

National Association for State Community Services Programs



2023

WINTER TRAINING CONFERENCE

April 3 – 7 | Arlington, VA

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Restoring Hope

Workforce in Action!

www.nascsp.org

WAP Workforce Needs Analysis

Juliana Williams
NASCSP Winter Training Conference
April 2023

Background

As identified through stakeholder dialogue, Weatherization Assistance Program (WAP) Grantees and Subgrantees face challenges in hiring and retaining field staff in the following positions:

- Retrofit Installers/Technicians (RITs)
- Crew Leaders (CLs)
- Energy Auditors (EAs)
- Quality Control Inspectors (QCIs).

Previously, the WAP lacked reliable nationwide data regarding:

- Current baseline staffing needs
- Staffing needs to meet increased funding levels
- Barriers/challenges to hiring, training, certifying staff.

Data Collection Objectives

- ✓ Determine the number of individuals needed per position: RIT, CL, EA, and QCI.
- ✓ Determine the relationships between Subgrantee subcontracting approaches and staffing needs.
- ✓ Determine number of positions required to accommodate production increases.
- ✓ Identify the scale of recruitment needed to implement WAP at expected increased funding levels.
- ✓ Identify qualitative factors affecting workforce challenges.

WAP Workforce Needs Data Collection and Target Audiences

To gain a baseline understanding of workforce needs, NREL collected voluntary workforce data from May 4-June 30, 2022, from the following respondents:

- Grantees (18 questions)
 - 20 respondents.
- Subgrantees (29 questions)
 - 92 respondents.
- Subcontractors (20 questions)
 - 23 respondents.
- WAP Training Organizations (15 questions)
 - 6 respondents.

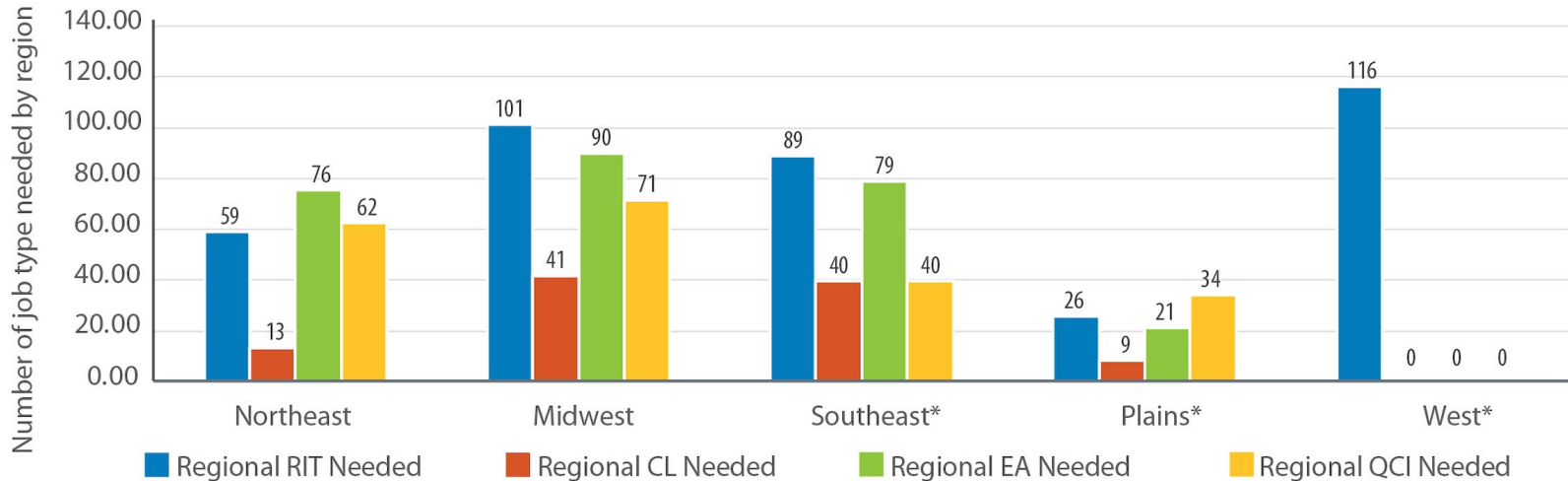
Figure 1: Scaled-Up Regional Staffing Needs as of June 2022

This chart shows the labor shortage in terms of number of jobs by position by region for subgrantees as of June 2022.

Key takeaway by region:

- Midwest has the largest shortages for positions, with the exception of RIT, where the West has the highest need (although the sample size is small and zero needs may not be reflective of actual needs).
- Although not shown on the chart, the national Grantee QCI staffing need as of June 2022 is estimated to be 42.

Scaled up regional staffing needs as of June 2022



*Results may not be fully representative of the region due to small sample size.

