

This webinar introduces strategies that will leverage residential and commercial retrofit projects towards realizing workforce diversity and economic inclusion. It will cover why leveraging retrofits for community benefits is important and identify challenges towards employing a diverse workforce and implementing economic inclusion strategies. Speakers will offer guidance on how to develop project requirements that track to workforce diversity and economic inclusion and how to identify partners who can help project teams realize their workforce goals.







### The Buildings Upgrade Prize (Buildings UP)

Buildings UP is designed to rapidly scale <u>energy efficiency and efficient electrification building upgrades</u> in communities across the country. The prize is envisioned to consist of four phases over approximately five years.

**Application support prizes** available for new and under-resourced teams.



#### Phase 1: Concept

- \$22M+ in Prizes to Teams & Technical Assistance
- Applications due by July 18, 2023
- Seeking 20-60 teams to join the "coopetition."



#### www.heroX.com/buildingsUP

Buildings UP | U.S. Department of Energy

## **Prize Goals**

Buildings UP aims to address persistent <u>non-technical</u> barriers to improving building energy efficiency and reducing on-site emissions (e.g., administrative, financial, social, and other barriers).

Buildings UP is a capacity-building prize to support teams with solutions that:

- Accelerate building upgrades for efficiency and on-site emissions reductions beyond current best practices in the applicant's identified area of focus
- Demonstrate scalability and replicability a cross building type(s), climate zone(s), and/or, community type(s)
- Advance holistic and lasting energy efficiency and efficient electrification initiative development
- Benefit underserved communities by ensuring that benefits accrue to equity-eligible buildings, their occupants, and surrounding communities.

\*Equity-eligible buildings include buildings in disadvantaged communities; low- and moderate-income (LMI) households; and underserved commercial, nonprofit, and public buildings.

Buildings UP | U.S. Department of Energy

6

Phase 1: Pathway	s & Prizes
Equity-Centered Innovation Pathway \$400,000 in cash prizes for each winning team	• Develop replicable, scalable, innovative building upgrade initiatives in equity-eligible buildings (i.e., 80% equity-eligible).
Open Innovation Pathway \$200,000 in cash prizes for each winning team	<ul> <li>Develop replicable, scalable, innovative building upgrade initiatives. May include a focus on equity but are not required.</li> </ul>
	e is awarded to winning teams in both pathways.

Buildings UP | U.S. Department of Energy

Equity	-Eligible Buildi	ngs	
	<u>Geographic</u> <u>Location (</u> Justice 40 Census Tracts, Tribal Lands, Territories)	<u>Affordable</u> <u>Housing</u> (Subsidized, Naturally Occurring)	
	Underserved Commercial (including Title 1 Schools, Community Services, Non-profits)	<u>Team-Defined</u>	
Buildings UP   U.S. Departr	Additional information is in Section 3.5 o	of the official rules.	8

## **Example Projects**

A rural electric cooperative partners with a local CBO and the county to help LMI single-family home residents



transition from **propane heat** to **efficient electric heat pumps.** 

A K-12 school district and an energy services company partner to electrify district buildings.



Buildings UP | U.S. Department of Energy

A CBO in a midsized town in the southeast partners with the local government to bring heat pumps (and air conditioning!) to affordable housing buildings throughout the community.



A **national residential property owner** teams up with **multiple local governments** and

utilities on an initiative to electrify its properties in three major markets.



A business improvement district in a large city neighborhood partners with local houses of worship

.

.



to bring efficient electric heating and cooling equipment to small businesses.

### +Innovations!

Minimum technologies and strategies teams must include in their initiatives:

- Weatherization and envelope improvements (e.g., insulation, air sealing, window improvements) where needed to reduce energy costs
- Efficient electric heating and cooling equipment (e.g., heat pumps and/or heat pump water heaters).

### Seeking Innovations to Address Non-Technical Challenges to Widespread Building Upgrades

- Lack of contractor and occupant familiarity with technologies
- High first costs for upgrades, limited short-term payback
- Lack of retrofit materials and equipment
- Insufficient workforce to complete upgrades
- Lack of reach of funding and incentive programs to historically underserved households and building owners
- Inconsistent quality of work and consumer mistrust.

