

# Descriptions of MSAs and their Workforce Ecosystem Profiles

Creating actionable solutions to diversifying the clean energy workforce requires understanding workforce development within metropolitan areas. The United States Office of Management and Budget defines metropolitan statistical areas as standardized county or equivalent-based areas having at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core, as measured by commuting times.<sup>41</sup> Most of the activity within labor markets occurs within metropolitan areas. This is where workers receive training and get connected to opportunities. Workers often commute to jobs within the boundaries of metropolitan areas, often crossing city, state, and county boundaries.

American Job Centers, funded by the Workforce Innovation and Opportunity Action (WIOA) of 2014 are often organized to provide a variety of services to residents of a metropolitan region. This is typically done in conjunction with government agencies, community-based organizations and educational institutions and employers. Employment opportunities are more likely to be found in metropolitan areas. Each local workforce system is different, so an analysis of career pathways within metropolitan areas provides a more textured picture of the character of the workforce system and a roadmap of the potential place-based strategies to enhance pathways into clean energy.

<sup>41</sup> Bureau of Economic Analysis, *How is a metropolitan area defined?* <https://www.bea.gov/help/faq/459> January 10, 2008. Page last modified April 25, 2010.

## Descriptions of MSAs and their Workforce Ecosystem Profiles *continued*

Finally, the problem of increasing diversity can be addressed more directly. A geospatial analysis of the location of disadvantaged communities in relation to training and employment opportunities in clean energy provides additional insights about access to clean energy pathways.

### Methodology

Six MSAs were prioritized for this study. Priority locations were identified in consultation with the Barr Foundation Climate Team. A geospatial analysis of MSAs was used to identify the most disadvantaged locations in terms of social and economic vulnerability and exposure to environmental risk factors. The Geospatial analysis calculated an Environmental Justice Index (EJ Index) across the six New England states. This analysis applied the US Environmental Public Agency (EPA) EJSCREEN for calculating the EJ Index by combining demographic and environmental indicators, to represent historically underrepresented communities that are vulnerable to an environmental pollutant. In this case, the analysis used particulate matter as it is closely related to fossil fuel combustion for electricity. The following are demographic indicators used to define historically underrepresented communities:

- Minority Population
- Low Income
- Less than a High School Education
- Non-English-Speaking Households
- Unemployed Population

The team then used Barr grantees to narrow down to the final set of MSAs for case studies. Emerald Cities Collaborative conducted 37 interviews with representatives from different organizations within each priority MSA.

Interviews included stakeholders across the six regions in the following categories:

- Industry Representatives and Businesses
- Advocacy and EJ Organizations
- Community-Based Organizations
- Community Colleges and Technical Colleges
- Pre-Apprenticeship and Apprenticeship Programs
- State Building and Construction Trades Councils
- State Organizations and Leaders

## Descriptions of MSAs and their Workforce Ecosystem Profiles *continued*

Interviews focused on the levels of awareness about clean energy career pathways, the activities that prepared individuals for career pathways, and the types of formal or informal partnerships each organization had with others in the workforce ecosystem. The way these partnerships were described led to inferences about the degree to which an organization was connected to others. Connectivity was an important indicator of the effectiveness of the workforce ecosystem. Indicators of connectivity included:

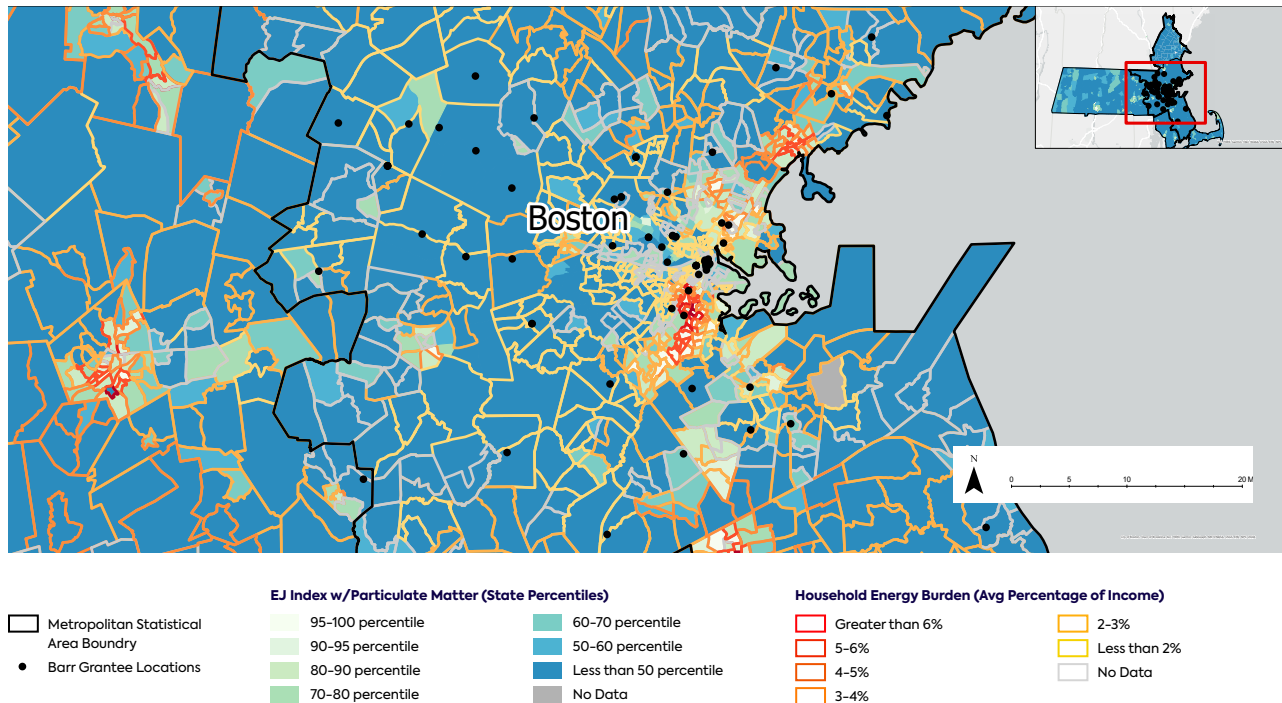
- The number of public-facing partnerships the organization had in place. These were determined through the interviews and by examining the websites of these organizations.
- Descriptions of memoranda of understanding, articulation agreements or other formal statements of agreements with other organizations situated in the workforce ecosystem.
- Descriptions of referral networks where the organization either gained participants from others or where the organization referred participants out.