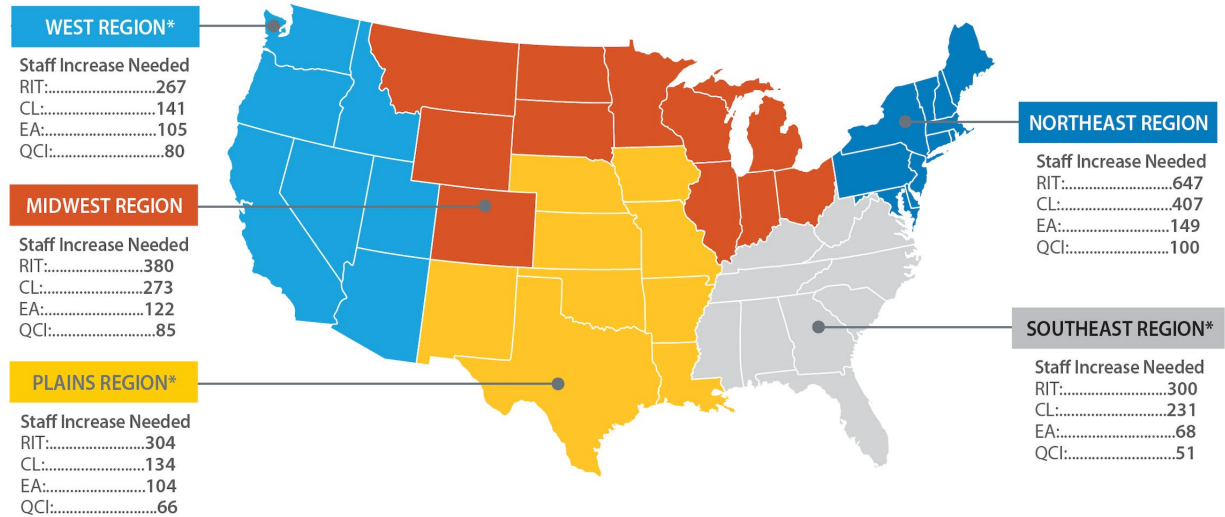
Figure 2: Regional Subgrantee Job Gap To Meet Production Associated With BIL Funding

This figure shows the number of field jobs by position by region resulting from additional production funded by the estimated first 2 years of BIL (estimated 40% of BIL funding).

Key takeaway:

- With the influx of the first 2 years of BIL funding, the WAP Subgrantee labor shortage is expected to grow by approximately 1,900 RITs, 1,200 CLs, 600 EAs, and 450 QClIs.

Regional Subgrantee Job Gap to Meet Production Associated with BIL Funding



*Results may not be fully representative of the region due to small sample size.

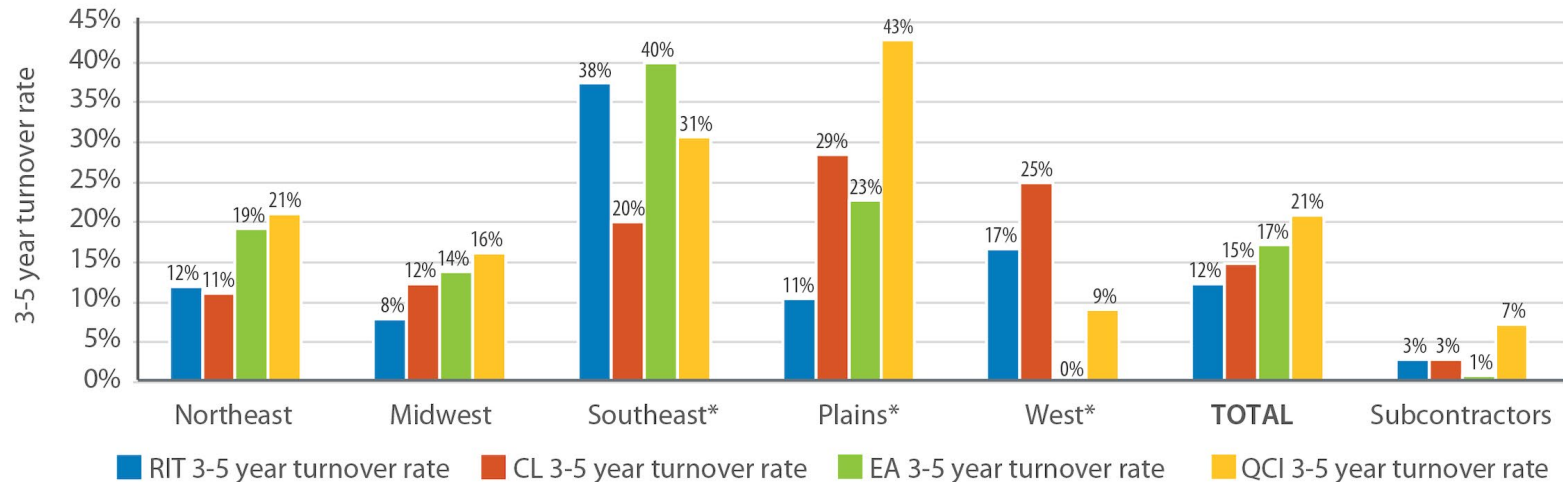
Figure 3: Turnover Rates for Subgrantees by Region and for Subcontractors

This chart shows turnover rates for the past 3-5 years for Subgrantees by region compared to subcontractors.

