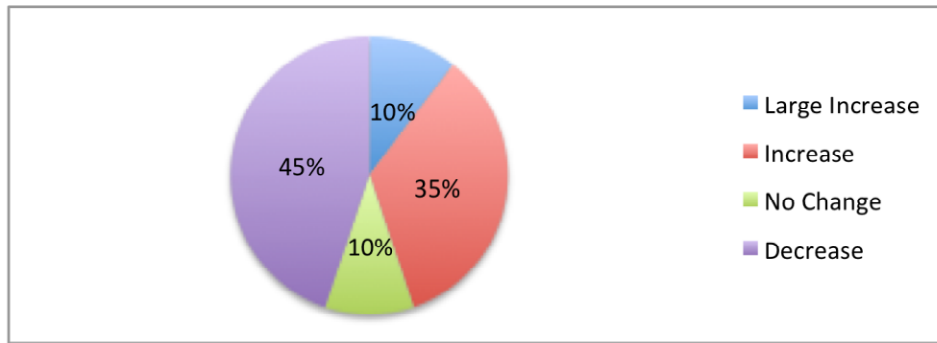


Figure 3.2 Predicted Changes in Demand for Weatherization Training at the Local Level over the Next Five Years

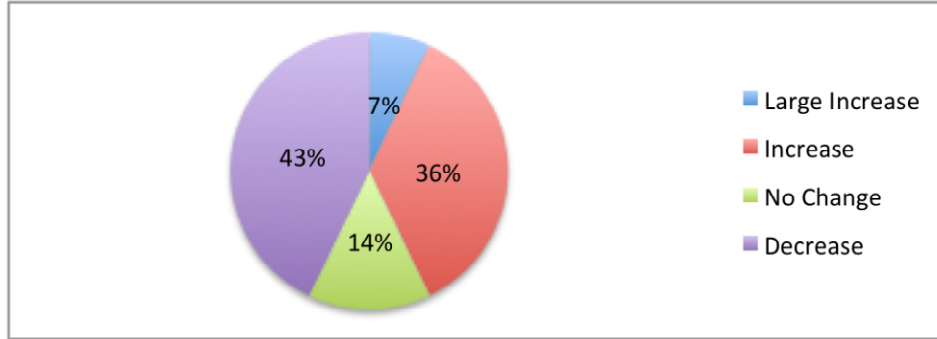


Figure 3.3 Predicted Changes in Demand for Weatherization Training at the National Level over the Next Five Years

Table 3.3 Selected Potential Problems in Attracting New Trainees

	Frequency
Lack of public education around weatherization	5
Market demand for weatherization jobs	17
Marketing the training center	2
Confusion around certification	1
Lack of funds/resources for the center	7
Low-skilled trainees	6
Time and money needed for classes	7

Table 3.4 Potential Types of Trainees Attracted to Weatherization Training over the Next Five Years

	Frequency
Un/Under employed	3
Energy service company	1
Contractors	6
Construction	6
Utility	1
Entry-level	11
Experienced	7
HVAC	3
Sustainability-minded	6
Young	7
Real estate	3
Building managers	1

Table 3.5 Potential Types of Jobs for Trainees over the Next Five Years

	Frequency
HVAC jobs	4
Construction jobs	9
Contractor jobs	16
State government jobs	1
Auditor jobs	16
Tradesperson jobs	3
Energy service company jobs	2
Utility jobs	4
Inspector jobs	11
Crew chief jobs	7

4. CONCLUSIONS

This short report presents the results of a survey of weatherization training centers. As expected, the centers' activities ramped up tremendously during ARRA and then back down again post-ARRA. The centers report taking steps to ensure their viability post-ARRA but without new sources of funding, about one-third expects to close. Just as many centers expect to see demand for weatherization training increase as decrease in coming years. Most plan to offer services to the non-low-income home retrofit sector. One can hope that the economy will rebound and demand for home retrofit services and training and certification will indeed increase while this valuable training infrastructure still exists.

