

OFFSHORE WIND IN NEW YORK CITY

New York City has committed to a 100-percent clean electricity goal by 2040 and carbon neutrality by 2050. Achieving these goals will require a shift to renewable energy, including offshore wind (OSW).

In 2021, the City committed to investing \$191 million in the offshore wind industry over 15 years. This will be used to develop best-in-class infrastructure, workforce and business development, and innovation in offshore wind technologies and strategies.

New York City also provides an unmatched labor pool for offshore wind operations, with a higher concentration of workers in select offshore wind-related occupations than almost all other regions on the East Coast.

Ongoing offshore wind development in the area will provide operations and maintenance (0&M) and staging and assembly facilities, transforming the region into a hub for offshore wind—including what will be one of the largest dedicated offshore wind port facilities in the US.

"NYC is showing how to embrace offshore wind. By partnering with industry, spurring the supply chain, including staging and assembling these large-scale projects, NYC will be a go-to hub for this exciting new industry."

Siri Kindem

President, Equinor Wind U.S.



1 M

People currently working in offshore windrelated occupations in New York City



\$191M

The City's 15-year commitment to offshore wind (Source: NYCEDC)



130+

Offshore wind firms already operating in New York City



\$70B

The scale of the supply chain being created by the offshore wind industry (Source: Offshore Wind NYC Plan)



2.3M

People employed in offshore wind-related occupations in the greater metro area

AN ECOSYSTEM IN PLACE

There are already nearly one million people—the most anywhere on the East Coast—employed in offshore wind-related occupations in New York City, with nearly 2.3 million people in these occupations in the greater metro area:

New York City has the highest concentration of Operations and Maintenance occupations of any region on the East Coast—12 percent more than the next highest region. And the city is strong in Construction and Installation, Manufacturing, and Planning and Development.

A Home to Manufacturing

New York City is home to over 830 manufacturing businesses and retains a high concentration of manufacturing trades that drive the offshore wind industry, with workers in:

- · Structural Iron and Steel
- · General Maintenance and Repair
- · Reinforcing Iron and Rebar
- · Ship Engineering
- · Material Moving

New York City is drawing on federal funding to support its current and future workforce, and is doing so with a focus on equity. The City has strategically used federal dollars to

deliver at least 40 percent of job and investment benefits to historically underserved, overburdened, and marginalized communities. Over the past five years, New York City has demonstrated success in securing federal funding for maritime projects through US Department of Transportation (USDOT) grants such as Rebuilding American Infrastructure with Sustainability and Equity (RAISE) and Port Infrastructure Development (PIDP).

This labor market is also supported by a robust and growing offshore wind ecosystem, with 130+ firms already working across the industry including Equinor, McAllister, Miller's Launch, Atlantic Offshore Terminals, and more. New York City is also home to 5,400 small- and medium-sized businesses in offshore wind-adjacent industrial sectors, representing the enormous potential of the city's market and labor pool.

New York City's offshore wind ecosystem currently includes the following:

Developers and OEMs:

Equinor, Orsted, EnergyRe, Invenergy, Copenhagen Infrastructure Partners, bp, National Grid, Atlantic Shores, Nexans

Climate Tech Innovation:

NYU Urban Future Lab,
Offshore Wind Innovation
Hub, Brooklyn Navy Yard,
Newlab, Governor's Island Climate Solutions
Center, Cornell Tech,
NYSERDA

Workforce Development Ecosystem:

CUNY OSW Advisory Network Schools (CSI, KCC, City Tech, LaGuardia), SUNY Maritime, Columbia Climate School

Local Manufacturing in NYC:

Barone Steel, Kepco Inc, ACME Industrial, Belmont Metals, Hugh O'Kane Electric, Kleinberg Electric, Linda Tool, among others

ROBUST TALENT PIPELINE

New York City is home to a talent pipeline primed for employment in the offshore wind industry. A total of 13 education, training, and research and innovation institutions across the city are providing focused training for the offshore wind workforce of the future, preparing workers for every stage of project development.



Employment in these occupations is expected to **grow by 20 percent** or more over the next decade.

This labor market is supported through paid training. In the past five years, the greater metro area saw over 25,000 apprenticeships registered in offshore wind-related occupations—with over 12,000 apprenticeships to support

union work, 2,000+ more apprenticeships for union workers than the next highest total on the East Coast.

The city is projecting strong growth in manufacturing occupations, such as Machinists, Mechanical Engineers, Metal Workers and Plastic Workers, and Assemblers and Fabricators, all crucial to manufacturing.

Further, New York City is expected to add more Mechanical, Electrical, and Industrial Engineering jobs over the next decade than other port metro areas on the East Coast.



25K apprenticeships registered in offshore-wind-related occupations over the last five years.

STRATEGIC LOCATION

New York City is less than a day's sail to 25 wind energy lease areas—more than any other comparable market along the East Coast—and features easy access to offshore wind marshalling terminals from Long Island Sound to the Chesapeake Bay.

The city boasts robust transportation infrastructure including:



The East Coast's **largest deep-water port**, featuring on-dock rail facilities and berths capable of accommodating the world's largest vessels



Two of the nation's **busiest and well-connected airports**: LaGuardia and JFK International



Access to two **Class I freight rail carriers:** CSX and Norfolk Southern



Extensive road connections to the interstate highway network, including I-80, I-84, I-87, and I-95

AN UNRIVALED PORT

The Port of New York—the largest port on the East Coast with over three times the vessel activity of any other East Coast port—can truly handle it all.