Key takeaways:

- Southeast and Plains appear to have higher turnover rates across the job positions, but the sample sizes are small.
- Subcontractors have significantly lower turnover rates, implying better retention.

Retirement/Turnover Rates: Subgrantees By Region and for Subcontractors



*Results may not be fully representative of the region due to small sample size.

Qualitative Analysis

Factors Affecting Workforce

Respondents were asked about perceived barriers or challenges in the following areas:

- Onboarding practices and staff turnover
- Earning or maintaining EA and QCI certification
- Production approaches:
 - Subcontracting versus in-house crews
 - Energy audits (priority lists versus DOE approved modeling tool).
- Expanding training.

Figure 4: Staff Turnover Factors

Question: When experiencing staff turnover, select the most common responses given by staff when asked, “Why are you leaving our organization?”

Key takeaways:

- Compensation ranked highest for Subgrantee/Grantee staff but third for subcontractors.
- Working conditions influenced Subgrantee and subcontractor turnover much more than workplace culture or work life balance.

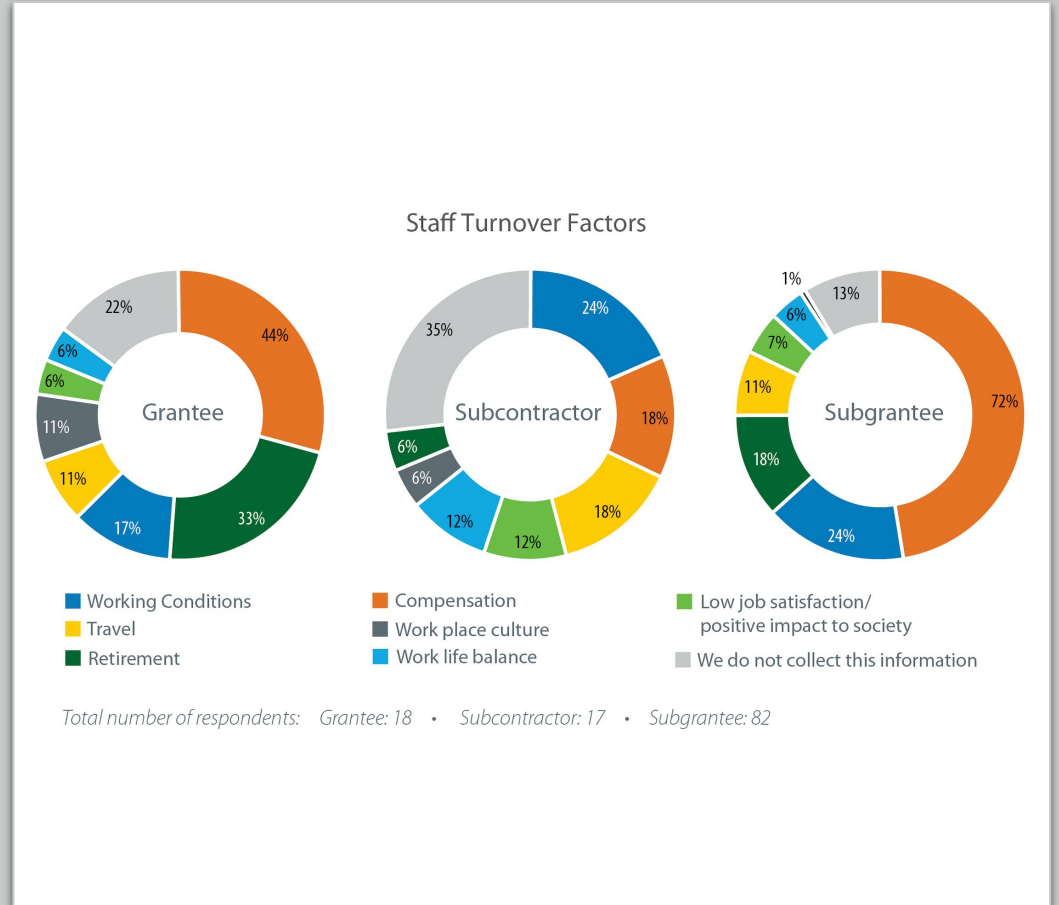


Table 1: Subgrantee Onboarding

The table below shows the % of respondent organizations utilizing each approach.

Key takeaways:

- Just over 40% of respondent organizations do not have a formal diversity, equity, and inclusion plan.
- 3% of respondent organizations use a registered apprenticeship program.

