



OFFSHORE WIND NYC

**Equitable Opportunity
For A Sustainable Future**

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NYC / EDC

SEPTEMBER 2021

THE VISION

A NEW INDUSTRY

New York City has committed to 100-percent clean electricity by 2040 and carbon neutrality by 2050. This requires a shift to renewable energy from many sources—from rooftop solar and utility-scale renewables to energy storage. **Offshore wind (OSW) has an important role to play in the decarbonization of NYC's electric grid.**

In just nine years, enough offshore wind will be built nationally to power 10 million homes with clean, renewable energy. A new industry will be created in the United States to make this happen, with potential to equitably distribute economic benefits to workers, utility customers, and communities.

Recognizing the size and scale of this opportunity, community and environmental justice leaders, and the de Blasio administration have laid **the groundwork to attract offshore wind to New York City.**

A NEW OPPORTUNITY



In Sunset Park, Brooklyn, NYCEDC and its partners have collaborated to activate the South Brooklyn Marine terminal (SBMT) into a world-class OSW port. This ensures that a sizeable piece of the burgeoning industry will land in New York by the mid-2020s.



But New York City's offshore wind opportunity does not end in Sunset Park. With a new administration in Washington, and growing investment from the private sector, **New York City is committed to doubling down on offshore wind** and cementing our status as the leading destination for the industry in the United States.

States have set ambitious goals for OSW energy, and now with a supportive federal administration, an OSW-powered future is within the country's grasp. But to turn these ambitions into reality, **cities need to define how the industry, government, and the nonprofit sector work together** to realize the potential this moment provides.

NYC will lead the way while centering an equity focus as no other global destination has done before—by leveraging our expertise in maritime infrastructure development, and our world-class talent base and workforce development system, along with activating our capacity for innovation across sectors.

NYCEDC spearheaded efforts to achieve this bold vision, beginning at SBMT in partnership with local stakeholders and Equinor, a global developer of offshore wind power operating the Empire Wind Project. To ensure that we can further seize upon this transformative opportunity, we will **deepen our strategy in collaboration with an Industry Advisory Council** composed of leading community, business, and nonprofit stakeholders.

THE PLAN

15 Years
\$191+ Million
3 Core Strategies



Sites and Infrastructure

Developing best-in-class infrastructure that will support the construction and operation of 12 GW of offshore wind



Businesses and Workforce

Preparing local workers and businesses to seize upon the opportunities that will be created by infrastructure investments

Research and Innovation

Promoting innovation in offshore wind to ensure that new technologies and approaches are created in New York City



Our Vision Begins with Equity

Our plan for the offshore wind industry in NYC centers equity as no other global destination has done before.

Through the plan, we will:

Bring communities and the private sector together, transforming maritime properties that have long-failed to live up to their potential into OSW-focused facilities that **bring jobs and environmental benefits to historically disadvantaged communities**

Enable existing world-class workforce development and business support systems to **prepare a diverse pool of talent and entrepreneurs** to serve this emerging industry

Attract federal, state, and private investments in OSW innovation that enables the growth of our local industry, the more effective delivery of clean power, and the **creation of good-paying jobs to New Yorkers from all backgrounds**

In doing so, we will be the model for growing urban OSW clusters in the United States and for ensuring that the clean energy transition is truly just for all



OSW Ecosystem Fund

\$5 Million

As part of their operation at SBMT in Sunset Park, the Empire Wind Project plans to establish a \$5M fund to ensure that low-income populations, people of color, and New Yorkers from environmental justice communities equitably share in the benefits of the industry.

