

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.⁴¹ 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.

⁴¹ 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:

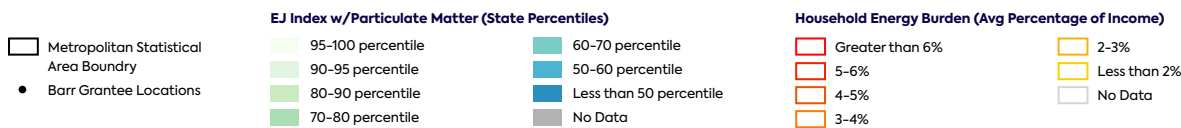
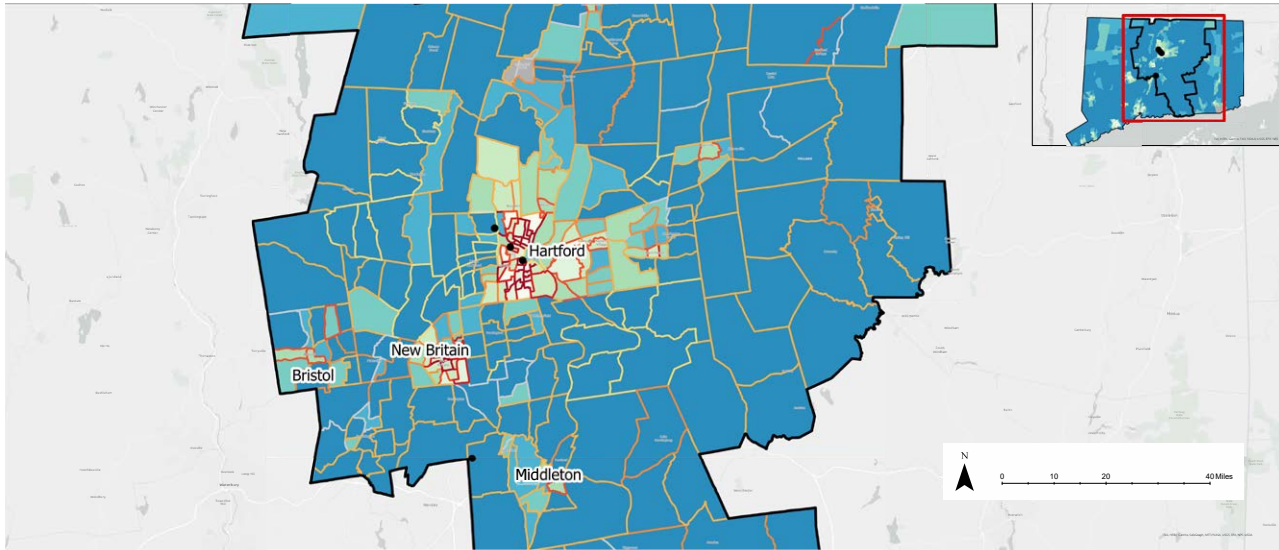
- The number of public-facing partnerships the organization had in place. These were determined through the interviews and by examining the websites of these organizations.
- Descriptions of memoranda of understanding, articulation agreements or other formal statements of agreements with other organizations 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

Hartford-East Hartford-Middletown MSA Workforce Ecosystem

Hartford-East Hartford-Middletown MSA Environmental Justice Index and Energy Burden By Census Tracts 2020



HARTFORD-EAST HARTFORD-MIDDLETOWN MSA GEOSPATIAL PROFILE

Population (in 2020): **1.2 million**

Unemployment Rate: **4.4%**

Average Particulate Matter
2.5 percentile in State: **28**

Average Traffic Proximity Percentile
in State: **58**

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

Hartford-East Hartford-Middletown, Connecticut, metropolitan area centers the state capital of Hartford. The metropolitan region comprises Hartford County, Tolland County and Middlesex County.⁴² In 2020, the population was 1.2 million, a 0.46 percent growth from 2019.