Subgrantee Onboarding	
An onboarding standard operating procedure	68%
A diversity, equity, and inclusion plan	59%
Temporary hiring agencies	29%
Registered apprenticeship programs	3%
U.S. Department of Labor subsidies to offset onboarding/training cost	3%

Perceived EA and QCI Certification Barriers

Key takeaways:

- Prerequisite requirements and the time commitment were the top concerns for Subgrantees and Grantees.
- Lost production and the time commitment were the top concerns for Subcontractors.
- Building science written exam difficulty were common reported barriers for Subgrantees and subcontractors.

Table 2: Training Organizations

Key takeaways:

- Finding qualified trainers was the number one challenge to expanding training capacity reported by training organization respondents.
- Funding, training prop development/maintenance, outdated curriculum, and demand for HEP training were reported as barriers for half or more of respondents.

Training Program Expansion Barriers

Finding qualified trainers	83%
Funding	66%
Training prop development/maintenance	66%
Outdated curriculum	50%
Registration/demand for HEP Training	50%
Retaining qualified trainers	33%
Training center facility limitations	33%
Organizational interest	33%
Training Provider accreditation	16%
Technology (software, learning management system, etc.)	16%

Key Takeaway Summary

Key Takeaways

1. The estimated national WAP Subgrantee **field staff shortage as of June 2022**, scaled by **existing reported vacancies**, is approximately:
 - **400 RITs**
 - **100 CLs**
 - **260 EAs**
 - **200 QCIs.**
2. With the influx of the first 2 years of **BIL funding**, the Subgrantee labor shortage is expected to grow by approximately:
 - **1,900 RITs**
 - **1,200 CLs**
 - **600 EAs**
 - **450 QCIs.**

Key Takeaways

3. The Midwest region is facing the largest labor shortage across most positions and has the lowest capacity to accommodate production increases.
4. Subcontractors appear to have lower turnover rates and greater production capacity compared to Subgrantees.
 - a. Subcontractors reported **60%-80% lower turnover rates** across positions compared to Subgrantees.
 - b. Subgrantees that utilized subcontractor labor had **greater capacity to accommodate production increases**.
5. Training organization respondents reported difficulty finding qualified trainers.
 - a. Difficulty finding trainers coupled with the network-reported job vacancies as of June 2022 and the projected staffing increase due to BIL funding suggests that the WAP is facing **a significant training gap in addition to a jobs gap**.

New Workforce Resources

Workforce Development Toolkit

New interactive online tool supporting workforce development in WAP, including:

- Overview of approaches for workforce development
- Links to key DOE, NASCSP, NCAP, and NREL resources
- WAP case studies of innovative workforce development programs
- Information on developing and funding workforce programs.

Workforce Development Toolkit for the Weatherization Assistance Program

Weatherization Assistance Program

Weatherization Assistance Program » Workforce Development Toolkit for the Weatherization Assistance Program

Workforce development is the process of recruiting and preparing workers to meet the needs of employers and putting the systems in place to promote success and advancement of workers over the span of their careers.

This toolkit provides workforce development information and resources applicable to the Weatherization Assistance Program (WAP). It is organized by the different stages within workforce development and includes both resources and WAP-specific case studies for each.

Funding Workforce Development

Many of the workforce development activities described on this page can help improve the quality and efficiency of your organization. As such it is important to plan and budget for this each program year. This section provides some ways that WAP organizations can fund their workforce activities.

TRAINING AND TECHNICAL ASSISTANCE FUNDS	+
ENHANCEMENT AND INNOVATION GRANTS	+
OTHER FUNDING SOURCES	+

Building a Workforce Pipeline

There are many factors that affect how easy or difficult it is to find workers. Some of these, like the broader state of the economy, are beyond the control of individual organizations or hiring personnel. But there are many steps that organizations implementing WAP programs can take to help grow the pool of potential workers and provide clear pathways for them into weatherization.

One valuable thing a WAP organization can do is to create local workforce and education partnerships. It is not only up to your organization to develop the talent you will need on your staff in the future; there are many organizations in your community that are engaged in working with populations that could be potential WAP workforce.

On This Page

Funding Workforce Development

Building a Workforce Pipeline

Hiring and Onboarding

Training, Upskilling, and Professional Development

Staff Retention, Company Culture, and Diversity, Equity and Inclusion

Working with Contractors

Other Resources

Installer Badges Toolkit

Retrofit Installer Tasks

25 Badges

- Work Lead Safe
- Air Seal Attic Floor
- Seal and Dam High-Temperature Heat Sources in Attic
- Prep Attic Floor for Insulation
- Treat Attic Hatch, etc.

Development of online badging platform is in progress.

<https://sws.nrel.gov/installerbadges>



Installer Badges Toolkit

The Installer Badges Toolkit provides a flexible, customizable model for a competency-based apprenticeship approach to training and skills recognition across the home energy retrofit industry.

