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.

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:
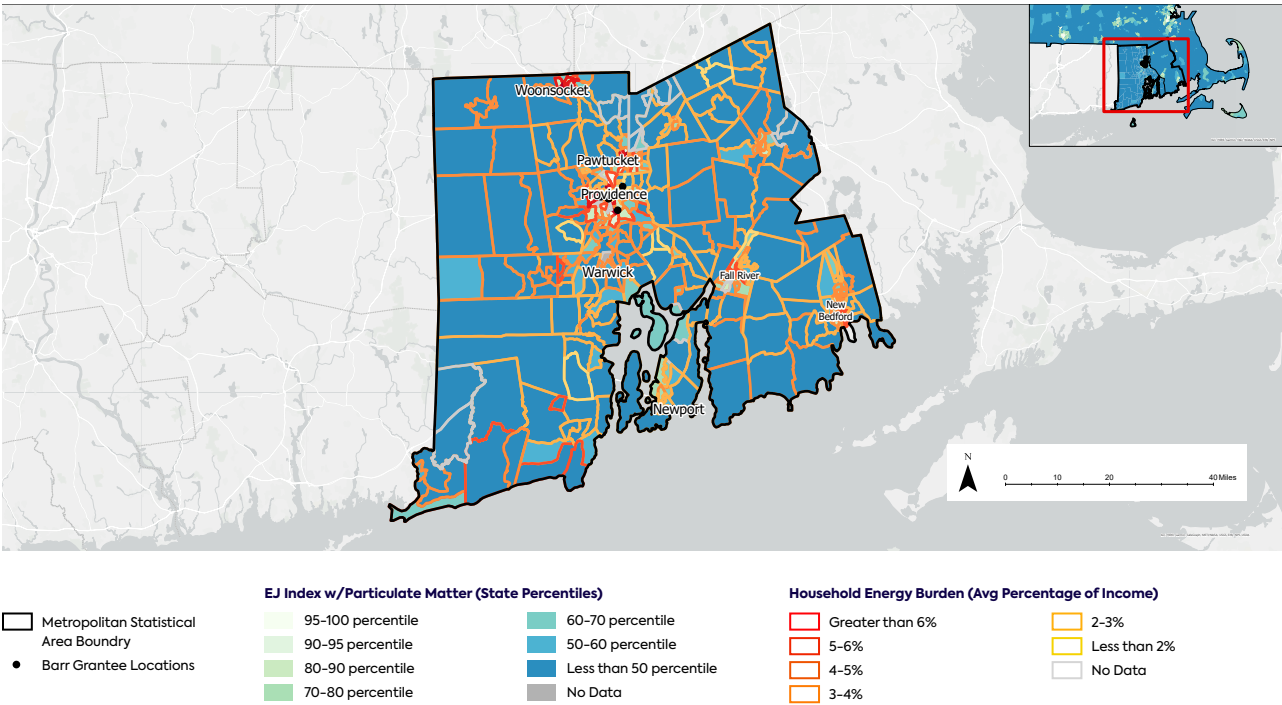
- The number of public-facing partnerships the organization had in place. These were determined through the interviews and by examining the websites of these organizations.

- 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

Providence–Warwick MSA
Workforce Ecosystem

Providence–Warwick MSA Environmental Justice Index and Energy Burden By Census Tracts 2020

EJ Index w/Particulate Matter (State Percentiles)

95–100 percentile	60–70 percentile
90–95 percentile	50–60 percentile
80–90 percentile	Less than 50 percentile
70–80 percentile	No Data

Household Energy Burden (Avg Percentage of Income)

Greater than 6%	2–3%
5–6%	Less than 2%
4–5%	No Data
3–4%	

☐ Metropolitan Statistical Area Boundry

● Barr Grantee Locations

PROVIDENCE-WARWICK MSA GEOSPATIAL PROFILE

Population (in 2020): **1.6 million**

Unemployment Rate: **4.6%**

Average Particulate Matter 2.5 percentile in State: **32**

Average Traffic Proximity Percentile in State: **47**

Average Energy Costs (% of household income): **4%**

Providence-Warwick metropolitan area extends across six counties located in Rhode Island and Massachusetts. This metropolitan region consists of Bristol County (Massachusetts), Bristol County (Rhode Island), Kent County, Newport County, Providence County and Washington County.[60] In 2020, the population was 1.6 million, a slight increase from 2019 at 0.17 percent.