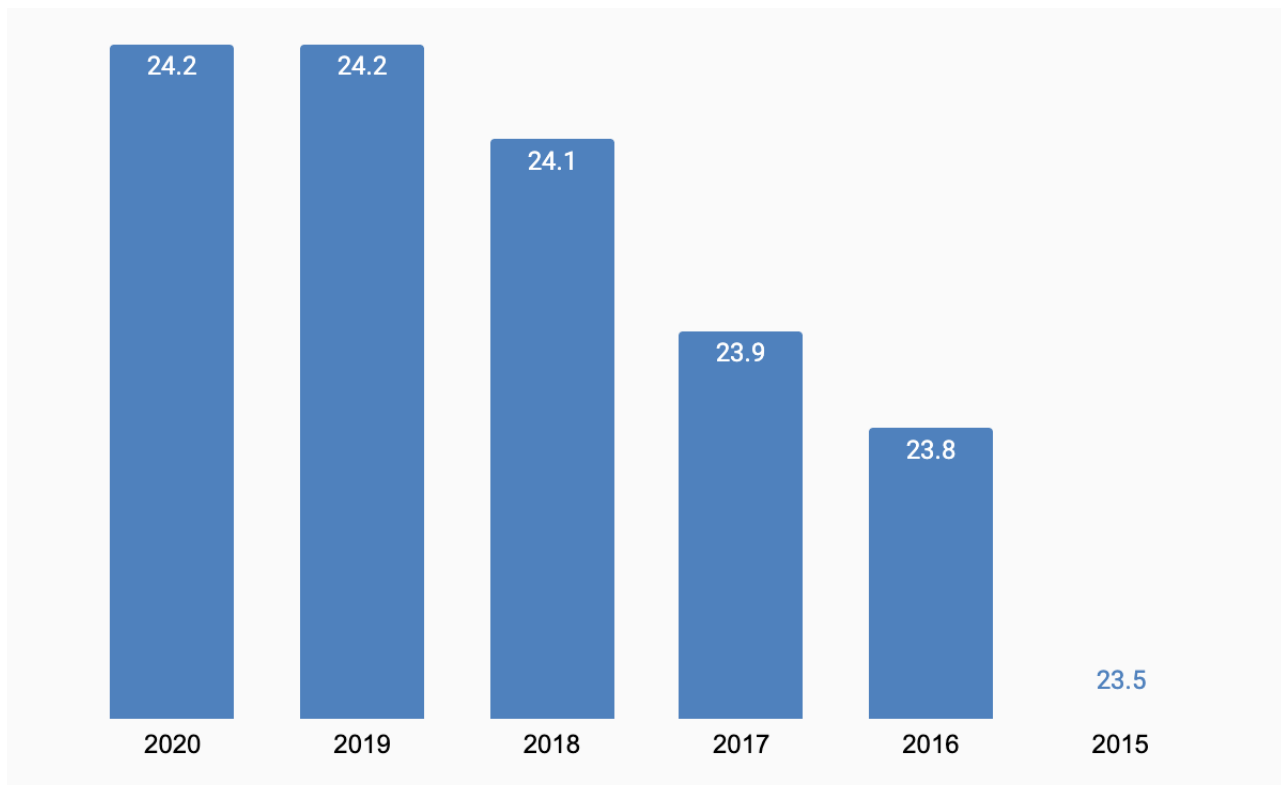
When compared to the state, the Hartford-East Hartford-Middletown metropolitan area ranked in the 28th percentile for particulate matter 2.5 pollution and greater than the 50th percentile when measuring communities proximate to traffic. On average, residents traveled 24 minutes to work, with nearly 35 percent of households owning three or more vehicles. Multiple vehicle ownership ranks the highest among the six MSAs observed in the New England region.

⁴² <https://www.bls.gov/cew/classifications/areas/county-msa-csa-crosswalk.htm>

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

FIGURE 1. Mean Travel Time to Work
Hartford-East Hartford-Middletown MSA 2015-2020