The National Renewable Energy Lab (NREL) and the U.S. Department of Energy (DOE) Weatherization Assistance Program (WAP) are collaborating with the home energy retrofit industry to support the development of skilled workers. The Installer Badges Toolkit provides a flexible, customizable, and voluntary approach to training and skills recognition for WAP implementers, utility programs, private sector workers, and contractors. It can be the basis of a competency-based Registered Apprenticeship, which offers greater flexibility and options for addressing talent development needs through apprenticeship, detailed here: <https://www.apprenticeship.gov/>.

A Flexible, Customizable Skills Verification Toolkit

The Installer Badges Toolkit consists of 25 Badges, each representing different energy efficiency tasks that an installer could perform on a home. Each Badge defines the desired outcome, criteria to verify, applicable material requirements, and references to SWS or other relevant standards. Workers earn Badges by completing each task and receiving approval from a qualified supervisor. To track progress, trainers or sponsors can provide workers with a physical Badges Passport or a digital badging platform.

The Badges provide a consistent approach to training by ensuring that installers in different regions are learning the same skills nationwide. Organizations can also customize the Toolkit by choosing only those Badges that are relevant to their program.

Whether workers earn Badges on the job with supervisor approval or at a training center, the work quality requirements are consistent. This allows workers to transfer applicable


Weatherization Job Aids

U.S. DEPARTMENT OF **ENERGY** Office of ENERGY EFFICIENCY & RENEWABLE ENERGY **3-2**

Seal and Dam Around Non-Insulation Contact-Rated (Non-IC) Recessed Lights


Job Aid for Seal and Dam High-Temperature Heat Sources in Attic Badge

Aligns with Standard Work Specifications 3.0102.1




1

Clear any debris and insulation from around non-IC rated light.




2

Enclosure has 3 inches of clearance from lamp to insulation on all sides.




3

Premade boxes can make installation easier when installation site is clear of framing members.




4

Seal box on all sides and edges to make continuous barrier from attic.



5

Top of box must be R-1 or less and left free of insulation. Flag enclosure for added visibility.



AFTER

When boxed with appropriate clearances and fire-rated materials, fire risk is mitigated and air leakage is reduced.

3-2 Seal and Dam Around Non-Insulation Contact-Rated (Non-IC) Recessed Lights 1

U.S. DEPARTMENT OF **ENERGY** Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

CHECKLIST

Seal and dam high-temp heat sources in attic

DESIRED OUTCOME
Ensure safety from fire and prevent air leakage¹

Non-Insulation Contact (IC) Recessed Lights

- Where non-IC recessed lights will be left in place enclosures completely surround each fixture.
- Enclosures:
 - Are constructed of fire-rated materials (e.g., 5/8" gypsum wallboard).
 - Maintain 3" clearance between fixture (including wiring, box, and ballast) and insulation.
 - Are free of insulation on top.
 - Are flagged to visually identify the location of the enclosure.
- All edges, gaps, and cracks of the enclosure, and between the enclosure and attic floor, are sealed with caulk, mastic, foam, or other approved material.

