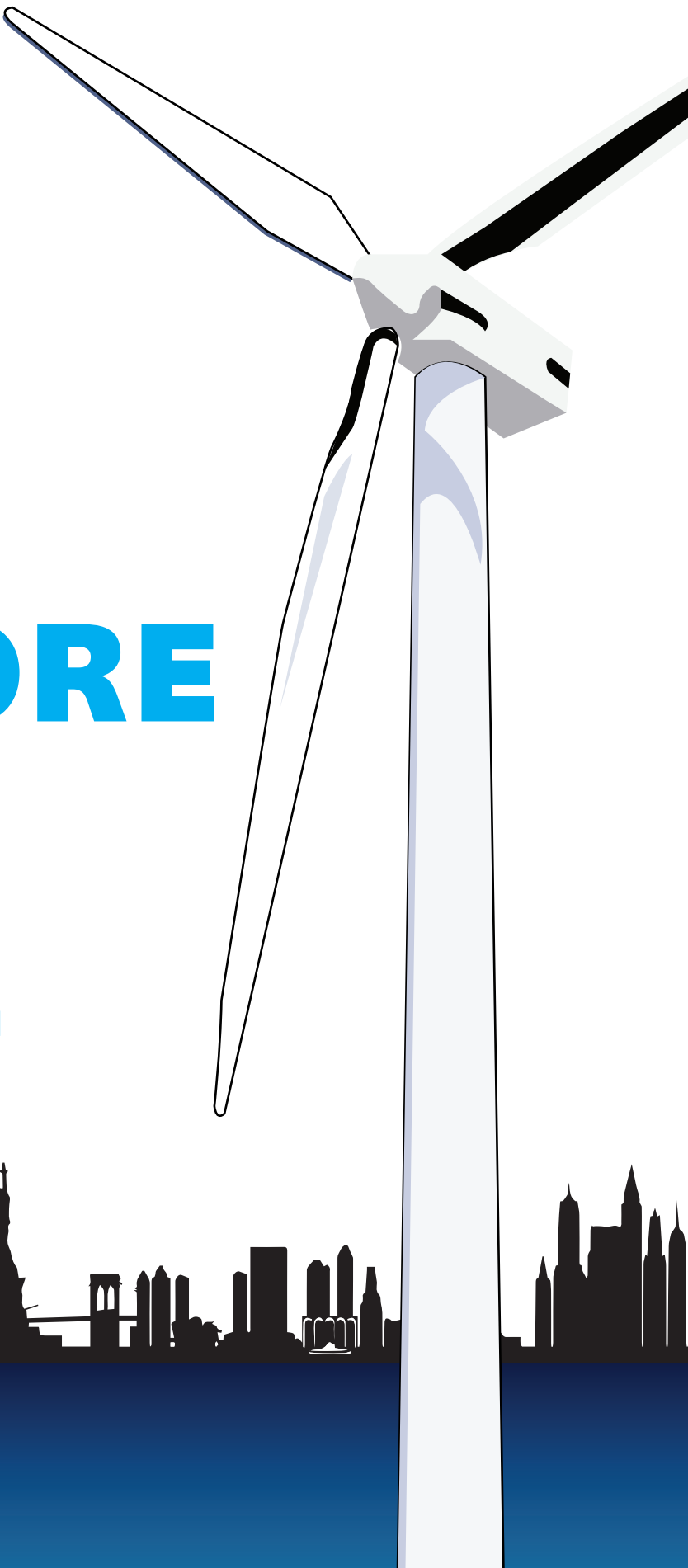




# NEW YORK'S OFFSHORE WIND FUTURE



Long Island is on the front lines of climate change. Rising sea levels, extreme weather events, ocean acidification, and the loss of fisheries poses a real and immediate threat to our environment, coastal communities, local economy, and quality of life. Increased renewable energy production, along with efficiency measures, helps to speed our island's transition away from fossil fuels. Some of the strongest and most consistent winds in the country are off our coasts, and a series of offshore wind farms are slated to make New York a national leader in offshore wind over the coming decade.

In 2019 New York State passed the strongest climate law in the nation—the Climate Leadership and Community Protection Act (CLCPA). The CLCPA mandates NY achieve 70% renewable energy by 2030 and carbon-free electricity by 2040. Long Island will play a key role in the state's transition from fossil fuels to renewable energy. We cannot succeed in meeting these critical goals without offshore wind—the CLCPA mandates that NY procure 9,000MW of offshore wind by 2035.

## **Transitioning off Fossil Fuels**

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A significant challenge for New York in reaching our CLCPA goals is that there is a “tale of two grids”. Upstate uses 88% zero-emission resources but only represents 1/3rd of the energy load, while downstate is 2/3rd of the load and 69% fossil fuels.<sup>1</sup> New York City and Long Island present a unique challenge to achieving CLCPA goals and are almost entirely reliant on fossil fuels. Many of the outdated local peaker plants act as a direct source of air pollution to nearby disadvantaged communities.