*Emerald Cities Collaborative. Photo credit: Marilyn Humphries*

# Boston-Cambridge-Newton MSA Workforce Ecosystem

## Boston-Cambridge-Newton MSA Environmental Justice Index and Energy Burden By Census Tracts 2020



### BOSTON-CAMBRIDGE-NEWTON MSA GEOSPATIAL PROFILE

Population (in 2020): **4.8 million**

Unemployment Rate: **4.1%**

Average Particulate Matter  
2.5 percentile in State: **61**

Average Traffic Proximity Percentile  
in State: **65**

Average Energy Costs  
(% of household income): **3%**

**Boston-Cambridge-Newton, MA-NH** metropolitan area is located towards the eastern and southern region of Massachusetts and New Hampshire, respectively. This region consists of Essex County, Middlesex County,

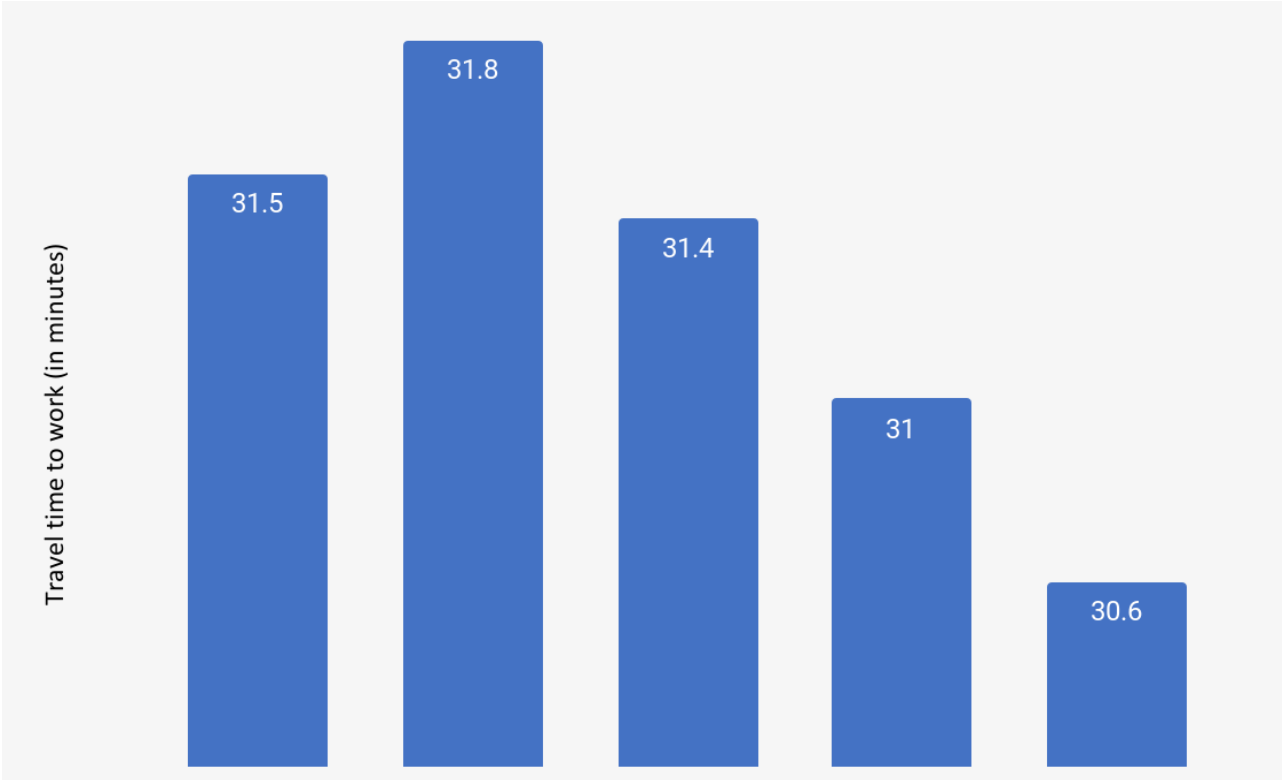
Norfolk County, Plymouth County, Suffolk County, Rockingham County and Strafford County.<sup>52</sup> In 2020, with a population of 4.8 million, it was the tenth largest metropolitan area in the country. Between 2019 and 2020, the population grew from 4.83 to 4.85, a 0.46 percent increase.