¹ Relevant standards: 3.0102.1

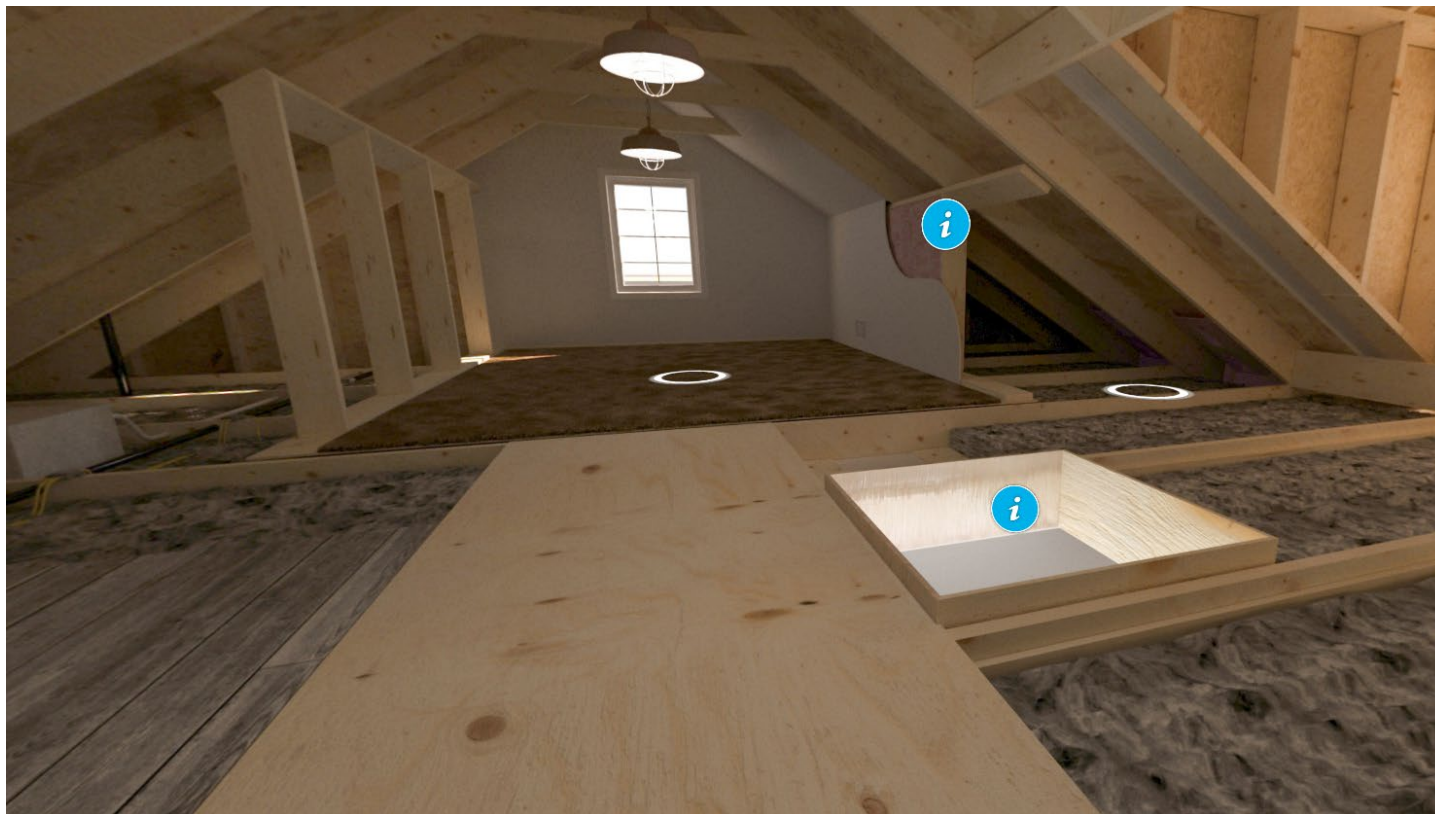
U.S. DEPARTMENT OF **ENERGY** Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

For more information, visit: energy.gov/eero/wap
DOE/EE-2591 - May 2022

3-2 Seal and Dam Around Non-Insulation Contact-Rated (Non-IC) Recessed Lights 2

NREL will develop additional job aids based on network feedback, including for masonry chimneys and outer ceiling joist insulation options.

3D House



Upcoming NREL Workforce Development Efforts

With expected production growth due to the influx of BIL funds, NREL will be conducting the following activities:

- Leadership training and support for local WAP agencies in partnership with NCAP
- Exploring workforce pipeline partnerships outside of WAP to help grow and stabilize the WAP workforce
- Convene subcontractor stakeholders to inform development of additional subcontractor resource
- Coordinate with NASCSP to update the WAP wage survey
- Develop an ACPU Wage Sensitivity Calculator
- Explore online badging platform for Retrofit Installer Badges.

The goal of these efforts is to help support the workforce development needs, barriers, and concerns for the weatherization network across the country.

Thank you!

www.nrel.gov

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NASCSP Workforce Development Working Group

- NASCSP did voluntary call for participants in May 2020
- 11 Members; all 5 Regions represented
- Met bi-weekly to discuss challenges and opportunities to workforce development and retention in the WAP

Member Representative	State / Territory	Region
Geoff Wilcox	Vermont	1
Keli Reynolds	Kentucky	2
Deanna McCord	Kentucky	2
Kye Garvin	Oklahoma	3
Robert Garber	Missouri	3
Mary Meunier	Wisconsin	4
Mick Prince	Illinois	4
Wayne Hartel	Illinois	4
Ryan Manzik	Colorado	4
Maddy Kamalay	Michigan	4
Jessicarae Nunez	Washington	5



Kentucky:
Workforce
in Action



Vermont – Workforce in Action!

WORKFORCE INITIATIVES IN VERMONT WAP

Geoff Wilcox

Weatherization Program Director

Phone 802-279-7964

Email geoff.wilcox@vermont.gov

State of Vermont

Office of Economic Opportunity

280 State Drive

NOB N Second Floor

Waterbury, VT 05671-1050

www.dcf.vermont.gov/benefits/weatherization or www.weatherization.vermont.gov



**WEATHERIZATION
WORKS!**

QUICK SNAPSHOT

- 6 Local Agencies. (5 local WAPS and 1 statewide MFWAP).
- Local WAP's 99% in house crews (70 total crew workers).
- Underspending 10-20% that last few years.
- Crew vacancies the biggest reason (10-20% vacancy rate).
- No vacancies at other positions.
- \$20 million WAP budget this year.