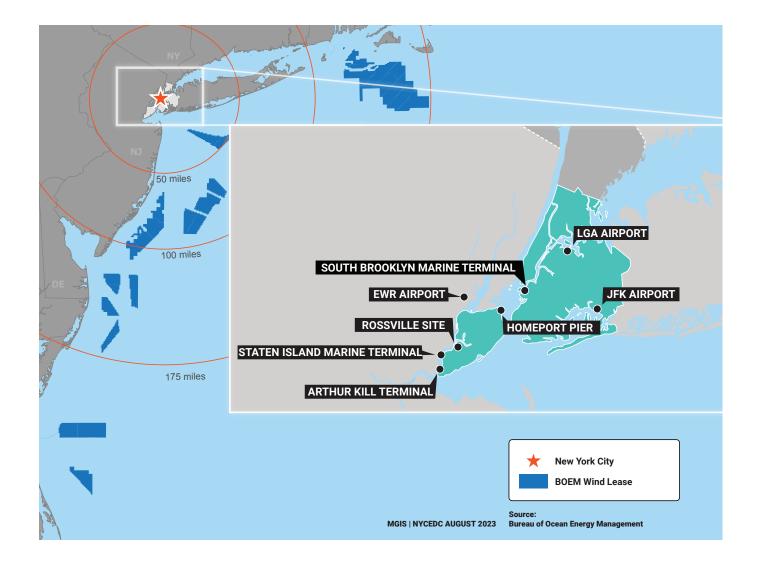


3.6M Tons of bulk product moved through the Port of New York in 2022

In 2022, 3.6 million tons of bulk product, over 420,000 automobiles, and almost 9.5 million TEUs* flowed through the Port. This unrivaled position offers the offshore wind industry access to the highest concentration of tug and barge operations on the Eastern Seaboard and access to four large shipyards—GMD Shipyard, Caddell Dry Dock and Repair, Mayship Repair, Hughs Marine, and Bayonne Dry Dock—with graving docks and dry docks for full-service ship repair.

Recent infrastructure improvements at the Port of New York have increased navigational accessibility, including 50-foot navigation channels and increased air draft. And four strategic sites within the Port are well-suited for the offshore wind industry: the South Brooklyn Marine Terminal (SBMT), the proposed Rossville, Arthur Kill Terminal, and Staten Island Marine Terminal facilities in Staten Island.

*Twenty-foot equivalent units, a measurement of container volume



UNMATCHED CITY & STATE INCENTIVES

New York City and State incentives can help reduce the cost of offshore wind projects. The City itself has 15 labor and real estate incentives for offshore wind developers, more than any other comparable market on the East Coast.

Select incentives for an OEM include:

CITY

- Industrial and Commercial Abatement Program (ICAP)
 provides property tax abatements for buildings built,
 modernized, expanded, or physically improved for up to
 25 years.
- Offshore Wind NYC Waterfront Pathways Program allows participants to become pre-qualified for exclusive access to offshore wind projects, gain access to on-the-job technical assistance, and tap into industry expertise.
- The Energy Cost Savings Program (ECSP) offers an energy discount (45 percent reduction on regulated electricity and 35 percent reduction on regulated gas) for eight years followed by a four-year phase-out where benefits are reduced each year.
- The Relocation and Employment Assistance Program (REAP) offers business income tax credits for relocating jobs from outside of New York City to designated locations in the city.

 The NYCIDA offers incentives that can reduce the overall cost for offshore wind-related projects—such as OEM facilities—that involve substantial capital investments.
 Benefits offered through NYCIDA may include property tax abatements for up to 25 years, a sales tax waiver, and a mortgage recording tax reduction.

STATE

- Manufacturing Assistance Program (ESD) provides grants of up to \$1 million for businesses located in New York State to fund projects that improve production and retain at least 85 percent of employees.
- Excelsior Jobs Program (ESD) provides a variety of fully refundable tax credits to businesses relocating or expanding in New York State while demonstrating investment and job creation commitments.
- Work Opportunity Tax Credit (ESD) offers employers up to \$2,400 per employee for hiring individuals with barriers to employment.
- Investment Tax Credit (ESD) offers a tax credit at a standard rate of five percent of total capital investments made in buildings, machinery, or equipment in New York State.

For a comprehensive resource of City and State incentives available to businesses in New York, explore NYCEDC's Business Incentives Guide.

ACCELERATING INNOVATION

New York City is committed to advancing private and public sector partnerships that position the city as the preeminent innovation and R&D hub for offshore wind in the United States—to increase economic opportunity for New Yorkers and help achieve ambitious federal and New York State OSW goals.



NYC has the **3rd largest climate tech ecosystem** in the world.

Nationally, 30 gigawatts (GW) of OSW energy must be generated by 2030, and in New York State, 9 GW of OSW energy must be developed by 2035.

As part of this commitment, public and private actors are working to create and commercialize new technologies and approaches to R&D that increase efficiencies in OSW developments.

Programs like the Offshore Wind Innovation Hub support startups accelerate technological developments that advance the growing industry, complemented by a robust network of 100+ universities and colleges, including three R1 universities, in NYC.



Learn More About NYC's Offshore Wind Opportunity

Contact Our Team osw@edc.nyc offshorewind.nyc

OFFSHORE WIND \(\sigma\)