Long Island has three legacy fossil fuel power plants, located in Northport, Port Jefferson, and Island Park, which provide 40% of the island's generation capacity for electricity. According to the Public Service Enterprise Group (PSEG)/Long Island Power Authority (LIPA) 2017 Integrated Resources Management Report, increases



in renewable energy and energy efficiency have greatly reduced the need for these plants and their use has declined. Currently, the E.F. Barrett plant runs 44% of the time, while the Northport plant and Port Jefferson plant run only 18% and 11% of the time, respectively.<sup>2</sup> While these plants were built with the potential to provide 40% of Long Island's energy, they are now only providing 22% due to increases in our clean energy mix and decreased demand.<sup>3</sup>

PSEG found that replacing these antiquated plants with renewables would be the more cost-effective solution. Long Island also generates power from a combined cycle power plant in Yaphank, known as Caithness, as well as over 30 additional fossil fuel "peaker plants".<sup>4</sup> Peaker plants are

smaller fossil fuel power plants that were originally built to meet electricity needs during high demand, such as summer time. Long Island also purchases power from five underwater cable connections, which provide energy from upstate New York, New Jersey, New England.<sup>5</sup>

In order to fight climate change and ensure a just transition from fossil fuels to renewable energy, Long Island and New York City must invest in offshore wind. Due to space limitations, land-based renewable energy projects will not provide enough energy to retire our polluting power plants and replace them with clean renewables. The good news is that New York is already becoming a national leader in offshore wind.



Source: Climate Central

[https://xs.climatecentral.org/#12/40.6882/-73.6290?scenario=extreme\\_p50](https://xs.climatecentral.org/#12/40.6882/-73.6290?scenario=extreme_p50)

# NEW YORK'S OFFSHORE WIND PROJECTS

New York State has released an Offshore Wind Master Plan that identifies several areas for offshore wind development off the coast of Long Island.<sup>6</sup> These areas were chosen based on years of collaboration with stakeholders on environmental, maritime, economic, and social issues, as well as 20 studies, including wildlife surveys to minimize impact on birds, whales, and other marine species. For each wind farm that will be developed off Long Island, they must win a bid from NYS and conduct rigorous environmental review, including multiple opportunities for public comment, before a project begins construction. So far, New York State has selected five projects:

## **South Fork Wind Farm**

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New York's first offshore wind farm will be located 35 miles off the coast of Montauk and power 70,000 homes on the south fork of Long Island with renewable energy. This project was originally going to consist of 15 turbines generating 90 MW of power, but significant technological progress since the original project submission in 2015 will allow these turbines to provide an additional 40 MW of power to Long Islanders.<sup>7</sup>

Unlike the rest of Long Island, where energy demand is decreasing, energy demand on the south fork has increased. Long Island had to make the decision to build a new fossil fuel power plant or build the state's first offshore wind farm, coupled with battery storage. After years of overwhelming public support for wind, LIPA decided to choose the South Fork Wind Farm.

This project has been approved by the US Bureau of Energy Management and New York

State and broke ground in 2022. Construction is currently underway and the project is expected to be completed and delivering energy to Long Island homes in 2023.

## **Sunrise Wind and Empire Wind Farms**

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In 2019, New York State awarded bids to two offshore farms that will provide a combined 1,700 MW of wind power to Long Island and New York City.<sup>8</sup> The Sunrise Wind Farm will be located off the south shore of Long Island. This project is due to begin construction in 2022 and will generate 924 MW of power for 600,000 Suffolk County homes. The energy will be delivered via a cable connection to the Holbrook substation.<sup>9</sup>

The Empire Wind Farm will be located approximately 20 miles off the coast of the Rockaways and generate approximately 800 MW of energy, which will also power 500,000 homes in south Brooklyn.<sup>10</sup>

## Empire Wind 2 and Beacon Wind

Empire Wind 2 will be located off the coast of Long Beach City, adjacent to the previously selected Empire Wind. This project will generate 1,260 MW of clean, renewable energy that will power over 600,000 homes in Nassau County. Energy will be delivered to the south shore via a cable connection to the E.F. Barrett substation in Oceanside. The turbines will be built 20+ miles offshore.

Beacon Wind will generate 1,230 MW of renewable energy and power over 600,000 New York homes. The cable route is expected to carry energy from the turbines, located 50 miles off Montauk, to Astoria, Queens substation via the Long Island Sound.