Source: 2016-2020 ACS 5-year estimates

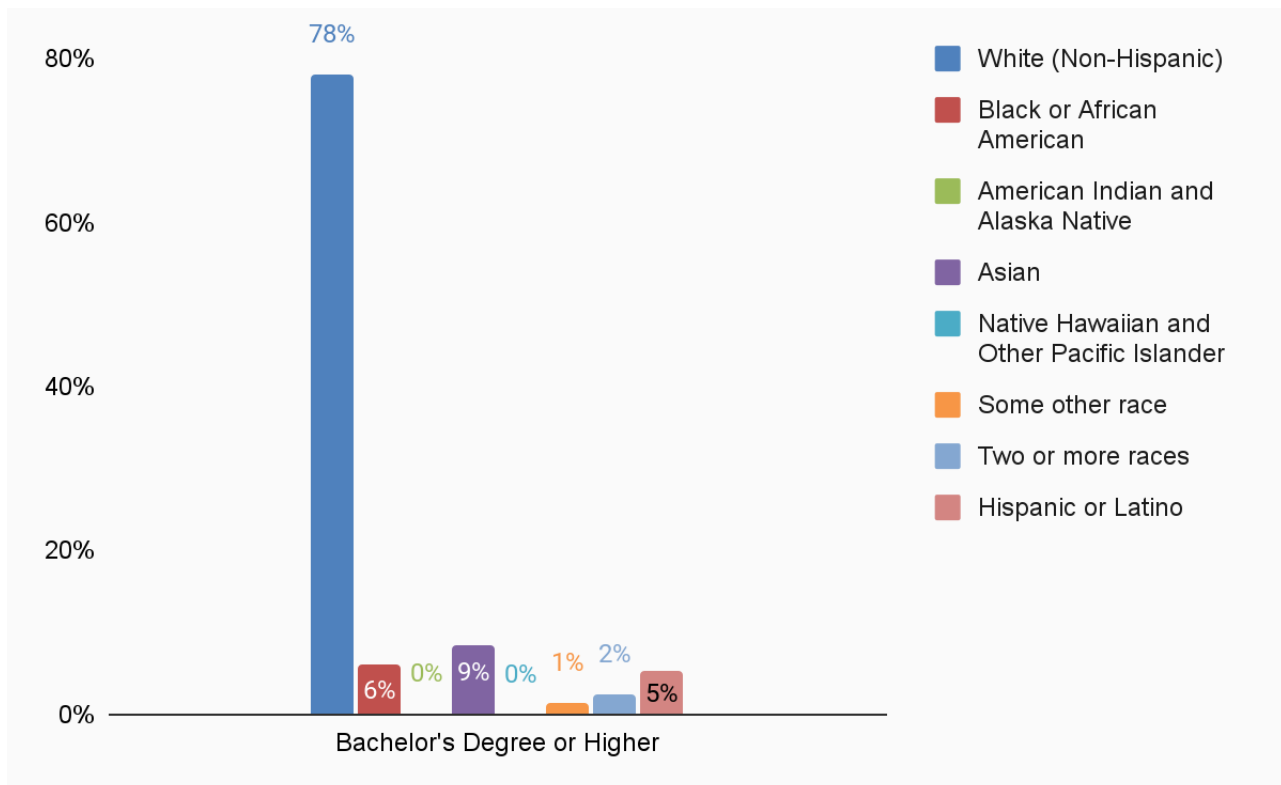
Disproportionate impacts to health and pollutant exposure are largely associated with race/ethnicity and income. Historically underrepresented communities represent 12 percent of the Hartford metro population. Overall, 31 percent of the residents identify as non-White, 9 percent have less than a high school education, 4 percent are unemployed, 13 percent have incomes at or below 65 percent below the state median income, and 5 percent live in limited English-speaking households.

On average, there were 7.9 times more White (Non-Hispanic) residents than any other race or ethnicity in 2020. Of the total population, 66.2 percent of the residents identify as White, 15.2 percent Hispanic or Latino and 10.5 percent Black or African American and 5.1 percent Asian America. The share of Hispanic or Latino, Black or African American residents varies slightly from the state population. In Connecticut, 16.4 percent of residents identify as Hispanic or Latino, while 9.9 percent identify as Black or African American.