3 Objectives

Scaling the talent pipeline in OSW-related careers

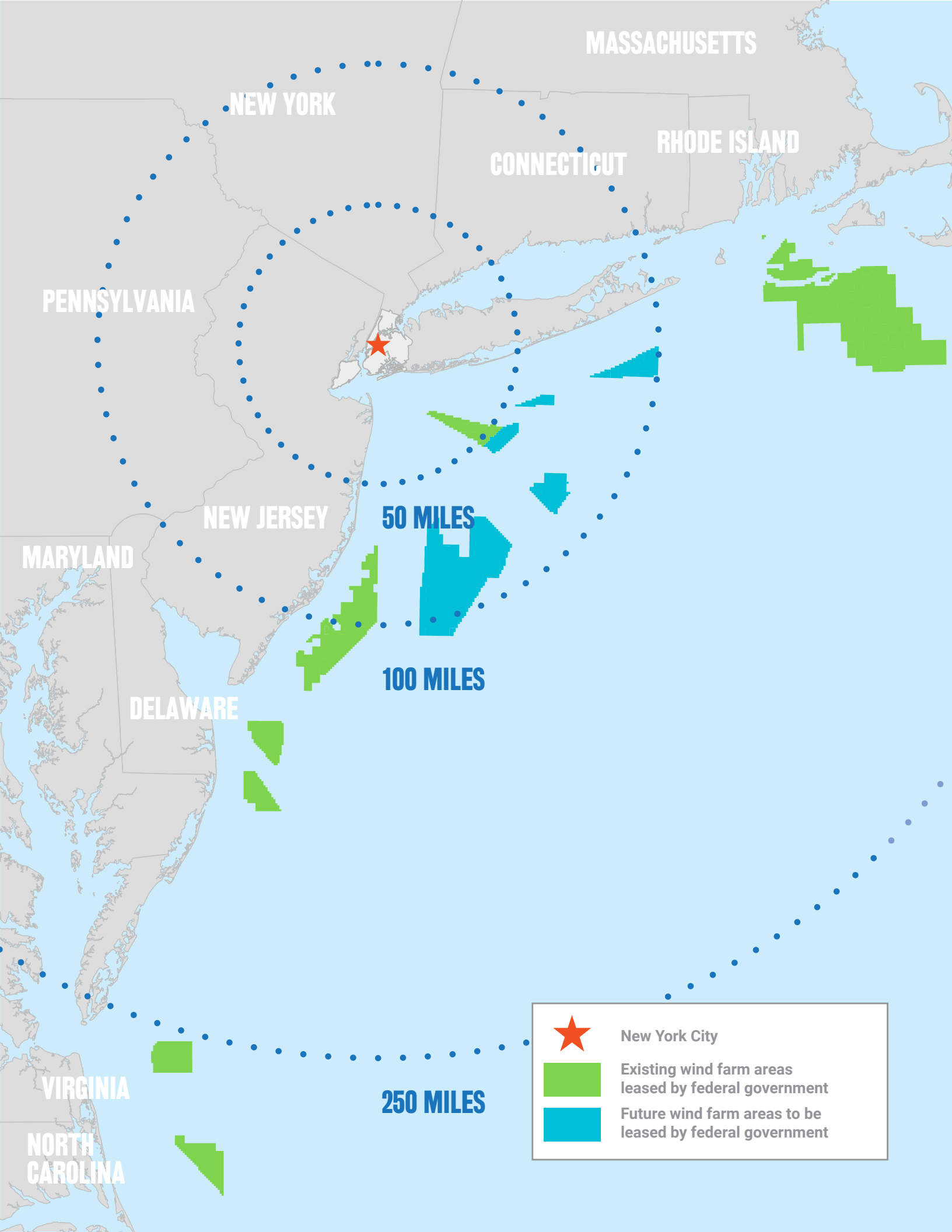
Supporting low-income New Yorkers and NYCHA residents in the green energy transition

Growing the green energy innovation ecosystem in NYC

“A true public and private partnership will bring new life to a dormant facility, and new jobs and economic activity to the local community, while allowing us to play a major role in changing the course of our climate in crisis for future generations.”

Mike Stamatis
Managing Partner,
SSBMT, LP





This plan will enable NYC to support offshore wind projects up and down the East Coast—every wind turbine installed within 250 miles of NYC can be supported by our project development, maritime, and manufacturing sectors. NYC will be able to export innovative technologies and processes to advance OSW projects around the world.

With the right investments, offshore wind can become a cornerstone of New York City's burgeoning green energy economy, with the potential to:

Create

over 6,000 accessible jobs and generate \$1.3B in average annual investment

Ensure

that 40% of job and investment benefits are directed toward women, minorities, and environmental justice communities

Reduce

34.5 million short tons of CO₂, valued at \$1.6B, using clean offshore wind power (the equivalent of removing nearly 500,000 cars from the road for 15 years)



STRATEGY 1

SITES AND INFRASTRUCTURE

THE GOAL

Develop best in-class infrastructure that will support the construction and operation of 12GW of offshore wind.