When compared to the state, the Boston-Cambridge-Newton metropolitan area ranked in the top 61 percentile for particulate matter 2.5 pollution levels and the top 65 percentile when measuring communities proximate to traffic. Particulate matter is one of the most common air pollutants as it largely derives from traffic, diesel exhaust or dust from a construction facility. In 2020, residents traveled more than 30 minutes to work on average, with nearly 30 percent of households owning three or more vehicles.

<sup>52</sup> <https://www.bls.gov/cew/classifications/areas/county-msa-csa-crosswalk.htm>



**FIGURE 1. Mean Travel Time to Work**  
Boston-Cambridge-Newton MSA 2016-2020



Source: 2016-2020 ACS 5-year estimates

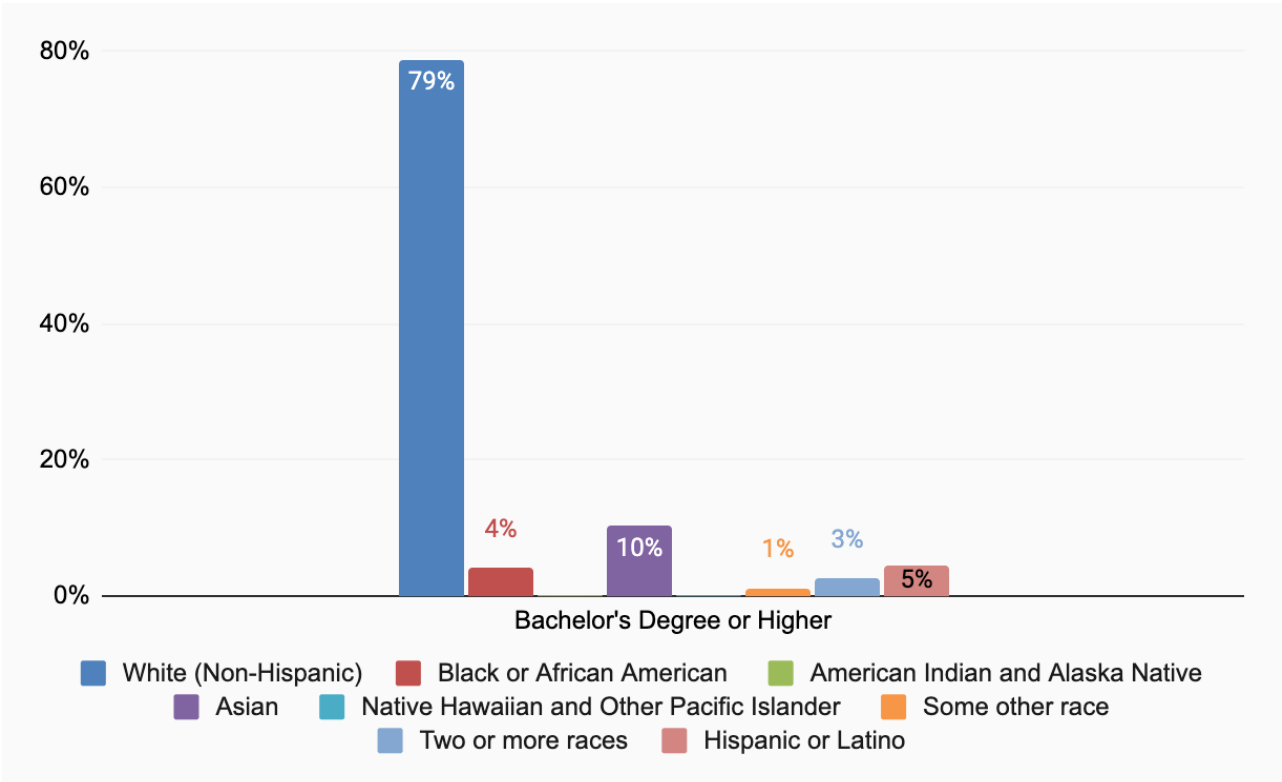
Disproportionate impacts to health and pollutant exposure is largely associated with race/ethnicity and income. Historically underrepresented communities represent 12 percent of the Boston metro population. Overall, 30 percent of the residents identify as non-White, 8 percent have less than a high school education, 4 percent are unemployed, 11 percent have incomes at or below 65 percent below the state median income, and 6 percent live in limited English-speaking households.