STATEWIDE MARKETING BY STATE OFFICE

- Radio and TV interviews to spread word (crew jobs and apply for Wx services).
- Public Service Announcements (filmed short video in a home) on statewide TV network.
- Interviewed staff and posted on social media and statewide newsletter (Front Porch Forum).
- Utilized the Wx Career Fact Sheet (from NASCSP / NREL).

CREATED MINIMUM AND PREVALING WAGE

- Instituted a \$20.16 per hr. plus 42.5% fringe rate for crew. \$2 higher for crew chief.
- Did this via Wx grants. Low administrative burden (not DB).
- This wage was up to \$4 an hour higher than previous starting wages (for some agencies).
- Has resulted in increased recruitment (and better quality), and retention of crew workers.
- All agencies have been thankful this was implemented!!!!

OTHER

- Awarded a DOE Grant to plan and implement a State of VT Wx Training Center.
- Participation in numerous state and national Workforce Committee's.
- Establishing relationships with other organizations including schools, Dep. Of Labor, etc. (a lot to do here).



Kentucky
Workforce
in Action!

Workforce Issues Pre- Pandemic

Not all Subgrantees had EAs and QCI

One contract QCI who was serving at least 5 subgrantees

Subgrantees who are supplying other subgrantees with QCIs

Not enough contractors, especially plumbers and HVAC

Disaster Hits!!

Pandemic – workforce has unmet needs
and wages are high

Natural Disasters

- Extreme Flooding in Eastern Kentucky – March 2021
- Tornadoes Hit Western Kentucky – December 2021
- Massive Flooding in Eastern Kentucky – July 2022 – leaving over 1200 houses that need to be replaced or repaired





Natural Disasters on Workforce

- Housing isn't replaced fast enough = People leave
- People leaving = Businesses close (no contractors)
- Workforce crashes in affected areas.
- If housing is replaced fast, people go to work for contractors who are receiving reimbursements fast and paying high wages.

Workforce Development Strategies



Used NASCSP flyer for career path

Built minimum wage pay for each position in WAP

Creating outreach teams that will help to create training partnerships and workforce recruitment

Incorporating incentives for contractors and subgrantee crews

Hoping that we get to the people needing jobs before the federal disaster funded contractors do

IHWAP Workforce Initiatives

*Mick Prince
Weatherization Program Manager
April 2023*



Tuition Reimbursement



- We are encouraging our subgrantees to engage with area community colleges and technical schools.
- We are offering \$5,000 in tuition reimbursement annually, for a maximum of 3 years, or \$15,000 total reimbursement.
- We are hoping this will attract new talent and help retain staff.

Contractor Training Stipends



- IHWAP requires a 1-week training and certification program for our architectural and HVAC contractors.
- We understand this loss in production can be a barrier for contractors.
- We now offer stipends for up to \$300/day/person.
- Mileage reimbursement
- Per diem
- Lodging

Digital Marketing Campaign



- We are doing a mass email marketing campaign to find interested contractors.
- Standing up a website specifically for contractor engagement.
- Interested contractors can complete a form to become prequalified to work in the program.
- We are planning a press conference with Governor Pritzker to promote the launch of the website.

Digital Marketing Campaign

Contractor Recruitment into WAP



Illinois
Department of Commerce
& Economic Opportunity

Home Weatherization

The Illinois Home Weatherization Assistance Program (IHWAP) helps low income residents and households conserve fuel and reduce energy costs by making their homes and apartments more energy efficient. IHWAP also provides many health and safety upgrades ensuring safe and healthy homes. Energy conservation and health and safety measures provided through home weatherization can ensure citizens have access to more affordable energy services.

How do we do it?



The local agencies that provide weatherization services to low-income households need more mechanical (HVAC and plumbing) and architectural contractors (insulation, carpentry) to participate in the program. This is a great opportunity for companies to grow their business! Rather than spending time developing bids and marketing your services, the clients and work orders will be provided to you by the local weatherization agency.



Missouri: Apprenticeship Pathways For Workforce Development

- [NASCSP Workforce Innovation Blog Series](#)

US Dept. of Labor Registered Apprenticeship Program

- The subgrantee will fill out a R.A. application and program plan
- Upon plan approval by DOE, the subgrantee will recruit an apprentice(s)
- The apprentice(s) is hired as full time employee of the subgrantee
- The apprentice(s) are matched with a mentor who has sufficient experience performing the tasks the apprentice will be learning
- The apprentice is given 2000 hours of on the job training and 144 hours of classroom instruction

US Dept. of Labor Registered Apprenticeship Program

Benefits for Your Subgrantees

- Recruit and develop a highly-skilled workforce
- Increase retention of workers, during and following the apprenticeship
- Improve productivity and expand capacity
- Create flexible training option that ensure workers develop the right skills
- Minimize liability costs through appropriate training of workers
- Funding available to pay at least a portion of the apprentice's wages

US Dept. of Labor Registered Apprenticeship Program

Benefits for Apprentices

- Employed from day one
- Graduate with zero debt
- Receive a nationally recognized credential upon completion
- Receive real experience while studying
- Wage progression as skill are mastered
- Competitive Advantage over peers not in a Registered Apprenticeship