Buildings UP | U.S. Department of Energy

10

## **Next Steps for Competitors**

- Follow the prize on HeroX.com, read the rules, and review • the FAQs.
- Register for an Informational Webinar: June 13 at 2pm ET •
- Create an account on HeroX and click on the "Solve this • Challenge" button.
- Team up and submit a Phase 1 "Concept" application via ٠ HeroX by July 18, at 5pm ET.

Follow www.HeroX.com/BuildingsUP Questions: buildingsUP@nrel.gov



a all Count Class

Prize



Buildings UP | U.S. Department of Energy

Building Upgrades: An Opportunity for Workforce Development and Economic Inclusion

Daryl Wright Rohini Emerald Cities Collaborative ACEEE

Rohini Srivastava ACEEE

Residential Retrofits for Energy Equity

Buildings UP The Buildings Upgrade Prize

#### **Meet Your Presenters**



Daryl Wright, Chief Strategy Officer, Emerald Cities Collaborative



Rohini Srivastava, Senior Researcher, ACEEE



**Residential Retrofits for Energy Equity (R2E2)** is a new nationwide initiative that provides trainings to state, local, and tribal governments as well as community-based organizations and other partners to jumpstart energy upgrades for affordable housing that will lower utility bills, reduce greenhouse gas emissions, improve residents' health, create good-paying local jobs, and help advance racial equity. R2E2 is supporting the Buildings Upgrade Prize by providing training and technical assistance to applicants and awardees.



# Learning Objectives

By the end of this webinar, project teams will:

- Define economic inclusion and workforce diversity
- Explain how leveraging retrofit projects for community benefits aligns with J40 goals
- Identify challenges to employing a diverse workforce and creating economic inclusion
- **Describe community benefits** as a strategy to create projects with workforce diversity and economic inclusion goals
- Identify partners who can help project teams realize their workforce goals



#### **Buildings UP Scoring Overview** Phase1Concept Plans (due July 18) are scored Buildings UP Scoring Criteria (equally weighted) against scoring statements under each prize 1. Assessing & Prioritizing Challenges criterion. 2. Addressing Challenges Through Innovation: **Initiative Scope and Impacts** One narrative is required for each criterion. The summation of narratives constitutes the Concept 3. Scaling & Replicating Innovation through Plan. **Community Involvement** 4. Demonstrating Capabilities & Team This training is applicable to the following Characteristics Critical for Success criteria: 5. Achieving Equitable Building Upgrade Strategies > Assessing & Prioritizing Challenges (additional criterion: Equity-> Addressing Challenges Through Innovation: Centered Innovation Pathway) **Initiative Scope and Impacts** Official Buildings UP Rules: https://www.herox.com/BuildingsUP/resource/1152

Buildings UP | U.S. Department of Energy

15

# **Economic Inclusion Defined**

**Economic Inclusion** includes high-road employment and contracting opportunities and improved access to those opportunities for historically marginalized people and communities, i.e. BIPOC, women, at-riskyouth, etc.

**High-road** refers to social and environmental responsibility. Policies that support the high-road encourage competition based on quality rather than cost, and favor firms that internalize the true costs of business by providing good wages, benefits, growth opportunities, and working conditions, adhering to laws and regulations, and pursuing best practices with respect to community engagement and the environment.



🕅 R2E2

Source: Em erald Cities

Two terms are important for this discussion. Both address the intention to create benefits that result in access to quality jobs.

## Why Workforce and Economic Inclusion?

#### Justice 40 Department of Energy Priorities

1. Increase clean energy **enterprise creation and contracting,** including minority and disadvantaged businesses in disadvantaged communities.