New York City, centrally located near planned offshore wind lease areas on the East Coast, is ideally positioned to host the supply-chain activities associated with building and managing offshore wind farms.

WHAT IT TAKES

A successful offshore wind industry requires significant land-based operations for:

- Manufacturing**
Portside facilities that can build the component parts of an OSW turbine, including the parts that make up their towers and blades, and the foundations turbines rest on
- Operations and Maintenance**
Smaller facilities that can house the vessels that will regularly service operating wind farms
- Staging and Installation**
Large sites of at least 20 acres that can serve developers looking to assemble the components of wind turbines
- Transmission**
Electrical equipment that allows for OSW power to reach millions of NYC homes



MAKING IT HAPPEN

Over the next 15 years, the City will make the investments in our industrial waterfront required to attract offshore wind operations:

In partnership with Equinor, a premier global offshore wind developer, we are leveraging our \$57M investment in the South Brooklyn Marine Terminal in Sunset Park to turn it into a world-class offshore wind port.

NYCEDC will make offshore wind a priority public-private investment area through our Public-Private Impact Initiative Request for Expressions of Interest (RFEI). This designation will allow the City to work with the private sector to find future opportunities for offshore wind.



SOME PLAYERS IN THE PLAN

These sites around the city will drive the three core strategies of the OSW plan: sites and infrastructure, businesses and workforce, and research and innovation.





“The commitment to a new OSW facility in NYC is the result of Sunset Park’s two-decade struggle for environmental justice and the “green reindustrialization” of our waterfront.

The struggle now is for a just transition, ensuring from day 1 our people are both at the table and working in this industry.”

Elizabeth Yeampierre
Executive Director,
UPROSE/National Co-Chair,
Climate Justice Alliance

STRATEGY 2

BUSINESSES AND WORKFORCE

THE GOAL

Prepare local workers and businesses to seize upon the opportunities that will be created by infrastructure investments.

New York City’s large existing construction and industrial workforce, along with new entrants to the workforce, and our innovative manufacturing ecosystem, are well poised to serve the OSW industry.

WHAT IT TAKES

The planning, construction and maintenance of windfarms requires a trained workforce and a local supply chain. NYC is home to existing institutions ready to serve the needs of the offshore wind industry:

Specialized OSW **curricula and relevant programs** at CUNY campuses including Kingsborough Community College, LaGuardia Community College, New York City College of Technology, Bronx Community College, City College, and College of Staten Island

Innovative secondary education **programming in maritime skills** at Governors Island’s Harbor School

Robust **union training apprenticeship programs**, pre-apprenticeship and direct entry programs preparing tradespeople for work in offshore wind construction trades

World-class post-secondary **maritime career training** at the SUNY Maritime College in the Bronx



MAKING IT HAPPEN

Over the next 15 years, we will ensure that New Yorkers, especially women, BIPOC, and those from environmental justice communities, are ready for OSW jobs through targeted investments in our workforce training ecosystem.

We will support M/WBEs and other local companies, especially manufacturing firms, and in-water construction, design, and professional services firms, in accessing the over-\$70B supply chain opportunity being created by the industry.

Investments at SBMT will create opportunities in OSW staging, operations, and maintenance. Equinor has made **commitments to ensure that the local Sunset Park community has access to these jobs**. Bolstering these commitments is a \$5M fund to be established by the Empire Wind Project that will be a vehicle for equitable workforce and supply chain development, and other investments.

Our activities at SBMT will include a **30% M/WBE participation goal**, and any future site development will also contain a goal of at least 30%. To further support M/WBEs, we will invest in a capacity-building program that provides education, networking, and resource support to businesses with an interest in NYC’s waterfront and offshore wind industry.

We will **support manufacturing companies** with industry education and networking, self-certification, and compliance, as well as access to the advanced manufacturing machinery, equipment, and other fixed assets necessary to win contracts in the offshore wind industry.