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

FIGURE 2. Race/Ethnicity by Educational Attainment
Hartford-East Hartford-Middletown MSA 2020



Source: 2016-2020 ACS 5-year estimates

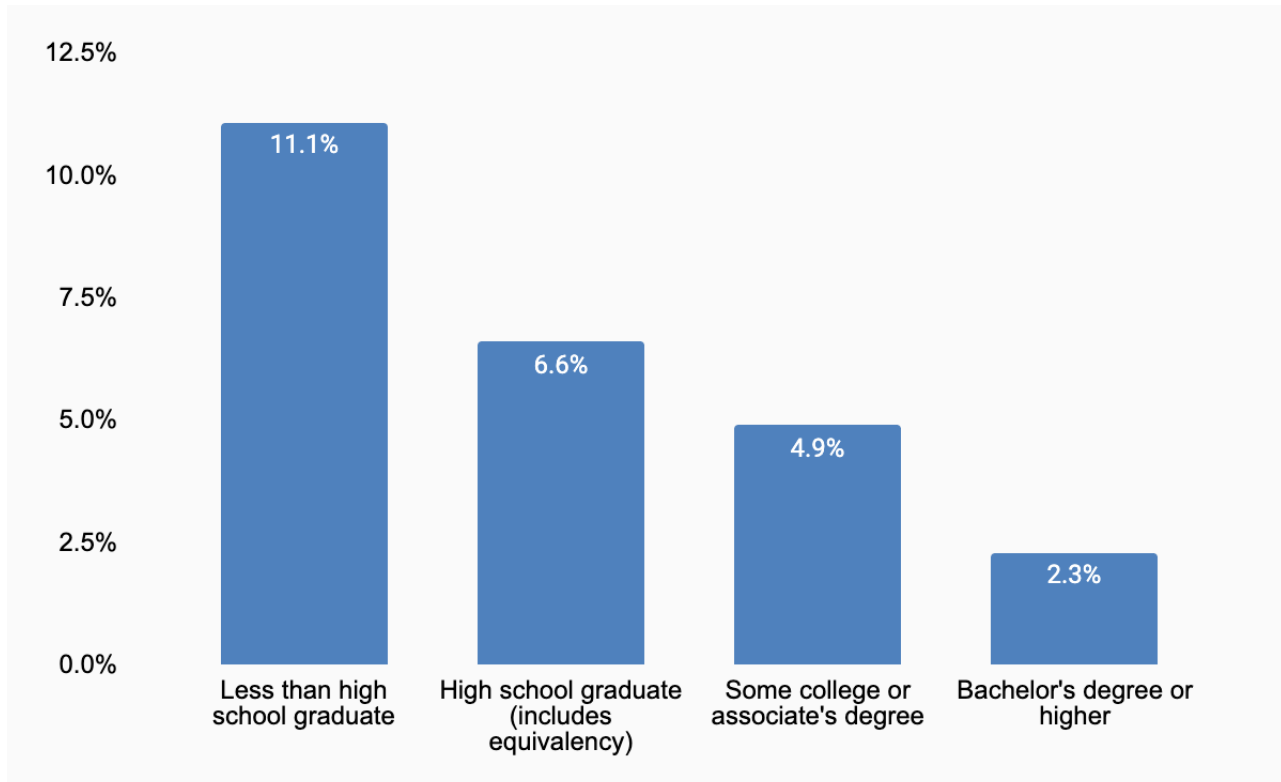
Knowing the educational attainment of the population can provide valuable insight about a specific area. Areas with high rates of low educational attainment usually face challenges such as higher rates of unemployment. Overall, 9 percent of residents have earned less than a high school diploma while 26 percent have high school diplomas with no other formal education. Figure 2 shows race & ethnicity by distribution for the Hartford metro area in 2020.

Although residents identifying as Hispanic or Latino represent the second highest share of the population at 15.2 percent, only 5 percent of the population have attained a bachelor's or higher.

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

FIGURE 3. Unemployment Rate by Educational Attainment
Hartford-East Hartford-Middletown MSA 2020