On average, there were 8 times more White (Non-Hispanic) residents than any other race or ethnicity in 2020. Of the total population, 69.6 percent of the residents identify as White, 8.1 percent Asian America, 11.3 percent Hispanic or Latino and 7.4 percent Black or African American. The share of Hispanic or Latino and Black or African American residents varies slightly from the state population. In Massachusetts, 12 percent of residents identify as Hispanic or Latino, while 6.8 percent identify as Black or African American.

# Boston-Cambridge-Newton MSA

## Workforce Ecosystem *continued*

**FIGURE 2. Race/Ethnicity by Educational Attainment**  
Boston-Cambridge-Newton MSA 2020

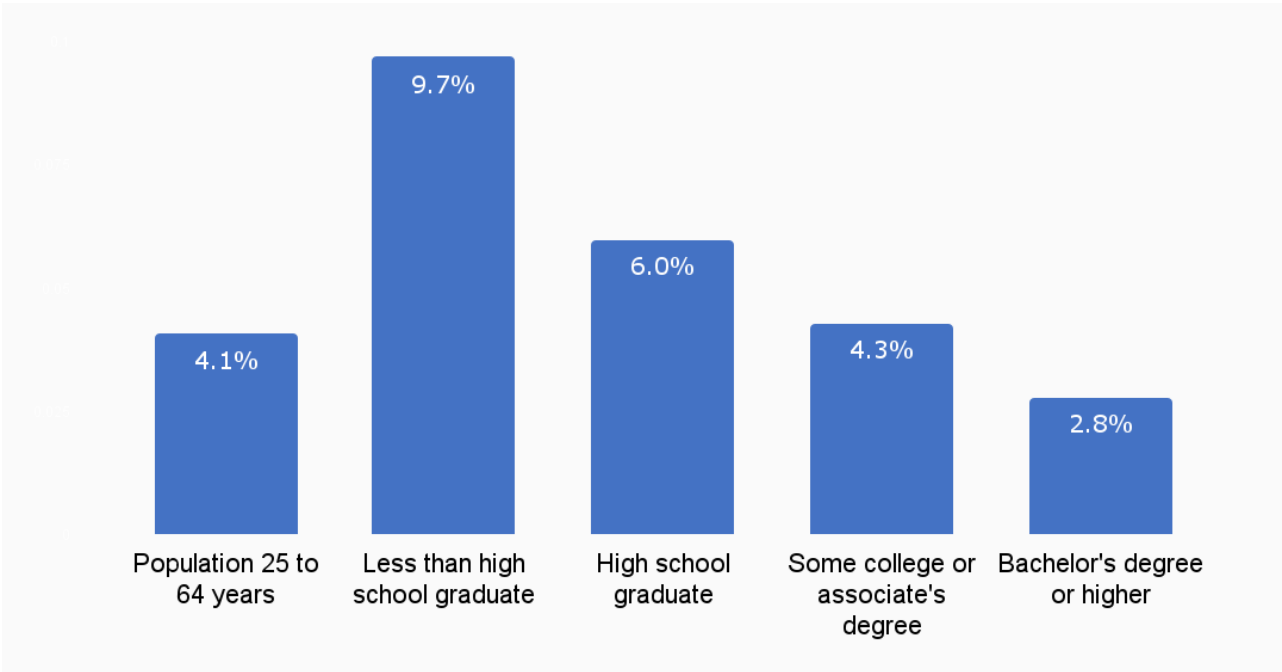


Source: 2016-2020 ACS 5-year estimates

Knowing the educational attainment of the population can provide valuable insight about a specific area. Areas with high rates of low educational attainment usually face challenges such as higher rates of unemployment. Nearly 8 percent of residents have earned less than a high school diploma, while 22 percent have high school diplomas with no other formal

education. Figure 2 shows race & ethnicity by distribution for the Boston metro area in 2020. Nearly 80 percent of White residents earned a bachelor's or higher compared to the rest of the population.

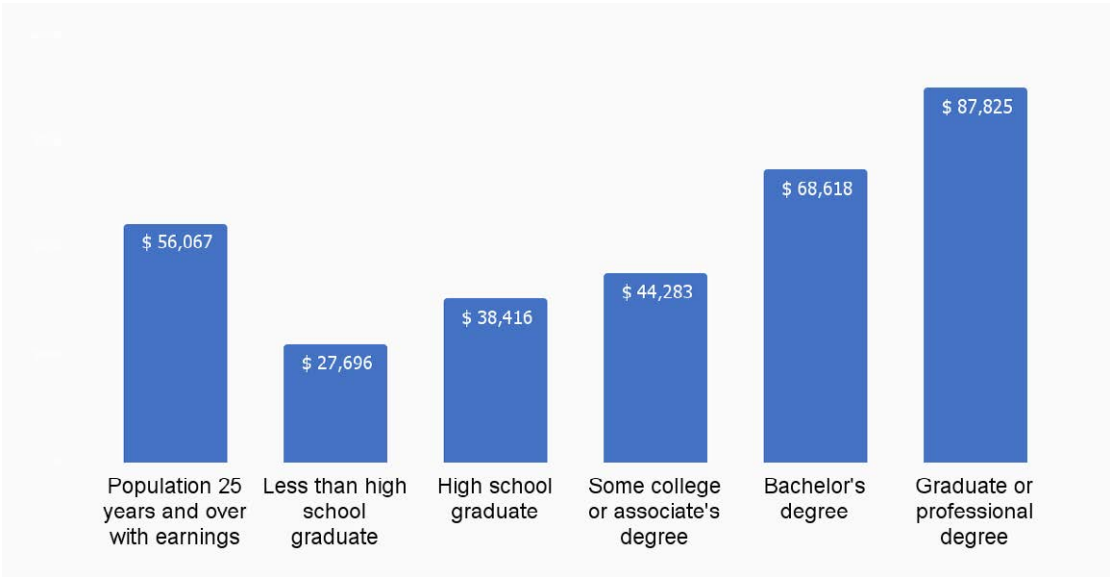
**FIGURE 3. Unemployment Rate by Educational Attainment**  
Boston-Cambridge-Newton 2020



