

The Energy Efficiency Workforce Initiative

Recent federal and state policies are driving unprecedented demand for energy efficiency products and services, shaping the industry landscape for decades to come. However, this deluge of funding is running into one very big dam - an ongoing, national shortage of workers.

COVID-19 dealt a major blow to the energy efficiency workforce, with the DOE's [2021 U.S. Energy and Employment Report](#) (USEER) reporting an 11.4% drop in workers in 2020 alone. However, the shortage of workers cannot be attributed to the pandemic alone. In February 2020, one month before COVID-19 became a household term in the U.S- the president of the National Comfort Institute [stated](#) that each year, an estimated 20,000 HVAC technicians were leaving the industry nationwide. And with [40% of the construction workforce likely to retire](#) in the next decade, there is an urgent demand for new workers in multiple fields.

According to the latest DOE [USEER State Report](#), jobs in the Virginia energy efficiency industry have steadily increased over the last three years and are now back to pre-COVID numbers. This slow rebound will not be enough to meet exponentially growing demand. With the passage of the Inflation Reduction Act (IRA), DOE will deliver \$9B to states (\$186M to Virginia) for residential energy efficiency and electrification projects, creating an unprecedented demand for skilled contractors in an already strained workforce.

Moreover, it will not be enough for contractors to simply be licensed, bonded, and insured. Contractors who perform upgrades as part of any utility, state, or federal energy efficiency program must understand building science principles, or the "building as a system" approach to ensure measures are being installed properly in order to maximize energy savings for the consumer.

The Solution

DOE will be providing hundreds of millions of dollars to states to implement workforce training programs in preparation for the IRA rebates, underscoring how critical it is to train a skilled energy efficiency workforce **now**.

The Virginia Energy Efficiency Council has been convening workforce development experts as well as experts from within our membership, to design the [Virginia Energy Efficiency Workforce Initiative \(EEWI\)](#), a holistic, employer-driven approach to workforce development. We will utilize best practices from other programs, such as the DC Sustainable Energy Utility (DCSEU) [externship program](#), to establish career pathways for HVAC technicians, weatherization subcontractors, and energy auditors, which will also include providing individualized career support services as needed.

The EEWI will align partners and existing entities to recruit, train, place, and retain skilled workers while utilizing funds to provide support and career services to trainees.

Thanks to a generous grant, we will be piloting the EEWI in Hampton Roads, with the intent to eventually scale statewide. We chose Hampton Roads for several reasons. First, under new federal funding guidelines, called the [Justice40 Initiative](#), 40% of federal funding benefits must go to disadvantaged communities. According to the latest [Census data](#), the average poverty rate of the six major cities in Hampton Roads- Norfolk, Newport News, Hampton, Portsmouth, Chesapeake, and Virginia Beach- is 13.4%, which is above the national average.

This data clearly demonstrates there is a huge demand for low-income weatherization services. Unfortunately, Hampton Roads has been without a contracted weatherization provider for most of 2023. The Department of

Housing and Community Development will announce a new provider soon, but regardless of who they are, the massive backlog of work means the provider and their subcontractors will need to hire en masse quickly. Weatherization providers are located in the regions they serve, which means these jobs will benefit Hampton Roads communities.

Additionally, beginning in 2024, Tidewater Community College and Trane Technologies have partnered to deliver a new HVAC training program at the Skilled Trades Academy in Portsmouth, to provide both classroom and hands-on-training. This is the perfect opportunity for the EEWI to support HVAC training in the region.

Developing partnerships with local organizations in Hampton Roads will be critical to the success of the EEWI. Working with trusted community groups will not only help us understand the localized needs of each community in Hampton Roads, but will also help us maximize participation from members of those communities.

To ensure equitable access to the EEWI, career support services will be critical to helping trainees overcome economic barriers to participation. These services support the individual as a whole and not just as a new recruit or employee. A [2023 report](#) by the Institute for Construction Employment Research listed transportation assistance, housing and employment support, mentorship, tool and clothing vouchers, and support for childcare services as the most successful support services to provide for disadvantaged workers.

In Cincinnati, OH, the [WorkAdvance program](#) provides career support services to low-income individuals looking for work. According to a report on their initial pilot program, participants, at the time of enrollment, earned less than 200% of poverty level and many were on food stamps. The report showed that participants who received wrap-around services were more likely to work stable, full time positions, and saw wages increase 14-24%. Additionally, participants were ten times more likely to advance in their jobs than those who did not receive career services support.

This holistic approach to workforce development not only provides opportunities for both new and existing workers, but also solves a business need in high-demand industries, demonstrating that strategic partnerships that go beyond job placement can improve outcomes for both individuals and businesses alike.

Moreover, the EEWI is designed to work in tandem with the IRA Home Energy Rebates, as well as existing energy efficiency programs and training entities. By focusing our pilot program on one region, we will be able to provide a proof of concept that has already been in practice to the state energy office, positioning ourselves as a proven program implementer and ensuring the program is ready to deploy across the commonwealth once federal funding becomes available.

How it Works

While there may be hundreds of workforce development entities working throughout the Commonwealth, we find that many times, these entities work on just one piece or another of the career pathway- training people without providing placement support, or hiring people with no training or career advancement opportunities. These siloed initiatives are not effective. Workforce development entities must work together to ensure recruits are successful in attaining and retaining employment.