When compared to the state, the Providence-Warwick metropolitan area ranked in the 32nd percentile for particulate matter 2.5 pollution levels and the 47th percentile when measuring communities proximate to traffic. On average, residents traveled nearly 30 minutes to work, with 33 percent of households owning three or more vehicles.

FIGURE 1. Mean Travel Time to Work
Providence-Warwick MSA 2016–2020
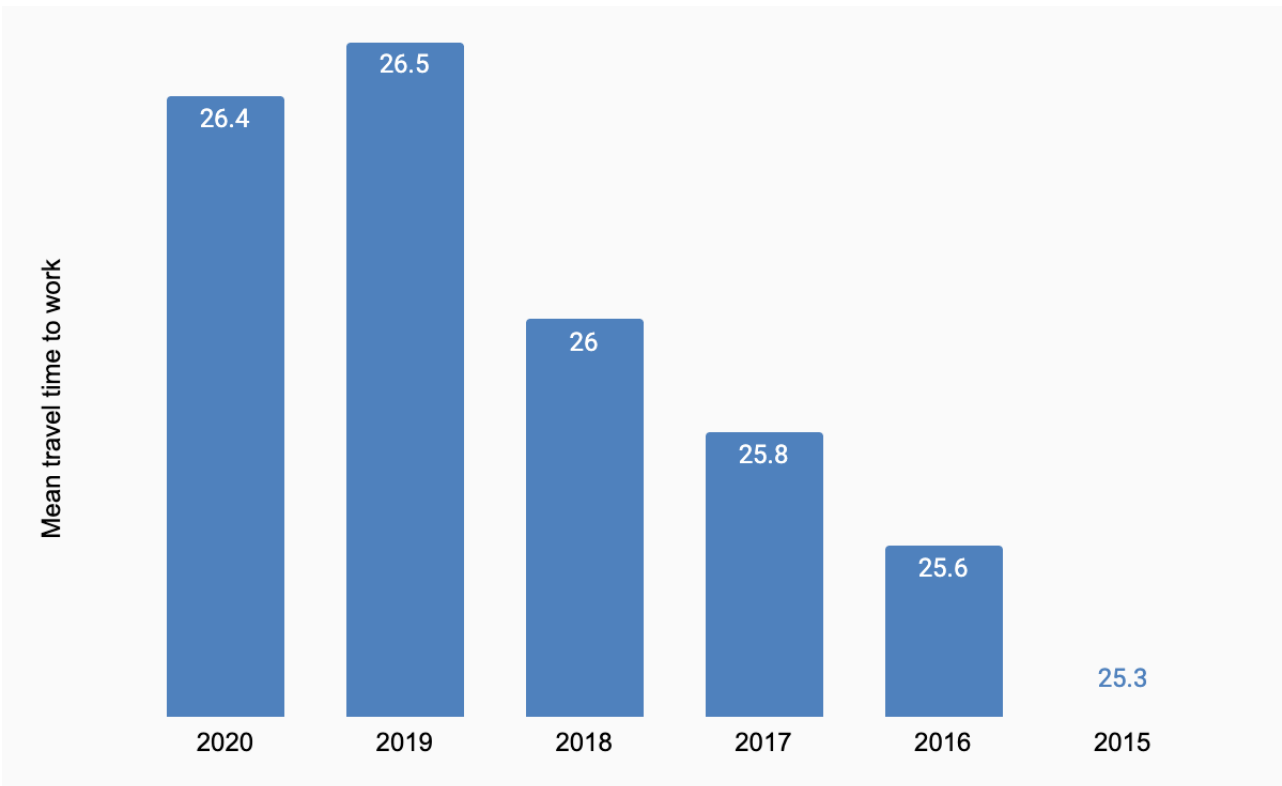
Source: 2016–2020 ACS 5-year estimates