Source: 2020 ACS 5-year estimates

Overall unemployment rate for individuals 25 to 64 years and older was 4.1 percent. However, for those who attained less than a high school diploma or earned a high school diploma, the rate is disproportionately higher at nearly 9.7 percent and 6 percent, respectively. Unemployment rates among residents with a bachelor's or higher is significantly lower than general Boston metro unemployed population at 2.8 percent (Figure 3).

**FIGURE 4. Median Earnings and Educational Attainment**  
Portland-South Portland MSA 2020



Source: 2020 ACS 5-year estimates

Higher earnings also correlate with educational attainment. Workers with a bachelor’s earned \$40,000 more in annual wages than those with less than a high school education (Figure 4).

English-capability is an important aspect of employment participation. Nearly 30 percent of the Boston metropolitan population speak a language other than English at home with Indo-European being the most common language at 10.8 percent, followed by Spanish-speaking households at 9 percent and Asian and Pacific Island households at 6 percent. Collectively, 6 percent of residents speak limited English at home.

When compared to the state, the Boston-Cambridge-Newton metropolitan area ranked in the top 61 percentile for particulate matter 2.5 pollution levels and the top 65 percentile when measuring communities proximate to traffic.

Particulate matter is one of the most common air pollutants as it largely derives from traffic, diesel exhaust or dust from a construction facility.

Particulate matter also comes from a lesser extent from fossil fuel combustion for electricity. In 2020, residents traveled more than 30 minutes to work on average, with nearly 30 percent of households owning three or more vehicles.

**Boston-Cambridge-Newton-  
New Hampshire MSA Workforce Ecosystem**

The collective impact literature provides a good grounding in terms of what it takes for a local workforce system to function well. We adapted this approach to produce a connectivity rubric (on the next page). This helped in developing questions that discerned the nature of connectivity with each MSA.