North East (Missouri) Community Action Corp

- Began Registered Apprenticeship Program in April 2021 for retro-fit installers
- 17 Apprentices have started the program since that time
- 4 have already graduated
- The second “class” of 8 apprentices are on track to graduate in June
- Only 2 of the 17 enrollees left the program prior to completion (88% retention rate).
- Added a 2nd apprenticeship for Energy Auditor last spring (2 current enrollees)

Getting Started

- Find a subgrantee who is excited about the possibility of an apprenticeship
- Contact your State's DOL Office of Apprenticeship:
<https://www.apprenticeship.gov/about-us/state-offices>
- Partner with your State's Workforce Development Office
- Create your program

After you have your program down on paper:

- Introduce your subgrantee to their local WIOA Board, Job Centers, and Vo-Tec/trade schools
- Support your subgrantee's efforts then expand to other subgrantees

Create Anticipation for the Position



WAP E&I

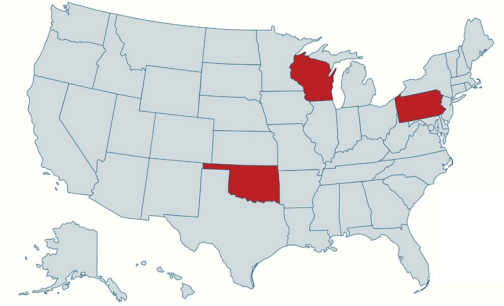
**Cultivating a New
Generation of Diverse
WAP Workers**

**NASCSP Winter
Training Conference**

April 7, 2023



Project Overview



Project Goals

Empower you with tools and resources to more effectively connect with, and recruit new workers.

Align recruitment strategies with the needs and values of underrepresented populations in the home energy industry and underrepresented community members.

Improve the employee candidate pool for Weatherization Assistance Program jobs and reduce the time and cost to hire new workers.

Key Project Activities

- Develop, pilot, and nationally deploy a data-driven outreach campaign focused on recruiting and hiring new WAP workers.
- Provide third-party contractor support and education, including a *Guide to Contractor Success*.
- Produce a multimedia, multi-audience outreach toolkit and an online engagement platform.

Outreach & Engagement Platform

- Raise awareness of WAP careers
- Provide an engaging online experience
- Connect potential workers to local job opportunities
- Access to outreach collateral and community engagement resources for Subgrantees
- Access to Guide to Contractor Success for contractors

Discussion Questions

Visit www.irecusa.org/wapei or scan the QR code.

1. What has worked for filling WAP job openings?
2. What would help to recruit underrepresented groups?
 1. What would you want someone to know about working in the WAP?



Connect with us!

Visit www.irecusa.org/wapei
or scan the QR code.



Expanding Communication and Outreach about WX Career Paths

NASCSP and NREL created Weatherization Career Fliers from the 2021 Wage Survey Data.

WEATHERIZATION CAREERS COLORADO

Why start a career in weatherization?

- Earn competitive wages while you learn – the cost of your training is covered.
- Paid benefits can include health care, retirement, vacation, and sick leave.
- Choose a career pathway that is technical or administrative, depending on your interest.
- Your skills and experience move with you anywhere in the country. Since 1976, weatherization has grown into a multibillion-dollar industry, with work in every county and state.
- Your work can improve your neighborhood and help the most vulnerable residents by making their homes safer to live in and more energy-efficient.

Do you have a...

- Willingness to learn
- Positive attitude and strong work ethic
- Desire to help your community and the environment.

Then a career in weatherization may be a good fit for you!

Sample Career Pathway

Depending on experience and qualifications:

Retrofit Installer Technician (0-2 Years) → Crew Leader (2-3 Years) → Energy Auditor (1-2 Years) → Quality Control Inspector (3+ Years)

Average Colorado Wages

Based on a 40-hour work week. These wages are averages and may vary by agency.

 Retrofit Installer Technician Installs home energy-saving upgrades \$19.50/hr. or \$40,560/yr.	 Quality Control Inspector Ensures quality and completion of installed energy-saving upgrades \$31.00/hr. or \$64,480/yr.
 Crew Leader Supervises installation of home energy-saving upgrades \$23.50/hr. or \$48,880/yr.	 Client Intake Specialist Confirms client eligibility for the program \$23.00/hr. or \$47,840/yr.
 Energy Auditor Examines homes to identify energy-saving upgrades \$25.50/hr. or \$53,040/yr.	 WAP Program Manager Oversees program staff, planning, and performance. \$37.00/hr. or \$76,960/yr.

Find a weatherization agency near you:
energyoffice.colorado.gov/weatherization-assistance/service-providers

Scan here to
complete the
survey for
this session!





Thank you to our Presenters!

Please take 2 minutes to
complete the evaluation for this
session.