APPENDIX
Table A1. Training Topics Offered by Training Center

Training Center																			Other								
	Intro to Wx	Energy Auditing	Intermediate/Advanced Wx	Building Science	Lead	BPI	Heating/Cooling Systems	OSHA	Crew Leadership	Quality Control Inspection	ASHRAE	Mobile Homes	Combustion Safety	Air Sealing	Blower Door/Pressure Diagnostics	Infrared/Heat Imaging	Ducts/Ventilation	Insulation		Mold/Moisture	Health And Safety	Asbestos	Construction	National Energy Audit Tool	Client Education	Boilers/Furnaces	Electrical
Association for Energy Affordability, Inc.																											IA Q, Lighting
Baltimore City Community College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bergen County Community Action Partnership, Inc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Bucks County Community College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Central Council Tlingit and Haida Indian Tribes of Alaska	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Century Center for Economic Opportunity, Inc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colorado Governor's Energy Office																											
Community Housing Partners Corporation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RESNET , Building Codes, Fire Safety
Corporation for Ohio Appalachian Development Inc.																											Healthy Homes
Focus: HOPE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
FSL Home Improvements dba SWBSTC	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Marketing
Green Jobs Alliance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Indiana Community Action Association, Inc.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Indoor Climate Research and Training - University of Illinois		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Contractor Education
Intermountain Weatherization Training Center		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Doors/Windows
Kentucky Housing Corporation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Maine State Housing Authority	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Plumbing
Metropolitan Energy Center	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
New Mexico Mortgage Finance Authority		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Healthy Homes
New River Community and Technical College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Building Codes, Math, Technical Writing
New York State Weatherization Directors Association	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	IA Q, Fire Safety
Oklahoma Weatherization Training Center		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	CPR, Doors/Windows
Oregon Energy Coordinators Association	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Healthy Homes, IA Q
Pennsylvania College of Technology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	IA Q, Lighting, Plumbing, Building Op/Maint
Pulaski Technical College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
South Middlesex Opportunity Council, Inc.		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Southface Energy Institute	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	RESNET, CPR
The Building Performance Center	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Healthy Homes, Lighting
The WorkPlace, Inc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
University of Central Florida																											RESNET, A CCA
University of Florida	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
University of Massachusetts Dartmouth	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Wilbur Wright College		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Marketing
Wisconsin Energy Conservation Corporation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
WorkNet Pinellas, Inc. - Hillsborough Community College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
WorkNet Pinellas, Inc. - Pinellas Wx Training Center	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
WorkNet Pinellas, Inc. - Urban League	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Math

Table A2. Certifications Offered by Training Center

Training Center	BPI Building Analyst	BPI Quality Control Inspector	EPA Renovations, Repair & Painting State Certification	BPI Envelope Professional	BPI Crew Leader	BPI Energy Auditor	BPI Retrofit Installer	OSHA 10	BPI Unspecified	BPI RBE-WHA/CI	OSHA 30	BPI Manufactured Housing Local Certification	BPI Multifamily Building Analyst	OSHA Unspecified	NCHH/Healthy Homes	BPI Air Conditioning & Heat Pump	RESNET HERS	RESNET HERS	Asbestos Safety Unspecified	ASHRAE 62.2	Other
Association for Energy Affordability, Inc.	✓		✓			✓						✓	✓								ABA, BPI Building Science Principles, PHI
Baltimore City Community College								✓													
Bergen County Community Action Partnership, Inc.	✓		✓				✓														
Bucks County Community College		✓	✓		✓	✓	✓													✓	DOE Lead Safe Wx, Mold Safety Unspecified
Central Council Tlingit and Haida Indian Tribes of Alaska																					
Century Center for Economic Opportunity, Inc.			✓					✓													HBI PACT, MC3
Colorado Governor's Energy Office	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓										
Community Housing Partners Corporation			✓				✓						✓				✓	✓	✓		CPR, Mold Safety Unspecified
Corporation for Ohio Appalachian Development Inc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓			
Focus: HOPE																				✓	Manufactured Home Energy Audit, National Energy Audit Tool
FSL Home Improvements dba SWBSTC	✓	✓	✓	✓	✓	✓	✓		✓	✓											
Green Jobs Alliance	✓								✓												
Indiana Community Action Association, Inc.			✓					✓													
Indoor Climate Research and Training - University of Illinois		✓	✓		✓																IREC
Intermountain Weatherization Training Center								✓					✓								North American Technician Excellence Unspecified
Kentucky Housing Corporation			✓																		
Maine State Housing Authority			✓					✓													
Metropolitan Energy Center	✓	✓	✓		✓	✓						✓	✓								
New Mexico Mortgage Finance Authority			✓					✓						✓							✓
New River Community and Technical College												✓									
New York State Weatherization Directors Association	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓											
Oklahoma Weatherization Training Center	✓	✓	✓		✓	✓				✓											DOE Lead Safe Wx
Oregon Energy Coordinators Association	✓	✓	✓	✓	✓	✓	✓					✓									PTCS Duct Sealing
Pennsylvania College of Technology	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓					
Pulaski Technical College	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓						IREC
South Middlesex Opportunity Council, Inc.		✓	✓		✓	✓	✓	✓	✓	✓											
Southface Energy Institute	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									CPR
The Building Performance Center	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓							PTCS Duct Sealing
The WorkPlace, Inc.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓									
University of Central Florida		✓	✓																		
University of Florida			✓				✓		✓												Green Advantage
University of Massachusetts Dartmouth	✓			✓	✓			✓													
Wilbur Wright College			✓																		
Wisconsin Energy Conservation Corporation	✓	✓		✓				✓													
WorkNet Pinellas, Inc. - Hillsborough Community College	✓																				NCCER: Building Analyst, Core Wx, Intro to Wx, Wx Tech
WorkNet Pinellas, Inc. - Pinellas Wx Training Center				✓	✓																
WorkNet Pinellas, Inc. - Urban League	✓				✓							✓									