The City will invest in programs at CUNY that leverage the system’s geographic reach, existing range of assets, academic programs, and expertise to prepare New Yorkers for jobs in OSW, including a new offshore wind career training center at CUNY Kingsborough.

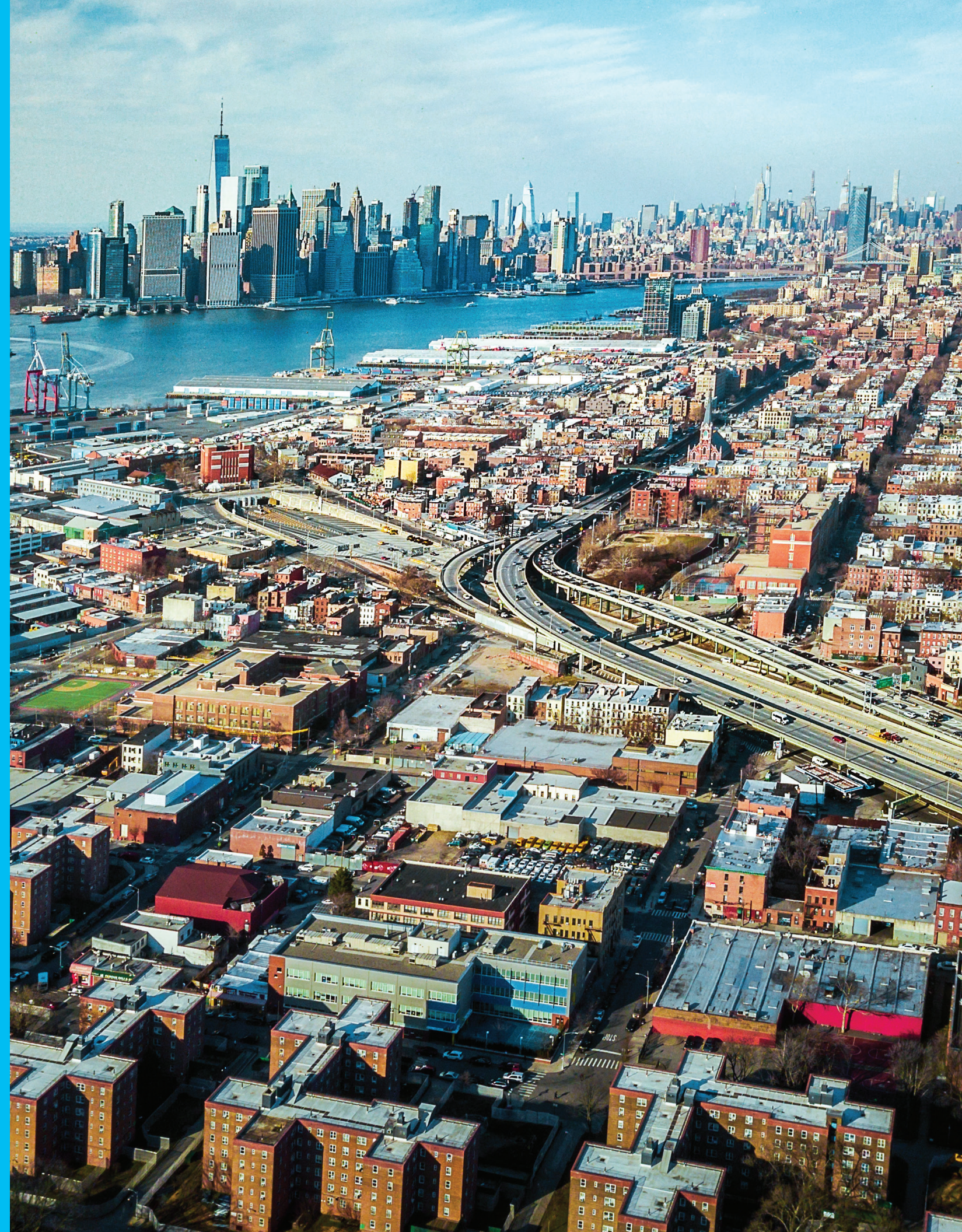
\$70 Billion

The scale of the supply chain being created by the offshore wind industry, which local companies will be able to access with our support



**“Research and innovation
is critical to the U.S.
offshore wind development.
NYCEDC’s contributions
will result in a broad base,
diversified industry in NYC.”**

Carrie Cullen Hitt
Executive Director,
National Offshore Wind Research
and Development Consortium



STRATEGY 3

RESEARCH AND INNOVATION

THE GOAL

Promote innovation in offshore wind, to ensure that new technologies and approaches that advance our vision for an equitable industry are created in New York City.