What sets the EEWI apart from other workforce development programs is the holistic approach. We intend to braid existing entities and funding sources together to successfully move recruits through hands-on and

classroom training, to placement at well-paying jobs and provide continued support for new hires as they advance through their careers.

Energy Efficiency Workforce Initiative Career Pathways

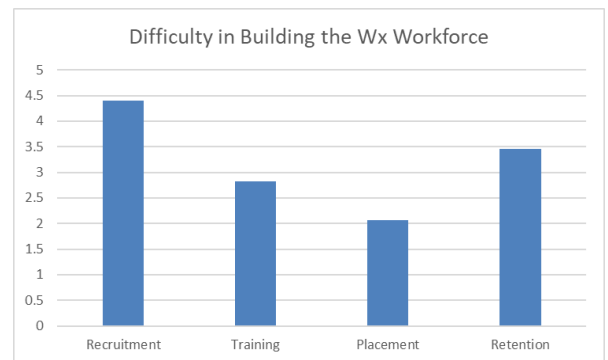


Recruitment

According to the [2023 US DOE USEER](#) state analysis, 53% of Virginia energy-sector employers found it somewhat- to very-difficult to hire new employees. Nationwide, small applicant pools/ competition were stated as the primary reason, indicating that recruitment is a big challenge in hiring new employees in the energy sector nationwide.

This was echoed in a survey we did of the Virginia weatherization provider network as well. Of the responses, 73% said recruitment was their biggest issue.

The EEWI will provide recruitment support to our placement partners by working with local organizations, workforce development boards and others to identify potential new hires. We will also attend recruiting events so our partners can focus their resources on the important work of training and hiring.



Training

Employee training is arguably the most important component of the career pathway. Yet, according to the [2023 US DOE USEER](#), the energy industry reports hiring difficulties due to insufficient skill, qualifications, or training.

Yet, just as there is no single energy efficiency job, there is no single training and certification pathway to meet the needs of each position or trade. The requirements for weatherization are different from those for HVAC technicians and green building professionals.

However, when it comes to any trade, a combination of classroom and field training is the best way to prepare an employee for certification. According to the [Blue Green Alliance](#), a hybrid training approach is well suited because it provides “the ability to understand the concepts and rationale behind energy efficiency and provide real-world challenges to completing technical work that participants will face on the job.”

However, this approach is not without costs. According to the most recent [E4TheFuture Jobs Report](#), the vast majority of contractors and HVAC companies are small businesses. Meaning, they often do not have the resources or means to provide training. Thankfully, by collaborating with the Community Housing Partners

weatherization training center and Tidwater's Skilled Trades Academy, recruits will have access to some of the best training resources available **for free**.

In addition to the actual costs of training, new hires could face other financial costs as well. During training, a new hire may not be able to work, meaning they are unable to earn wages. If training isn't nearby, then they may need extra money for transportation, food, or lodging, which could prevent them from applying altogether.

The EEWI will be able to provide additional support during the training phase, such as stipends or gift cards for transportation, lodging, and food to ensure access to these programs for all participants.

Placement

The VAEEC membership will provide us with instant access to placement opportunities. Through our membership, we have three main entry points to the existing contractor network: weatherization providers and subcontractors; residential utility program contractors, and affordable housing developers and contractors.

According to our weatherization survey, 52% of respondents said staffing issues were their biggest barrier to providing more weatherization services, with nearly every provider looking to hire within the next 18 months. Moreover, many respondents expressed a need for experienced workers to serve as crew leads, energy auditors, and/or quality control inspectors - roles that require advanced training and certification.

Whether it is directly with a VAEEC member, a member of a partner trade organization, or a subcontractor already working in the building performance space, the EEWI will readily be able to identify job opportunities.

Retention

Strenuous working conditions of construction and weatherization trades, especially during a workforce shortage, make it difficult for contractors to compete with less physically demanding jobs. As indicated in the table above, retention was the second biggest concern for Virginia weatherization providers.

Ongoing investments in on-the-job training and education for employees will be critical to the success of an expanded energy efficiency workforce. Continued career counseling not only increases an employee's longevity at the organization but also provides them with opportunities to advance into higher-paying positions.

While some of these services can be provided by third parties, continued on-the-job training would come directly from the employer since new hires are typically paired with a more experienced worker for a significant period. This increases payroll without increasing productivity until the new worker can work independently. As mentioned before, most energy efficiency contractors are small businesses with limited resources already.

Stipends to small businesses could help offset the initial costs of onboarding. Financial support would allow small businesses to provide resources to new employees while helping them grow their workforce with trained and knowledgeable individuals. According to [a survey](#) by the AnnDyl Policy Group, 46% of the contractors they surveyed would prefer wage subsidies for senior staff doing on-the-job training. This is critical information as we decide the best ways to deliver training funds and wrap-around services through the EEWI.

Conclusion

We envision a successful program that helps weatherization providers and their subcontractors meet the increased demand due to the RGGI low-income program and additional federal funding, supports affordable housing developers using RGGI and Low-Income Housing Tax Credit (LIHTC) financing to make their projects

more energy efficient, expands the utility contractor network to help electric utilities meet their energy savings goals in the VCEA, and provides the best experience possible for consumers taking advantage of the IRA rebates.