2. Increase clean energy **jobs**, **job pipeline**, **and job training** for individuals from disadvantaged communities



- Building upgrade projects present multiple benefits for local communities: While helping to reduce carbon emissions to help the **environment**, they can engage workers and contractors from communities impacted by the worst effects of climate change, yielding **economic** benefits for residents. This is a tangible way to address issues related to **equitable** access to opportunity. This increases buy-in from local communities and can provide an excellent opportunity to **educate** local residents about how climate change can be addressed.
  - There is a quadruple bottom line: environment, economics, equity, and education.
- Using building upgrades projects to promote workforce diversity and economic inclusion aligns with the mandate set forth by the federal Justice 40 initiative called for by executive order and being implemented by the US Department of Energy, the agency funding this competition. Justice 40 calls for 40% of the benefit of federal investments to go to disadvantaged communities.



### **Federal Investments Generating Demand for** Workers & Providing Worker Training

#### The Inflation Reduction Act (IRA) provides:

- \$27.5 billion in tax credits, grants and loans for energy upgrades for housing; \$27 billion in competitive grants for clean energy and climate projects (GHG Reduction Fund); and \$200 million for energy efficiency contractor training.

#### The **Bipartisan Infrastructure Law (BIL)** provides:

- \$3.5 billion for the Weatherization Assistance Program; \$250 million for Energy Efficiency Revolving Loan Funds; \$550 million for Energy Efficiency Block Grants; and \$40 million for Energy Auditor Training.

Generates the demand for labor: people and firms are needed to do the work.

Provides worker training and minority/disadvantaged business enterprises with the capacity to do building upgrades work



- A focus on workforce and economic inclusion contributes to creating capacity to • meet increasing demand for workers to do building upgrades.
- Some of this will be generated by private and federal government investments • called for in the recent Inflation Reduction Act and Bipartisan Infrastructure Law, where there are direct federal investments and tax incentives to drive private investments in clean energy, energy efficiency and workforce development.

	Statute	Total Appropriations & Availability	Allocation of Funds	Building Segment Served
State-Based Home Energy Efficiency Contractor Training Grants	IRA Sec. 50123	\$200,000,000 Until September 30, 2031	State Agencies	Residential
Energy Auditor Training Program	BIL Sec. 40503	\$40,000,000 Until Fiscal Year 2026	State Agencies	Residential, Commercial
Building Training and Assessment Centers Program	BILSec. 40512	\$10,000,000 Until expended	Institutions of higher education	Commercial, Institutional
Career Skills Training	BIL Sec. 40513	\$10,000,000 Until expended	Nonprofit-industry- labor partnerships	All buildings

- The federal legislation also includes funding for energy efficiency workforce development programs to enable investments that can support good-paying jobs and equitable access to those jobs.
- BIL and IRA funding is available through 4 programs:
  - State based home energy efficiency contractor training grants to help reduce cost of training contractor employees and provide testing and certification support
  - Energy auditor training grant program to help train individuals to conduct energy audits or surveys of commercial and residential buildings
  - Building training and assessment centers grant program to establish training and assessment centers to identify opportunities for optimizing energy efficiency and environmental performance in buildings
  - Career skills training program grant to create career skills training programs

# **Relevant Occupations for Retrofits**

## Potential retrofit team by occupation:

- Energy auditors
- HVAC/heat pump technicians and installers
- Plumbers (installers for heat pump water heaters),
- Electricians (for panel upgrades, rewiring, etc.)
- Home performance contractors (envelope upgrades, health and safety)
- Quality control specialists
- Building commissioning professionals



- As the funding becomes available and we plan for more building upgrade projects, there will be a widespread need for a skilled workforce to perform the work.
- Project teams may need different professionals to complete the project from building auditors who can assess building conditions, to technicians and installers who can weatherize buildings and install more efficient heating and cooling equipment. Quality control specialists and commissioning professionals will also be needed to ensure equipment is properly installed and functions as designed.

### Affordable Housing Provides Opportunity: Identifying In-Demand Skills for Affordable Housing Retrofits

#### Brainstorm activity:

What skills do workers need to carry out building upgrades in affordable housing and underserved commercial buildings?

Put your answer in the chat.