Disproportionate impacts to health and pollutant exposure is largely associated with race/ethnicity and income. Historically under-represented communities represent 12 percent of the Providence metro population. Overall, 23 percent of the residents identify as non-White, 12 percent have less than a high school education, 4.6 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 15 times more White (Non-Hispanic) residents than of any other race or ethnicity in 2020. Of the total population, 75 percent of the residents identify as White, 13 percent as Hispanic or Latino, 5 percent as Black or African American and 3 percent as Asian American. The share of Hispanic or Latino and Black or African American residents is slightly lower compared to the state population. In Rhode Island, 16 percent of residents identify as Hispanic or Latino, while 5.5 percent identify as Black or African American.

FIGURE 2. Race/Ethnicity by Educational Attainment
Providence-Warwick MSA 2020
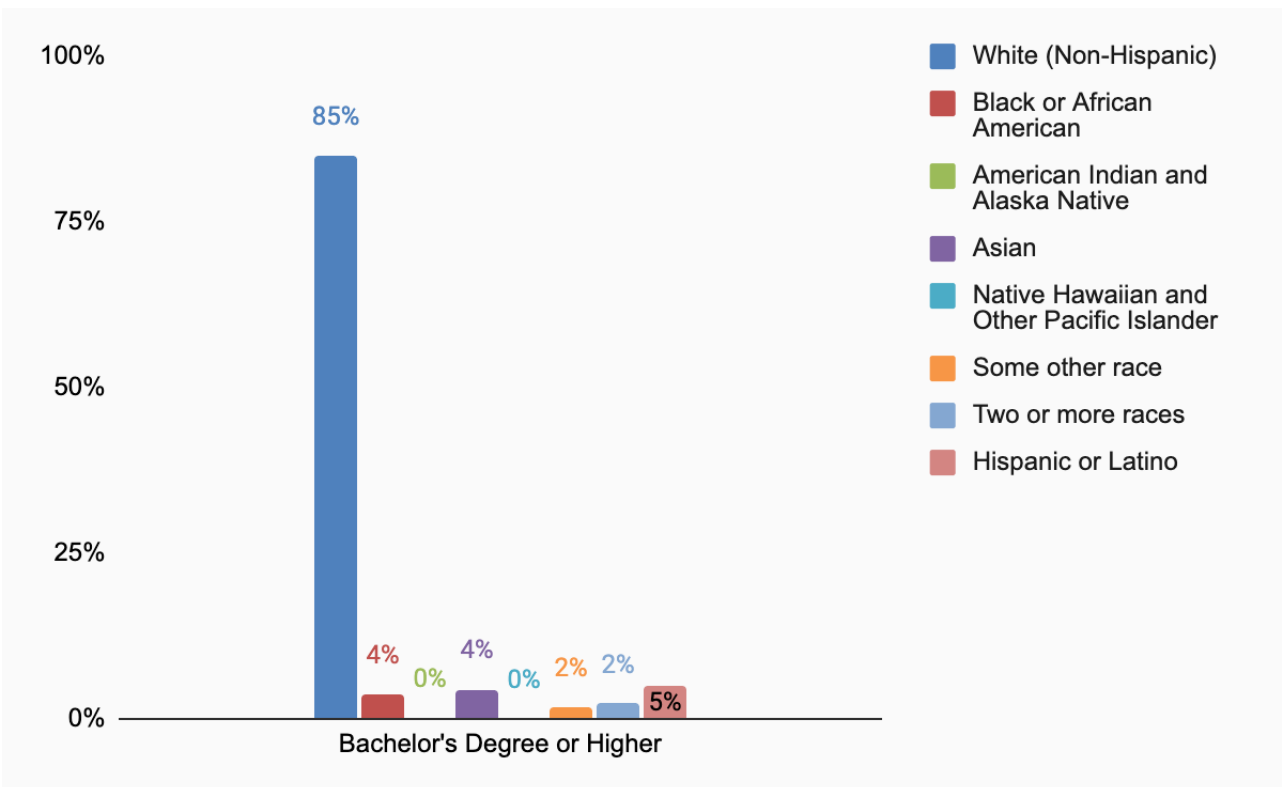
Source: 2016–2020 ACS 5-year estimates