### CONNECTIVITY ASSESSMENT RUBRIC

	Description	Key Indicators
<b>Ecosystem Manager AKA “Backbone Team”</b>	Ecosystems are anchored by an action oriented organization with the ability to convene frontline organizations and connect them with private sector and public sector opportunities, in addition to demonstrating the capacity to facilitate pass through funding opportunities to smaller organizations and funding to support partnership participation and investment in equity initiatives	<ul style="list-style-type: none"> <li>Have experience managing diverse stakeholder interests and facilitating and convening the partnership</li> <li>Are trusted in the community and perceived as an ally to people from frontline and impacted communities</li> <li>Intentionally and regularly convene community based groups and private and public sector groups within the workforce ecosystem with explicit inclusion of marginalized identities.</li> <li>Collect or support the collection of disaggregated data across the system</li> <li>Have access to funding or capacity to apply for grants to support the partnership</li> </ul>
<b>Public Facing Partnerships</b>	Ecosystems have established relationships with regional organizations such as CBOs, training organizations, pre-apprenticeships, apprenticeships, community colleges, universities, building trades, and employers to ensure equitable access to in demand clean energy careers	<ul style="list-style-type: none"> <li>Have MOUs and/or articulation agreements between partners</li> <li>The partners are representative of the different organizations along a career pathway (CBOs, pre-apprenticeships, high schools, community colleges, apprenticeships, employers)</li> <li>The partnership has a vision, mission and goals</li> <li>The partnership prioritizes equity and pathways to quality careers (high road)</li> <li>The partnership works to calibrate training to labor market demand</li> <li>The partnership is demand-side driven</li> </ul>
<b>Centering Equity</b>	<p>Established commitment to diversity, equity and inclusion among supply-side and demand-side actors by addressing barriers to employment opportunities in clean energy, as well as building equity in leadership and accountability.</p> <p>The work should include equity strategies for collective impact such as, strategies grounded in data and context, solutions focused on systems change, in addition to programs and services that listen to and act with the community.</p> <p>This might include active outreach to underrepresented communities, providing wrap-around services to enable program participation such as (subsidized child care, transportation, application fees, etc.)</p>	<ul style="list-style-type: none"> <li>Ecosystem manager leadership and the collaborative is led by members of the community and centers the lived experience of community members.</li> <li>Operate using a systems based approach</li> <li>Use of disaggregated racial data to understand where the ecosystem is and where it needs to go</li> <li>Sets goals for quality equity initiatives</li> <li>Investment in capacity of frontline organizations/CBOs</li> <li>Training organizations are based in underrepresented communities</li> <li>Public procurement policies are in place to promote utilization of MDWBEs</li> <li>Public policies set targets for apprenticeship utilization</li> <li>Public policies in place for targeted or local hire</li> <li>Providing training opportunities that prevent occupation segregation</li> <li>Inclusive hiring policies</li> <li>Organizations provide participants with comprehensive exposure to a career pathway</li> </ul>
<b>Mutual Reinforcing Actions</b>	WEs enable mutual reinforcing actions (referrals, stakeholder engagement, advocacy, work-based learning), among partner organizations through shared values, defined common standards that create industry recognized credentials	<ul style="list-style-type: none"> <li>Develop shared vision, mission and goals</li> <li>Work on local, state and/or federal policies that support equity goals and job quality as well as clean energy accessibility for impacted communities</li> <li>Evidence of alignment of credentials certifications, curriculum, and credits to create industry standards</li> <li>Provide work based learning and on-the-job training opportunities as well as career exposure through field trips, shadowing and presentations</li> <li>Review critical documents such as: Climate Actions Plans, Building Performance Standards, etc. to include strategies and language that support equity and economic inclusion</li> <li>Develop and implement community workforce agreements and community benefit agreements</li> <li>Engage impacted communities in policy and program design</li> <li>Work with employers to develop retention strategies for women and BIPOC employees</li> <li>Develop and adopt labor standards to ensure job quality and equitable access</li> </ul>
<b>Share Information and Best Practices</b>	WEs share information and best practices that help ecosystem partners understand and navigate the landscape	<ul style="list-style-type: none"> <li>Learn from national best practices that include equity and economic inclusion principles in their climate action and workforce development policies and programs development</li> <li>Map the workforce ecosystem and understand assets, gaps, and opportunities</li> <li>Transparent and share critical documents to help align the ecosystem</li> </ul>

## Boston-Cambridge-Newton MSA

### Workforce Ecosystem *continued*

**Based on interviews and desk audits, the team drew these conclusions about the nature of connectivity within each MSA. Since this was based on single interviews, and the rubric was not shared with the interviewees, the conclusions are more impressionistic. An improved methodology would have included self-assessments of connectivity among staff from different workforce development organizations.**

#### CONTEXT OF LOCAL POLICY

In 2019, the City of Boston updated its climate action plan to further accelerate progress in climate action goals. With the aim of reaching carbon neutrality by 2050, the plan outlines key targets for the building, transportation and energy sector over the next five years. Boston is largely focused on building performance and climate resilience as buildings account for 71 percent of carbon emissions, representing the greatest opportunity for emission reduction. Decarbonizing the building sector will require retrofitting and electrifying at least 80 percent of existing buildings over the next 30 years.<sup>53</sup> To help meet these goals Boston recently revised and implemented the Building Emissions Reduction and Disclosure Ordinance (BERDO) policy which sets greenhouse reduction requirements for large buildings. The City of Cambridge passed a similar policy in 2023, which will drive additional retrofit demand. In August 2020 City Councilor Michelle Wu put forth a vision for the City of Boston in the document [Planning for a Boston Green New Deal and Just Recovery](#). It offered sweeping proposals in 15 areas including green workforce development, a justice audit and framework, decarbonization and clean

energy financing. As Mayor, Wu pledged to implement a Green New Deal for Boston Public Schools, investing \$2 billion in school construction.<sup>54</sup> The Office of Worker Empowerment and the Office of the Mayor's Green New Deal Director are working in close partnership to conduct an analysis of the workforce needs in the region. The City of Boston is positioning itself to become an important workforce hub for the region.

#### STRENGTHS

Stakeholders in the Boston metropolitan region are actively involved in the equitable development of a local and regional clean energy workforce. This strength derives from an existing infrastructure of community-based organizations, advocacy organizations, organized labor, educational institutions, regional and state agencies, and firms in the climate sector. Stakeholders are committed to building coalitions and good faith partnerships to maintain and increase workforce programs tailored to placement in clean energy jobs or new educational pathways. Regional collaboration is also strengthened by quasi-governmental organizations like Massachusetts Clean Energy Center (MassCEC), convening and fostering collaboration among diverse groups ranging from educational institutions to environmental justice groups, providing funding opportunities and expertise to drive equitable workforce and business development in the clean energy sector.