# Segments of the Workforce: Different Workforce Opportunities and Supports Needed

Labor Market Supply Segment	Defined as	Opportunities	Supports
New Entrants	<ul> <li>High school students, returning citizens, opportunity y outh</li> </ul>	<ul> <li>Career awareness</li> <li>short-term credentialing opportunities</li> <li>W ork-based learning</li> </ul>	<ul> <li>Mentoring</li> <li>Cohort engagement in teams or groups</li> <li>Transportation</li> <li>Stipends</li> </ul>
Incumbent Workers	<ul> <li>Experienced workers changing careers</li> </ul>	<ul> <li>Low-cost/ no-cost training opportunities</li> <li>Networking</li> <li>Increases in pay commensurate with skills development</li> </ul>	<ul> <li>Access to work with benefits (healthcare, etc)</li> <li>Access to employ ers who need workers</li> </ul>
Suppliers	<ul> <li>Minority business enterprises/ Disadvantaged business enterprises</li> </ul>	<ul> <li>Training connecting directly to project opportunities</li> <li>Networking</li> </ul>	<ul> <li>Access to capital</li> <li>Prompt pay ment</li> <li>Supports with bonding insurance</li> <li>Orientation to procurement processes</li> </ul>

- When we talk about workforce development, we are looking at different types of workers. Successfully engaging them in building upgrades projects requires an understanding of each segment of the workforce and what they need to participate on projects. What opportunities are these workers looking for, and what additional supports may need to be leveraged to ensure they stick with the project?
- Workforce segments:
  - New entrants (young workers with limited work experience)
  - Incumbent workers (experienced workers looking for career opportunities)
  - Diverse suppliers (businesses/subcontractors who are working on projects)
- Engaging a diverse workforce requires project developers and implementers to work differently if they want to get the work done. Knowledge of the basic opportunities and supports helps you retain workers to meet the quadruple bottom line of environment, economic opportunity, equity and education.

#### Need for an Intentional Strategy for Workforce and Economic Inclusion



- This slide underscores the why of understanding the workforce. The majority
  of clean energy workers are white and male, and they also represent the
  oldest segment of the labor market. As they retire, they will need to be
  replaced.
- The persistence of labor market disparities in energy generation and energy efficiency occupations and the increasing demand for workers suggest the need for greater intentionality when it comes to attracting, hiring, and retaining non-white, non-male workers who represent the majority of the future workforce.
- This is why you want and need a workforce and economic inclusion strategy. This strategy is likely to include working with partners and leveraging tools to successfully engage and incentivize workforce development and economic inclusion.

## Workforce Development Strategies

Getting New Entrants and Incumbent Workers into Good-Paying Jobs

Residential Retrofits for Energy Equity

### **Investing in Workforce Development Strategies**

- Upskilling workers
- Credentials and certifications
- Work and learn opportunities and preapprenticeships programs that prepare workers for apprenticeship
- Partnerships with other organizations in your community (community colleges, unions, community-based training organizations)





https://www.energy.gov/scep/wap/workforce-development-toolkit-weatherizationassistance-program

## Learning Activity

# List potential workforce partners in your area.

Examples:

- Weatherization training centers
- IREC <u>Credential Training Center</u>
- CommunityCollegeBuildingScience Program
- Local high schools
- Others?



## For the Chat...

What organizations are training diverse workers for building upgrades?





These programs provide assurance that a trainee has developed a well recognized skillset from a credible organization.



- If you are a project developer, you can provide additional **educational benefits** to new entrants and incumbent workers short of hiring them.
- Work and Learn Strategies can be employed based on the availability of time and staffing resources.
- Low-touch strategies are "one and done" approaches to expose new entrants to new careers, for example. They may require an hour or two of a staff member's time.
- Higher-touch strategies include more focused skills training, requiring more staff time for training individuals in specific skills.

### Pre-Apprenticeship as a Strategy for Workforce Development

Pre-apprenticeship is a set of program strategies to prepare individuals from underrepresented groups for Registered Apprenticeship Training.