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, 12 percent of residents earned less than a high school diploma, while nearly 30 percent have high school diplomas with no other formal education. Figure 2 shows race and ethnicity by distribution for the Providence metro area in 2020. Of those who attained a bachelor's or higher, only 5 percent identify as Hispanic or Latino.

FIGURE 3. Unemployment Rate by Educational Attainment
Providence-Warwick MSA 2020
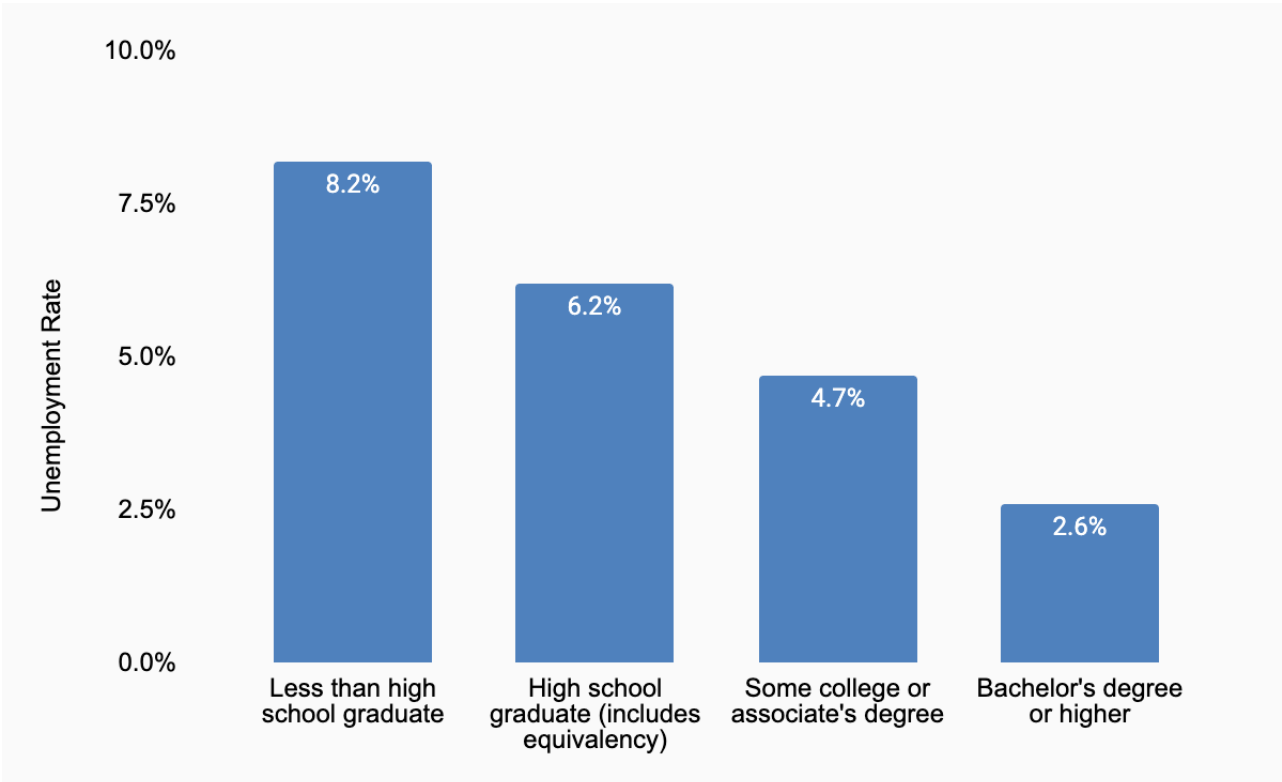
Source: 2020 ACS 5-year estimates