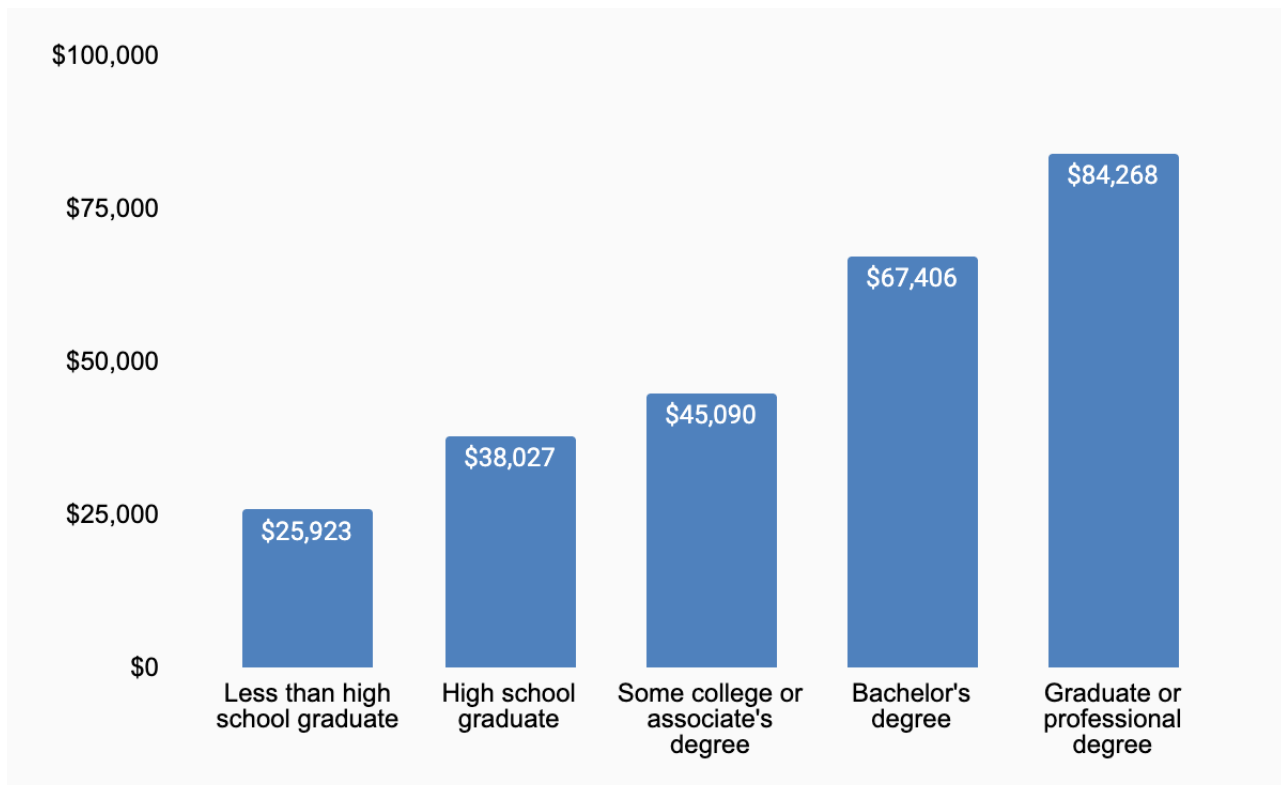
Source: 2016-2020 ACS 5-year estimates

Overall unemployment rate for individuals 25 to 64 years and older was 4.4 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 11.1 percent and 6.6 percent, respectively. Unemployment rates among residents with a bachelor's or higher is significantly lower than the general Hartford metro unemployed population at 2.3 percent (Figure 3).

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

FIGURE 4. Median Earnings and Educational Attainment
Hartford-East Hartford-Middletown MSA 2020



Source: 2020 ACS 5-year estimates

Higher earnings also correlate with educational attainment. Workers with a bachelor's earned \$41,000 more in annual wages than those with less than a high school education, the widest margin when compared to the six metropolitan areas observed in this report. (Figure 4).

English-capability is an important aspect of employment participation. Nearly 25 percent of the Hartford metropolitan population speak a language other than English at home with Spanish being the most common language at 12 percent, followed by Indo-European speaking households at 9 percent and Asian and Pacific

Island households at 2 percent. Collectively, 5 percent of residents speak limited English at home.