Go to <u>Apprenticeship.Gov</u> for more information



- Developers can convene stakeholders to build up and train the workforce
- Examples include: internships, shadowing, cooperative learning

## Case Study: Red Cloud Renewable

- Oglala Lakota-led organization on the Pine Ridge Reservation working with over 70 tribes since 2002 to create 600+ jobs in weatherization, solar installation, and sustainable home building
- Provides free, place-based workforce development opport unities for Native Americans
- Pre-Apprenticeship/Apprenticeship Readiness Program
- All Native-run weatherization program
  - Energy assessments
  - Retrofit projects
  - Focus on home safety and health



Source: Red Cloud Renewable, redcloudrenewable.org and facebook.com/RedCloudRenewable

**R2E2** 

More info about Red Cloud: <u>https://www.facebook.com/RedCloudRenewable/</u>; <u>https://www.redcloudrenewable.org/</u>



#### • YouthBuild

- Youthbuild is a federally funded program under the United States Department of Labor
- Community-based pre-apprenticeship program that provides job training and educational opportunities for youth ages 16-24
- There are provisions that include the hiring and training of YouthBuild participants as part of fulfilling the requirements of HUD Section 3
- Youth learn vocational skills in construction, as well as in other indemand industries that include health care, information technology, and hospitality.
- Youth also provide community service through the required construction or rehabilitation of affordable housing for low-income or homeless families in their own neighborhoods.
- Youth split their time between the vocational training work site and the classroom, where they earn their high school diploma or equivalency degree, learn to be community leaders, and prepare for postsecondary training opportunities, including college, apprenticeships, and employment.
- YouthBuild includes significant support systems, such as a mentoring,

follow-up education, employment, and personal counseling services; and participation in community service and civic engagement.

#### • Weatherization Assistance Training Centers

- Each year, the U.S. Department of Energy (DOE) allocates Training and Technical Assistance (T&TA) funding to Weatherization Grantees (states, the District of Columbia, U.S. territories, and tribes). A maximum of 20% of the annual appropriation may be allocated to T&TA.
- These funds are primarily used to train and certify weatherization workers following employment or contract execution with a weatherization organization.
- DOE will consider project proposals to use T&TA funds for recruitment and pre-employment training on a case-by-case basis.
- Workforce Innovation and Opportunity Act
  - This funding is funneled through local American Job Centers and Workforce Investment Agencies.
  - Under specific circumstances, employers may receive 50% reimbursement for the cost of on-the-job training for individuals hired through the public workforce system.
  - See <u>https://www.dol.gov/agencies/eta/employers/workforce-development-solutions#:~:text=Under%20certain%20circumstances%2C%20employers%20may%20receive%20reimbursement%20for,programs%20that%20may%20be%20available.%20Incumbent%20Worker%20Training
    </u>

#### • Inflation Reduction Act (IRA)

- The IRA provides a mix of tax incentives and direct grants for contractors for workforce utilization and work on building upgrades
- IRA apprenticeship criteria require that employers allocate 10 to 15% of hours worked on a project to participants in a registered apprenticeship program.
- Home Energy Efficiency Contractor Training for States reduces the cost of training and provides certification of contractors
- Green House Gas Reduction Fund establishes and expands financial institutions that support greenhouse gas reduction and zero emissions projects with a majority of funds going to low-income and disadvantaged communities
- New Energy Efficiency Home Tax Credit for contractors who are building new energy efficient homes or multifamily housing; includes homes eligible for low-income tax credits.




There are a number of mechanisms to provide for economic inclusion. The policy landscape within a jurisdiction can be an important factor in fostering economic inclusion. While Buildings UP does not focus on policy, paying attention to the existing opportunities for economic inclusion within your jurisdiction can facilitate your efforts. Policy initiatives include disparity studies that often provide the legal basis for creating local policies or executive orders from jurisdiction officials. While policies can be a powerful tool in the economic inclusion toolbox, it is not the only mechanism that can foster economic inclusion.