The unemployment rate in 2020 for individu-als 25 to 64 years and older was 4.6 percent. However, for those who attained less than a high school diploma or earned a high school diploma, the rate is disproportionately higher at 8.2 percent and 6.2 percent, respectively. Unemployment rates among residents with a bachelor's or higher is significantly lower than the Providence metro unemployed population at 2.6 percent (Figure 3).

FIGURE 4. Median Earnings and Educational Attainment
Providence-Warwick MSA 2020
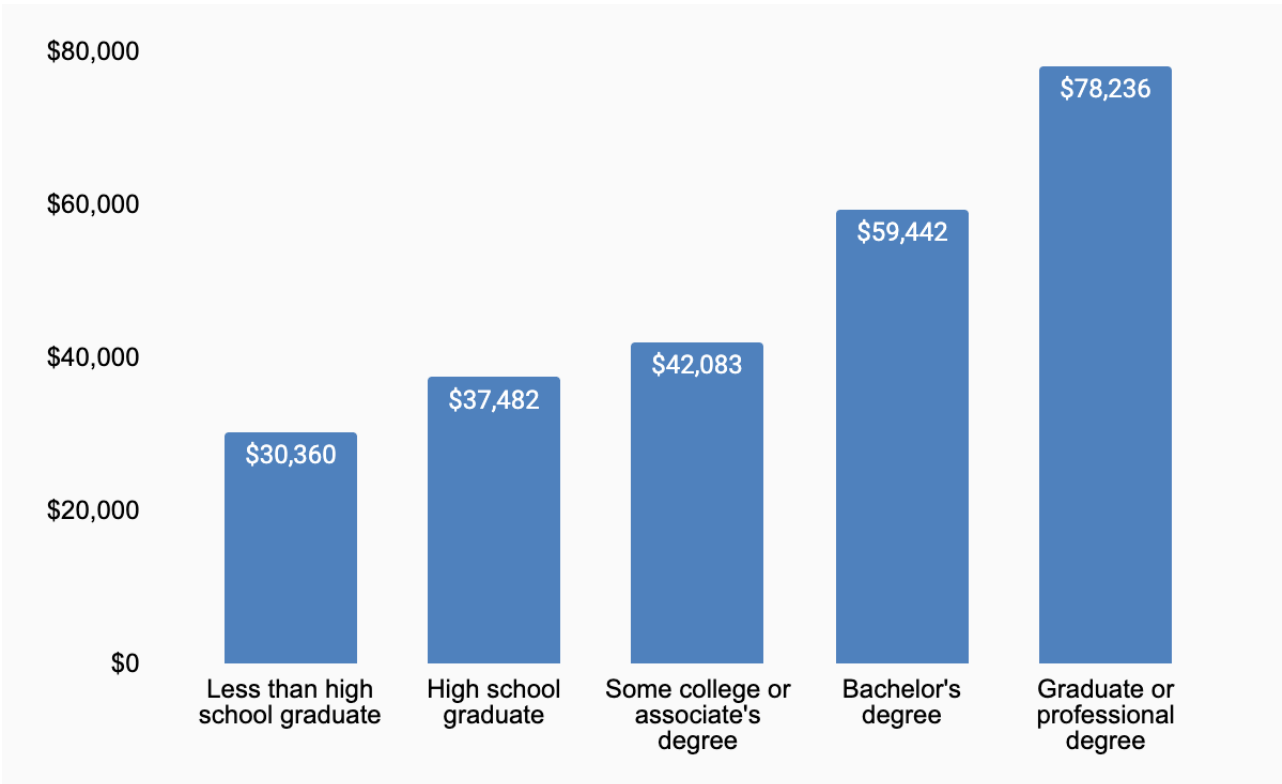
Source: 2020 ACS 5-year estimates

Higher earnings also correlate with educational attainment. Workers with a bachelor's degree earned $29,000 more in annual wages than those with less than a high school education (Figure 4).