Hartford-East Hartford-Middleton MSA Clean Energy 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
Ecosystem Manager AKA “Backbone Team”	<p>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</p>	<ul style="list-style-type: none"> • Have experience managing diverse stakeholder interests and facilitating and convening the partnership • Are trusted in the community and perceived as an ally to people from frontline and impacted communities • Intentionally and regularly convene community based groups and private and public sector groups within the workforce ecosystem with explicit inclusion of marginalized identities. • Collect or support the collection of disaggregated data across the system • Have access to funding or capacity to apply for grants to support the partnership
Public Facing Partnerships	<p>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</p>	<ul style="list-style-type: none"> • Have MOUs and/or articulation agreements between partners • The partners are representative of the different organizations along a career pathway (CBOs, pre-apprenticeships, high schools, community colleges, apprenticeships, employers) • The partnership has a vision, mission and goals • The partnership prioritizes equity and pathways to quality careers (high road) • The partnership works to calibrate training to labor market demand • The partnership is demand-side driven
Centering Equity	<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"> • Ecosystem manager leadership and the collaborative is led by members of the community and centers the lived experience of community members. • Operate using a systems based approach • Use of disaggregated racial data to understand where the ecosystem is and where it needs to go • Sets goals for quality equity initiatives • Investment in capacity of frontline organizations/CBOs • Training organizations are based in underrepresented communities • Public procurement policies are in place to promote utilization of MDWBEs • Public policies set targets for apprenticeship utilization • Public policies in place for targeted or local hire • Providing training opportunities that prevent occupation segregation • Inclusive hiring policies • Organizations provide participants with comprehensive exposure to a career pathway
Mutual Reinforcing Actions	<p>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</p>	<ul style="list-style-type: none"> • Develop shared vision, mission and goals • Work on local, state and/or federal policies that support equity goals and job quality as well as clean energy accessibility for impacted communities • Evidence of alignment of credentials certifications, curriculum, and credits to create industry standards • Provide work based learning and on-the-job training opportunities as well as career exposure through field trips, shadowing and presentations • Review critical documents such as: Climate Actions Plans, Building Performance Standards, etc. to include strategies and language that support equity and economic inclusion • Develop and implement community workforce agreements and community benefit agreements • Engage impacted communities in policy and program design • Work with employers to develop retention strategies for women and BIPOC employees • Develop and adopt labor standards to ensure job quality and equitable access
Share Information and Best Practices	<p>WEs share information and best practices that help ecosystem partners understand and navigate the landscape</p>	<ul style="list-style-type: none"> • Learn from national best practices that include equity and economic inclusion principles in their climate action and workforce development policies and programs development • Map the workforce ecosystem and understand assets, gaps, and opportunities • Transparent and share critical documents to help align the ecosystem

Hartford-East Hartford-Middletown 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

Hartford was one of the first cities in Connecticut to develop a comprehensive climate action plan. The plan identifies adaptation strategies to mitigate climate challenges such as improving energy efficiency of public and private buildings, increasing renewable energy use, encouraging clean energy vehicles and increasing energy resiliency among other strategic focuses. In 2019, the City of Hartford's Board of Energy Improvement District put forth and adopted a comprehensive plan to implement strategies drawn from the city's climate action plan. The Energy Improvement District aims to reduce greenhouse gas emission by sourcing 4 MW from renewable sources and with more than 1,200 households participating in utility-sponsored weatherization programs. To advance these efforts, the city of Hartford issued an Energy Equity Challenge for all residents and local property owners. The goal is to reduce energy use and encourage residents to utilize free resources to improve residential and commercial buildings energy efficiency.

⁴³ <https://www.hartfordct.gov/files/assets/public/mayors-office/sustainability/sustainability-documents/energy-improvement-district/eid-materials/eid-comprehensive-plan.pdf>

STRENGTHS

Hartford has an emerging infrastructure of educational institutions, organized labor, regional and state agencies, advocacy, and firms in active partnerships focused on creating pathways in the climate sector. Workforce development programs like Green S.T.E.P (Sustainability Technical Education Program) is a state initiative administered by local utilities in partnerships with local schools. The program was designed to prepare students for construction jobs related to clean energy. Students learn the concepts of sustainability, energy efficiency, renewable green buildings before going into the field to work with industry experts. In Hartford, 121 students from A.I. Prince Technical High school participated in the program.⁴³

Efforts at the state level are fostering connections for the workforce in high-demand sectors. The Office of Workforce Strategy (OWS), a quasi-governmental organization that aims to enhance Connecticut's workforce ecosystem through regional collaborative efforts. The Office funds pre-apprenticeship programs across the state and maintains a shared database of job seekers and workers participating in OWS programs.