- Program practices that foster economic inclusion:
  - Asking prime contractors for supplier diversity plans. Project owners can request supplier diversity plans from prime contractors in advance of hiring them. This mechanism can ensure prime contractors are intentionally focused on using a diverse contractor base for the building upgrade project.
  - Right-sizing contracts for smaller contractors and engaging business associations that include diverse members. We encourage institutions to look at economic inclusion through a developmental lens. Diverse contractors face a number of legacy issues that have impeded business

growth. Access to capital and challenges related to bonding and insurance are two challenges. We encourage project developers and prime contractors to consider a supplier development approach where they are cultivating a stable of diverse contractors to take on projects of steadily increasing value. Over the long-run, this approach builds wealth in justice-impacted communities and can expand the base of contractors taking on building upgrade projects in the metropolitan regions where your respective jurisdictions are located.

 Ensuring accountability among project developers and prime contractors is another aspect of promoting economic inclusion. The project owner can employ legally-binding community workforce or community benefits agreements to establish targets for participation of diverse contractors. These can either stand on their own or accompany project labor agreements if the owner is drawing from building trades. In jurisdictions that have targets for the participation of diverse contractors, site visits can be applied to verify diverse participation on projects.

#### Community Benefits Agreements: A Strategy for Workforce Development and Economic Inclusion

- Legal agreements
- Benefits a developer agrees to fund
- Local workforce training guarantees

<u>Community Benefit Agreement Toolkit</u>, 2022. Department of Energy, under Bipartisan Infrastructure Bill.



- Community benefits agreements are a tool to promote economic inclusion.
- These are typically legally binding agreements that hold developers and/or primes to specific community benefits.
- We strongly recommend benefits be defined by representatives of justiceimpacted communities.
- The jurisdiction or a well-regarded community-based organization can sign off on these agreements as signatories representing the community.
- In the case of community-based organizations, these might be called settlement agreements which outline conditions that will prevent legal challenges to the project.
- Community benefits agreements (or community workforce agreements) include agreements for targeted hire, including utilization of diverse contractors and workers on the project.

#### Case Study: Community Benefits Agreement, RENEW, San Francisco

- Emerald Cities brought together key stakeholders:
  - Community
  - Labor
  - City of San Francisco
- Crafted a community workforce agreement
- Delivered energy savings and goodpaying union jobs



R2E2

Emerald Cities Bay Area and its partners implemented a \$700K project that included four multi-family properties as part of the city's building upgrade measures including boiler replacements, lighting retrofits and HVAC upgrades.

Emerald Cities brought together key stakeholders from community, organized labor, and the City of San Francisco's Office of Workforce Development delivered energy savings for residents and good-paying union jobs for local disadvantaged residents. Partners were: Emerald Cities Bay Area, Asian Neighborhood Designs, Chinatown Community Development Corporation, and the San Francisco Building and Construction Trades Council.

The agreement took 6 months to negotiate in 2011 and still stands today. Provisions include:

- Requirements that 33% of the workforce be disadvantaged residents from San Francisco
- Apprenticeship utilization maximizing the ratios of apprentices to journey workers and ensuring second period apprentices are sponsored into union apprenticeship training
- Supplier diversity

#### Lessons Learned from RENEW, San Francisco

- Authentic community engagement means having the community at the negotiating table
- Effective public-private facilitation is key to getting to agreement
- Supplier diversity can be achieved through an intentional strategy and the engagement of partners



R2E2

During the course of developing and implementing the community benefits agreement, Emerald Cities learned some critical lessons about what it takes to create a community benefits agreement that lasts.

- First, community has to be at the negotiating table. Community representatives know what they want and should be in a position to articulate the conditions of such an agreement. Authentic engagement is the foundation of community benefits.
- This process takes time and effective facilitation by a party that is trusted by all the stake holders around the table is key. In the case of RENEW, it took six months for stakeholders to arrive at an agreement.
- Attention to process, careful documentation of concerns and ensuring that all voices are heard are hallmarks of good facilitation.
- Patience with the process and not papering over disagreements helps the group get work done through the inevitable challenges that accompany this kind of collaborative process.
- Finally, supplier diversity targets can be set and achieved through these types of agreements. Ensuring accountability to these and other goals sets the stage for a lasting process. Keep in mind, in this case 6 months work of work has set the stage for an agreement that has lasted 12 years. The time invested continues to

pay dividends.