Through these collaborations a few successful pre-apprenticeship models focused on getting women and people of color into apprenticeship programs have been developed. The Build-

<sup>53</sup> [https://www.boston.gov/sites/default/files/embed/file/2019-10/city\\_of\\_boston\\_2019\\_climate\\_action\\_plan\\_update\\_4.pdf](https://www.boston.gov/sites/default/files/embed/file/2019-10/city_of_boston_2019_climate_action_plan_update_4.pdf)

<sup>54</sup> Wikipedia. *Boston Green New Deal*. Last updated Apr 6, 2023. [https://en.wikipedia.org/wiki/Boston\\_Green\\_New\\_Deal](https://en.wikipedia.org/wiki/Boston_Green_New_Deal)

## Boston-Cambridge-Newton MSA

### Workforce Ecosystem *continued*

ing Pathways pre-apprenticeship program shared that of the participants enrolled in their program, 84 percent have been placed in apprenticeship industry related programs, 90 percent are people of color, and 42 percent are women. Preapprenticeship programs are well supported and coordinated with the Building and Construction Trades Council of the Metropolitan District, serving the Greater Boston metropolitan region. The building trades council has invested in pre-apprenticeship programs and worked collaboratively with local community-based organizations to build equitable pathways into the building trades. According to the leadership, this has been the product of work over the past twelve years addressing historical harms and systemic racism in the trades. The building trades council implemented programs to diversify the trades with set goals and benchmarks embedded in project labor agreements and community benefits agreements—which include DEI training, funding for pre-apprenticeship programs and equity goals. Local unions such as the IBEW local 103 electricians union are paving the way and making strides in meeting diversity, equity and inclusion goals.

Private industry is actively working with community-based organizations to support the development and delivery of key training, career placement opportunities, and financial support. Firms like Eversource launched a clean energy pathways program designed to channel individuals into energy efficiency careers in weatherization through on-the-job training. PowerCorps is another effort linking opportunity youth and returning citizens to clean energy employment opportunities in partnership with Roxbury Community College and the private sector.

In addition to initiatives in pre-apprenticeship, the technical and community colleges are actively working to create programming and strategic partnerships. Franklin-Cummings Technical College has established the Center for Energy Efficiency and the Trades to train diverse talent in clean energy and other sustainability areas. They have established partnerships with Browning the Green Space's ACCESS program to train aspiring entrepreneurs, Vineyard Wind, and the Boston Green Ribbon Commission to connect graduates to career pathways. Roxbury Community College has created a rapid credentialing program to get incumbent workers connected to employers in building operations and maintenance through the Center for Workforce Development.

Collectively, organizations in the Boston metro region have demonstrated a range of public facing commitments to diversity, equity and inclusion that are connecting women and people of color to workforce opportunities in clean energy.

#### CHALLENGES

With low unemployment rates and high demand for clean energy jobs, there is and will be a shortage of workers to meet climate goals. Currently there are not enough workers to meet the labor demand in energy efficiency. While there is immediate demand, delays in moving graduates of pre-apprenticeship programs into apprenticeship training is a persistent challenge as building and construction trades attempt to modulate the number of apprentices with the pace of Project Labor Agreements for larger scale, commercial projects. These are slowly and meticulously negotiated amid the rapid pace of labor market demand for smaller scale,

## Boston-Cambridge-Newton MSA

### Workforce Ecosystem *continued*

non-commercial projects. While community stakeholders are invested in directing new entrants and incumbents onto union pathways, they are perplexed by the slow pace of placements. Community stakeholders identify low trainer to trainee ratios as part of the problem. There needs to be immediate placement opportunities for graduates of pre-apprenticeship until they are accepted into apprenticeship programs or pre-apprenticeship will lose its allure as an access point to high-road employment. Shortage in the labor supply is also partly attributed to limited workforce development programs providing wraparound services for those in need. Reliable transportation and child care services are often cited as key resources needed by program participants. Insufficient transportation makes it difficult for participants to travel to job sites, training programs, or take part in employment opportunities. Wrap around services “breaks away barriers” to participate in the labor market. Innovative efforts such in these areas need to be taken to scale.

Also, organizations are grappling with how to clearly communicate the various workforce opportunities in the clean energy sector. Women, people from disadvantaged communities in workforce training programs, and students in middle and high school who participate in the Career and Technical Education system could benefit from awareness campaigns about the career opportunities available as the region takes action to address the climate crisis. This connection is not part of the mainstream consciousness of jobseekers and the messaging about these connections has been inconsistent at best.

#### OPPORTUNITIES

While there are many regional workforce actors, the ecosystem needs to be better aligned and coordinated, with the supply-side (workers and training) and demand-side (employers, trades, and associations) organizations, in order to meet the 2030 and 2050 clean energy goals and create access for people that are underrepresented in the sector. There is a huge amount of federal dollars for high-road jobs in the clean energy sector, however cities and organizations do not have the capacity, staff, and knowledge to navigate the process, convene key stakeholders and respond to grant proposals. More technical assistance and funding needs to go to organizations and cities to be able to benefit from this opportunity.

For instance, offshore wind is a nascent industry that is not ready for an influx of workers, but planning is required to ensure programs are prepared to train a ready workforce to fill the future job openings. There will be an opportunity to prepare a workforce equipped for jobs directly in offshore wind or in the regional supply chain such as manufacturing jobs related to industry materials and parts like cables and wind turbine parts. In order to do this effectively, it will require a planned approach engaging all ecosystem actors to ensure job accessibility for underrepresented populations and the calibration of supply and demand.