Similarly, Hartford Community College has a robust construction and trades program offering apprenticeship, certificate and degree programs. The program offers a career and workforce department, located in Hartford's Leading Edge Training Center Powered by the Ratcliffe Foundation, strategically placed at the Boys & Girls Clubs of Hartford & Cecil Counties. This location allows the college to provide valuable training in the southeastern portion of the County. Students are guided through

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

programs with help from dedicated career navigators who provide interviewing and resumé writing assistance, resources, and networking opportunities with local employers. Hence, the community college has a satellite site located within a disadvantaged community and offers supportive services necessary for people from impacted communities to succeed.

Additionally, advocacy organizations play a crucial role in bridging opportunities between environmental justice communities and labor. Both critical actors towards developing an equitable thriving climate future. Organizations like the Connecticut Roundtable on Climate & Jobs help to build partnerships, develop intentional workforce opportunities while addressing historical harms. CT Roundtable advocated for the passage of Climate and Community Investment Act (SB 999) which ensures Connecticut's transition to renewable energy creates high-road jobs. Recently CT Roundtable has taken on the Healthy Schools Initiative serving as the backbone organization to assist Hartford public schools reduce carbon emission by ensuring all new school construction are net zero, and existing schools are retrofitted to meet energy efficiency standards.

CHALLENGES

As with other regions across the state, there is a deep shortage of workers in residential energy efficiency roles. Workforce actors are providing some training programs, however organizations are grappling with how to expand program offerings. While firms are participating in training programs, they are looking to move beyond upskilling workers by partnering with organizations who have participants ready for employment placement. According

to the energy efficiency advocates and businesses we spoke to, this shortage appears to be associated with the discontinuity and lack of predictability of labor market demand. Utility incentive programs operate until annual allocations of resources for these programs run out, then programs stop until the next budget year. This lack of predictability makes it difficult for businesses to hire new workers since they don't know whether or not incentive programs will be operating. Disadvantaged communities are disproportionately affected by stops and starts in the flow of resources.

OPPORTUNITIES

More pre-apprenticeship and workforce readiness programs are needed to meet the forecasted demand in energy efficiency and energy generation. The Building Trades Multi-Craft Core Curriculum (MC3) is an apprenticeship preparation program developed by North America's Building Trades Unions and being adopted by local and state building trades councils. This is the case with the Connecticut State Building and Construction Trades Council. As with the Green S.T.E.P program, workforce training programs could partner with public schools to expand career exposure and exposure to apprenticeship training at the middle and high school level.

CONSIDERATIONS

Advocacy on the part of organized labor, community-based organizations, and environmental justice groups has resulted in a well-developed ecosystem focused on equitable access to opportunities and high-road employment in clean energy and other state infrastructure projects. For instance, the State

Hartford-East Hartford-Middletown MSA

Workforce Ecosystem *continued*

regulates Individual Development Accounts administered by the State Department of Labor. The law states: “The initiative shall provide an eligible individual as provided in [557-§ 31-51yy](#) with an opportunity, through a certified state IDA program, to establish an individual development account from which funds may be used by the account holder for the following purposes as specified in the approved plan”⁴⁴ including costs of education or job training, purchasing a primary residence, entrepreneurial activities, purchasing a car for employment purposes, lease deposit for primary residence, education or job training and child care costs. Under Public Law 557 § 31-56b the State of Connecticut requires Project Labor Agreements for all Public works projects. Executive action established [Public Law 19-71](#) requiring Project Labor agreements and apprenticeship utilization for

offshore wind projects. According to the Connecticut State Building Trades Council, Project Labor Agreements are an important tool to promote workforce diversity on public projects.

Recent state-wide workforce initiatives in clean energy are the result of early local efforts in Hartford. Now, they are being taken to scale. For instance the State of Connecticut’s Building and Construction Trades Council Training initiative is a statewide pre-apprenticeship program based on an earlier successful effort called the [Hartford Jobs Funnel](#). The Funnel was developed by the local workforce investment agency, designed to recruit local construction workers for major projects in Hartford. The program is still in place and includes a residential target hire of 30 percent, established by a city ordinance.

Assessment: Based on these findings, the team assessed Hartford 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

⁴⁴https://www.lawserver.com/law/state/connecticut/ct-laws/connecticut_statutes_31-51yy

LEARN MORE

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