### For the chat...

What community-based organizations could you work with to establish community benefits for your proposed project?



### Finding MBE/DBE Contractors

- Labor Management Organizations
- State or Jurisdiction Supplier Diversity Listings
- Minority or Ethnic Business Contractor Business Associations or Chambers of Commerce
- Community Action Agency Weatherization Assistance Program Administrators



### Key Takeaways

- Define the terms economic inclusion and workforce diversity
- **Explain** how leveraging retrofit projects for **community benefits** aligns with J40 goals
- Identify challenges to employing a diverse workforce and creating economic inclusion
- **Describe community benefits** as a strategy to create projects with workforce diversity and economic inclusion goals
- Identify partners who can help project teams realize their workforce goals

# **Concluding Polls**

- I can identify at least one resource to engage local workers in building upgrades.
  - Yes
  - No
  - Not Sure

# 2. In which of these areas do you still have the most questions?

- Defining, measuring, or tracking workforce diversity and economic inclusion
- How to employ a diverse workforce and integrate economic inclusion principles in your building upgrade initiative
- How to identify partners to work with on workforce development and economic inclusion

## **Upcoming Events**

- May 15 Office Hours
- May 18 Teaming Event: West Region
- May 19 Teaming Event: Midwest Region
- May 22 Teaming Event: South Region
- May 23 Teaming Event: Northeast Region

#### May 31 - Office Hours

• June 13 - Informational Prize Overview Webinar



Scan to view additional details and register for upcoming events, or visit heroX.com/BuildingsUP

44

Buildings UP | U.S. Department of Energy



## Resources

- Emerald Cities Collaborative. <u>https://emeraldcities.org/</u>
- E2, Alliance to Save Energy, American Association of Blacks in Energy, Energy Efficiency for All, Black Owners for Solar Services, and BW Research Partnership. Help Wanted Diversity in Clean Energy. 2021. <u>https://e2.org/wp-content/uploads/2021/09/E2-ASE-ABE-EEFA-BOSS-Diversity-</u> Descentional Content/Uploads/2021/09/E2-ASE-ABE-EEFA-BOSS-Diversity-
- Employment and Training Administration. YouthBuild. <u>https://www.dol.gov/agencies/eta/vouth/vouthbuild</u>
- IREC Training Centers: Technical Skills Training
- North America's Building Trades Unions Apprenticeship Readiness Programs
- NASEO. U.S. State Energy Program Update Successful Projects and Programs Implemented by the States Utilizing SEP Funding. <u>https://naseo.org/Data/Sites/1/final-sep-booklet-2020\_05-15-20.pdf</u>
- President's Task Force on Apprenticeship Expansion May 10, 2018 <u>https://www.aacc.nche.edu/wp-content/uploads/2021/05/task-force-apprenticeship-expansion-report.pdf</u>
- Shoemaker, M., R. Ayala, and D. York. 2020. Expanding Opportunity through Energy Efficiency Jobs: Strategies to Ensure a More Resilient, Diverse Workforce. Washington, DC: American Council for an Energy-Efficient Economy. www.aceee.org/research-report/u2010.
- Srivastava, R., M. Awojobi, and J. Amann. 2020. Training the Workforce for High-Performance Buildings: Enhancing Skills for Operations and Maintenance. Washington, DC: American Council for an Energy-Efficient Economy. <u>https://www.aceee.org/research-report/b2003</u>
- What is a Pre-Apprenticeship Program ?
- Weatherization Training Centers. <u>https://nascsp.org/wap/waptac/weatherization-training-centers/</u>
- Workforce Innovation and Opportunity Act. On-the Job Training Policy and Procedures. <u>https://workforce.org/wp-content/uploads/2020/07/OJT-Policy-and-Procedures. Rev\_07-2020-1.pdf</u>