English-language capability is an important aspect of employment participation. Overall, 25 percent of the Providence metropolitan population speak a language other than English at home with Indo-European being the most common language at 12 percent, followed by Spanish-speaking households at 10 percent

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

Providence-Warwick 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"	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	• 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	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	• 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 • Example
Centering Equity	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. 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. 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.)	• 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	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	• 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	WEs share information and best practices that help ecosystem partners understand and navigate the landscape	• 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

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

The City of Providence Climate Justice Plan sets carbon-neutral goals while providing dedicated resources and support to frontline communities. The plan builds on the City's progress to meet climate goals while prioritizing low-income communities of color affected by their proximity to pollution. The plan calls for continued efforts to improve building energy efficiency through lighting, HVAC, and building envelope/weath-erization upgrades while increasing low-income energy efficiency program participation.[61] In 2021 the City Council codified the goals and targets of the Climate Justice Plan in the city's code of ordinances. Recently, the City passed the Building Energy Reporting Ordinance (BERO) ordinance which mandates energy and emissions reporting for buildings more than 10,000 square feet. The city has also prioritized development of offshore wind in the ports. Support for this burgeoning industry ensures the growing offshore wind industry in the ports.

STRENGTHS

The Providence metropolitan region has strong community-based organizations actively supporting residents from system-impacted and environmental justice communities enter-ing the clean energy workforce. These orga-nizations provide an on-ramp to high-road construction and clean jobs as well as case management and wraparound services to assist individuals in successfully entering their career pathway. To matriculate individuals along the career pathway, community-based organiza-tions are exploring partnership opportunities with existing pre-apprenticeship programs as well as clean energy employers and community colleges.

The Providence metropolitan area has one of the strongest pre-apprenticeships models in the region. Organizations like Building Futures RI focus on enrolling applicants from underrep-resented communities and providing them with paid training opportunities. Eighty percent of their participants are people of color. Building Futures RI has strong partnerships with supply- and demand -organizations that support the pipeline of participants into pre-apprentice-ships and then into apprenticeships upon grad-uation, resulting in a notable apprenticeship retention rate. Given this program's impressive rates of placement and retention, this model has been replicated in other parts of the New England region. Additionally, Building Futures RI recently joined a partnership with the Commu-nity College of Rhode Island, the Rhode Island Department of Labor and Training, the Rhode

---

[61] https://www.providenceri.gov/wp-content/uploads/2019/10/Climate-Justice-Plan-Report-FINAL-English.pdf

Island Chamber of Commerce, and the Rhode Island Building and Construction Trades Council to establish the state's first Global Wind Organization (GWO) training certificate program,[62] geared to the education and training of offshore wind workers for burgeoning projects near the ports.

As one of the leading national leaders in offshore wind, the state is continuing its efforts by growing the offshore wind industry in the ports of Providence. The prioritization of this industry from the city and state will provide an economic and workforce development opportunity for environmentally impacted communities near the ports. Efforts for long-term procurement of wind generation include baseline requirements for labor standards, and equity and inclusion measures. Project developers are mandated to submit DEI plans that at minimum propose a strategy that "enables access to employment and vendor opportunities for historically marginalized communities."[63] Such policies demonstrate a commitment to workforce equity and supplier diversity. To yield the desired result, policies should not only include workforce protections, hiring goals, and representation in procurement practices, but also require benchmarks, monitoring, and tracking toward the goals to ensure investments are actualized.