NYC's world-class tech, finance, project development, and engineering ecosystems can solve the biggest challenges in building offshore wind.

WHAT IT TAKES

Scientists, industry leaders, startups, and policymakers are actively trying to identify new technologies and business models that increase the efficiency, scale, and impact of OSW. As we bolster NYC's brand as a global destination for OSW, **we will support the development of intellectual property, technologies, and firms that want to call NYC home** and can contribute to solving global OSW supply chain challenges.

In alignment with our vision to lead with equity, we will invest in R&D that creates local jobs accessible to individuals from all backgrounds, generates shared equity for a broad base of New Yorkers, builds the capacity of local academic institutions, and democratizes research.



MAKING IT HAPPEN

Over the next 15 years, we will partner with organizations, institutions, and government to support the development of OSW technologies and build facilities to bring research to market.

Working with the OSW industry and local innovation partners, NYCEDC will support the launch of an **offshore wind–focused accelerator**. This effort will allow NY-based startups to build out the next generation of offshore wind technologies. The technologies created in this accelerator will enable the worldwide growth and advancement of the offshore wind industry for decades to come.

Leveraging federal government funding for R&D alongside investments from NYC, **NYCEDC will partner with research institutions** to build facilities to conduct research, facilitate bringing lab research to market, and deliver programming connecting non-NYC research institutions—including federal labs—with the NYC ecosystem to advance the development of new products and services for offshore wind and the clean energy industry.



NYC: THE INGREDIENTS FOR OSW INNOVATION

Home to the world’s second largest tech ecosystem, with nearly a dozen innovation hubs, including accelerators and place-based initiatives that focus on technologies relevant to the OSW industry

A strong startup scene, with focuses on Internet of Things, artificial intelligence, big data & analytics, and cybersecurity—sectors with significant potential to address challenges and create new advancements for the OSW industry

Academic R&D, with three of the state’s top five R&D centers and research universities in New York City, along with numerous research institutes relevant to the OSW industry (e.g., CUNY’s Experimental Fluid Dynamic and Aerodynamics Lab and SUNY’s Center of Excellence for Offshore Energy)



“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.

15-YEAR PLAN

PHASE I

Laying the Groundwork (2021–2025)

Recognizing the need to begin this work today, the de Blasio administration is committing \$191M to offshore wind to support critical investments over the next four and a half years, including:



Launching our M/WBE capacity-building program



Committing over \$10M to programming at CUNY and establishing an OSW accelerator



Investing in local workforce training programming through a collaboratively governed fund



Opening the South Brooklyn Marine Terminal as a dedicated offshore wind port facility

PHASE II

Becoming a Leading Global Destination for OSW (2026–2035)

Our Phase I investments will have paved the way for NYC to become a hub in the United States for OSW activities across the supply chain. The final 10 years of the plan will result in:



A cross-sector R&D ecosystem that captures both federal funding and private investment helping us meet our annual \$1.3B investment goal in 2026



New OSW Staging, O&M, and manufacturing facilities that will help us generate 8,000 to 13,000 total jobs related to the OSW ecosystem by 2035



Our established infrastructure, workforce, and innovation systems collectively helping to bring 12 GW of wind power online, securing a clean-powered future for the region for decades to come

2021

2035

A photograph of an offshore wind farm in the ocean under a cloudy sky. Several large wind turbines are visible, and a yellow and black service vessel is moving through the water in the foreground, leaving a white wake.

OFFSHORE WIND NYC

New York City Economic Development Corporation creates shared prosperity across New York City's five boroughs by strengthening neighborhoods and creating good jobs. NYCEDC works with and for communities to provide them with the resources they need to thrive, investing in projects that increase sustainability, support job growth, develop talent, and spark innovation to strengthen the city's competitive advantage.

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