In terms of diversity, equity and inclusion, Massachusetts has legislation committed to workforce diversity goals, however these goals are meaningless if they are not tracked, monitored or enforced. There is an opportunity to create more



## Boston-Cambridge-Newton MSA

### Workforce Ecosystem *continued*

accountability and enforcement within legislation. Similarly, to create inclusive workforce environments requires a significant effort on the part of firms to address cultural biases and better representation at all levels of the company. Programs like RISE (Respect, Inclusion, Safety and Equity) in the construction trades are being initiated by the building trades to help employers address implicit bias, microaggressions, and create safe workplaces.

Finally, a robust clean energy economy is likely to require workers from all over this metropolitan area—beyond the City of Boston, even including parts of New Hampshire—to respond to burgeoning labor market demand. While local hire and targeted hire provisions will be important for cities and towns, the demand for a qualified workforce will still need to draw upon the talent across the metropolitan area to keep pace. This represents an important opportunity to build a strategy that incorporates assets across this metropolitan region.

#### CONSIDERATIONS

The majority of clean energy jobs are in the construction sector. However, jobs without labor standards, community workforce agreements, and commitments to employ and retain for people from underrepresented communities could end up being either low quality jobs and or inaccessible. One way to address this is by increasing unionization rates among women and people of color. Overall 10 percent of women and 30 percent of people of color are in union building trades apprenticeship programs. While the building trades have taken great strides to diversify membership, more is required to increase diversity at all levels and address DEI workplace

issues and perceptions. Furthermore, high-road opportunities are needed for both union and nonunion jobs. The unionized sector in construction largely focuses on government buildings, commercial and large-scale multi-family. Non-union sector is largely attributed to residential buildings including market rate and affordable housing. Without labor standards, the residential sector is typically low-road. Graduates of pre-apprenticeship programs need to be placed onto worksites where they can gain valuable experience in preparation for their placement as apprentices. In the past there have been agreements with community development corporations and housing authorities, for unionized labor to work at negotiated rates to produce affordable housing or to work on sites with non-union contractors. Sources suggest these efforts have been difficult to navigate, but could be an important opportunity with rising demand for building upgrades and prevailing wage requirements attached to federal funding.

In Massachusetts, and possibly in other states in New England, utility energy efficiency incentive programs are not readily available for older building stock since they often have “pre-weatherization barriers” such as knob and tube wiring and vermiculite wallcovering. If households or building owners lack the upfront capital to address these issues, buildings cannot be weatherized. Utility incentive programs do not cover these types of issues if they exceed certain spending to energy savings ratios. It could be argued that this problem, which affects low-income households most acutely, depresses the demand for residential energy efficiency. Funding support for pre-weatherization work could remove this barrier.

# Boston-Cambridge-Newton MSA

## Workforce Ecosystem *continued*

The Massachusetts utility energy efficiency incentive program provides a big opportunity for job creation as the demand for work under this program intensifies. However, there are concerns regarding transparency on background checks and what is and what is not a barrier to entry for people with a criminal record. The general narrative is that people with a Criminal Offender Record Information (CORI) are not allowed to work in residential energy efficiency work. In reality there may be opportunities depending on the CORI and other circumstances. Most contractors under this program do not know that opportunities exist to employ someone with a limited CORI, nor are they aware of the process for requesting an exception. Insurance coverage may also present some potential barriers but not enough research has been done regarding these issues to say definitively. Therefore, work can be done to narrow and define impermissible

CORIs, educate the sector as a whole on possible opportunities for employing people with CORI's and provide transparency on the process for requesting an exception if a background check comes back positive. Clarifying these issues alone would open up tremendous workforce development opportunities for a large number of people currently excluded from careers in this sector.

Creating equitable access to clean energy jobs requires funding for supportive services. This ensures workers can participate in training opportunities. Increasing efforts to increase available childcare options, and generating solutions to ensure transportation is accessible are examples of the types of services that will increase retention of workers in high-road jobs.

**Assessment:** Based on these findings, the team assessed the Boston-Cambridge-Newton-New Hampshire based on the rubric presented. Here is a summary of the findings compared to the other MSAs in New England. To review findings from other MSAs, please see the full report or another MSA profile.

### Connectivity Characteristics at the Regional Level: A Snapshot

	Ecosystem Manager	Public Facing Partnerships	Centering Equity	Mutual Reinforcing Action	Sharing Information & Best Practice
Metropolitan Region					
Hartford MSA (CT)	X*	X*	X*	?	?
New Haven MSA (CT)	X*	X*	X*	?	?
Portland MSA (ME)	X*	X	X	?	?
Boston MSA (MA)	X	X	X	X	?
Springfield MSA (MA)	?	?	?	?	?
Providence MSA (RI)	?	X	X	X	?

X = Present    X\* = Significant presence    ? = Could not be confirmed

LEARN MORE

Access the full New England Clean Energy Workforce Assessment Report and supporting materials at: [barrfoundation.org/ceworkforcedev](https://barrfoundation.org/ceworkforcedev)