CHALLENGES

There is limited visibility of statewide efforts to increase workforce readiness for growing industries like offshore wind projects. More engagement from community-based organizations and advocacy organizations are needed to ensure workers and individuals from impacted communities are aware of clean energy workforce opportunities. Community-based workforce organizations that work with people from impacted communities have difficulty navigating the clean energy sector and find the industry language confusing. This creates an exclusionary sense of being part of an ingroup or outgroup. Some organizations expressed feeling disconnected from clean energy opportunities. Getting organizations to partner could be a challenge.

Additionally, there is limited diversity in the clean energy and energy efficiency workforce. Environmental justice organizations have encountered formidable barriers to getting BIPOC participation in construction jobs. Environmental justice groups have reported incidents of outright racism from building trades unions. Part of this is based upon the experiences of individual people of color who have attempted to pursue careers in the trades. It is also due to a lack of connection between organized labor and environmental justice groups. Whatever the reason, there appears to be a deep distrust of the building trades among environmental justice advocates.

While the demand for offshore wind jobs is slated to grow, bringing quality pay, benefits and career advancement and significant

[62] https://www.ri.gov/press/view/44112
[63] https://legiscan.com/RI/text/S2583/id/2592036

climate benefits, there are barriers to occupations in offshore wind construction. Offshore wind will drive the demand for short-term construction jobs. However, the structure of these jobs, which require significant time away from family due to time required offshore, such jobs can be challenging, especially for single parents.

Similarly, jobs in residential energy efficiency present barriers to employment due to lower job quality and inequitable access to jobs. The region has a shortage of HVAC technicians and electricians and it is difficult to hire for those positions, as vacancies sit open for months. Residential energy efficiency jobs are often undermined by lower project cost objectives which disincentivizes workers seeking access to quality jobs.

OPPORTUNITIES

Greater alignment at the state level looks promising as organizations collaborate on developing partnerships to meet the climate demand. The Department of Labor was often cited as a potential convenor to coordinate the supply and demand side organizations in the ecosystem. The office has existing relationships with labor organizations and community-based organizations and seeks to engage the governor's workforce board to convene conversations around clear energy. Similarly, the Office of Energy Resources has taken steps to ensure Justice 40 principles are embedded throughout the office, suggesting they aspire to apply these ideas beyond their administration of federally funded programs. The office recently hired an Energy Justice manager to coordinate the adaptation of federal Justice 40 principles into program design and the department's distribution of resources. The office also commissioned a workforce assessment to develop a baseline for climate workforce opportunities in the state.

CONSIDERATIONS

Barriers to employment exist for formerly incarcerated individuals. Training programs that support system-impacted individuals are unable to place them in offshore wind projects given that they cannot pass a criminal background check. Community-based organizations are critical in supporting the transition from prison to employment and require more funding to support this transition. Returning citizens face a myriad of challenges such as lack of a valid driver's license, reliable transportation, stable housing, digital savviness, and unpaid fines. Overall, they require a great deal of additional support in their transition to gainful employment. While there have been pockets of success, there is a need to take the efforts of organizations like Man Up and Roots2Empower to scale.

Taking this kind of effort to scale will inevitably be blunted by another dynamic. There seems to be a bifurcated understanding of the transformative nature of workforce opportunities through climate action. On one hand, government officials and community-based workforce organizations are aware of the opportunity and starting to position for the flow of resources. On the other hand, there are environmental justice and community-based organizations with less capacity that are either less aware of these

opportunities or highly suspicious of organized labor and better funded organizations. Bridge building and awareness building across these organizations will be essential to introducing more people of color and women to clean energy opportunities. In this case, state government agencies seem to be trusted by both parts of this divide and could play an important con-

vening role. A lot is at stake. If the state government is an effective convener, past harms will be voiced, relationships of cooperation, and the intent of Justice40 will be realized. If the state government misses this moment, the divides will harden and the environmental justice community will be aggrieved.

Assessment: Based on these findings, the team assessed the Providence-Warwick MSA 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