Beacon Wind will also be using High Voltage Direct Current (HVDC) transmission, which allows the current to flow in either direction (towards shore or away from shore). This transmission systems allows for a more reliable power supply with fewer cable connections and less environmental impact to Long Island Sound.<sup>11</sup>

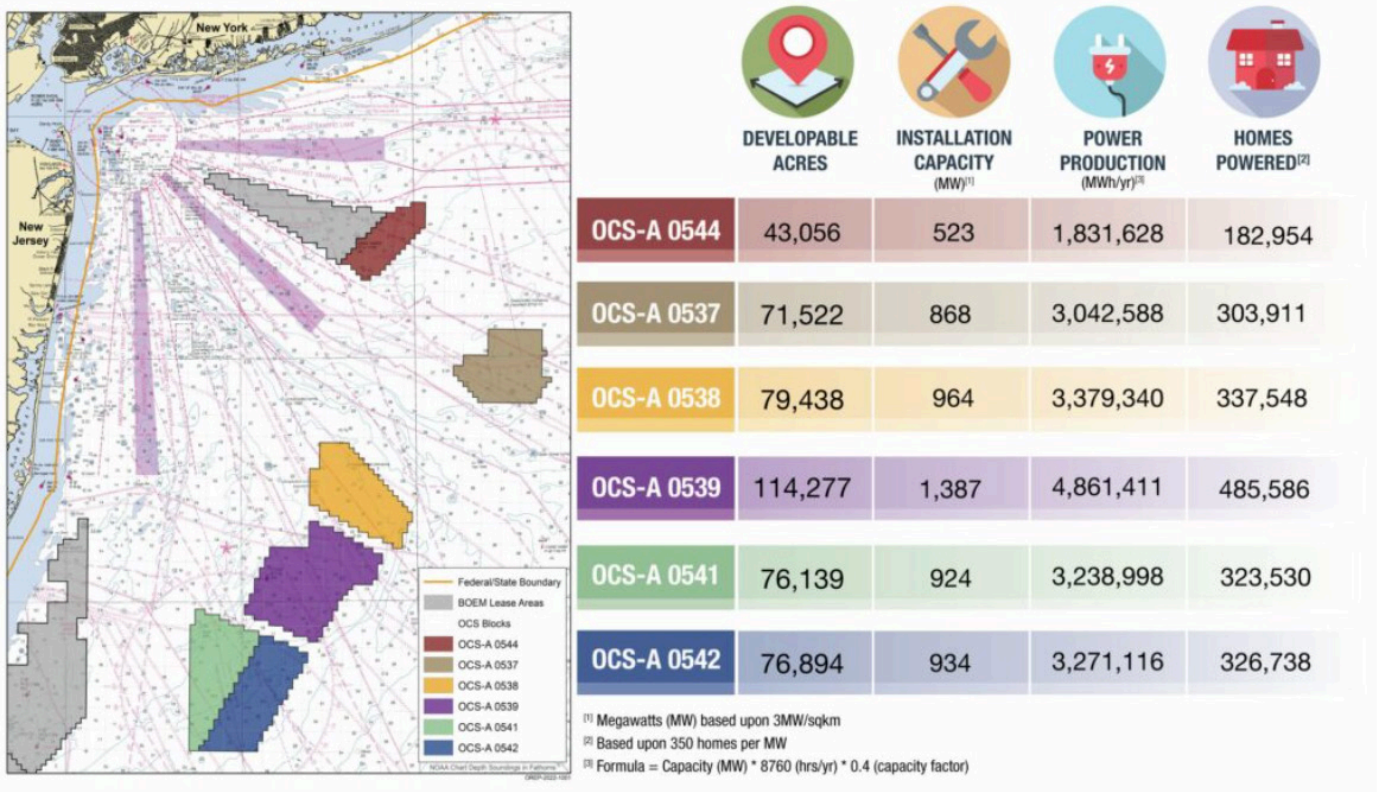
## NY Bight Wind Leases

In 2022, the Bureau of Ocean Energy Management's (BOEM) held an auction of six new lease areas offshore New York and New Jersey, within an area known as the New York Bight. The six wind energy areas sold for a record \$4.37 billion after several intense days of auction.<sup>12</sup> The lease areas sold this year can accommodate at least 7 gigawatts of clean wind energy, enough to

Project	Capacity	Location	Review Process	Completion
South Fork Wind Farm	130 MW 70,000 Homes	35 miles off Montauk, connects to East Hampton	Approved by BOEM, under construction	Expected to be operational by the end of 2023
Empire Wind 1	800+ MW 500,000 Homes	20 miles off the Rockaways, connects to South Brooklyn Marine Terminal	Federal review launched in 2021	Expected to be operational by 2026
Empire Wind 2	1,260 MW 600,000+ Homes	Off the south shore of LI, connects to Island Park	Federal review launched in 2021	Expected to be operational by 2026
Sunrise Wind	924 MW 600,000 Homes	30 miles off Montauk, connects to Holbrook	Federal review launched in 2021	Expected to be operational by 2025
Beacon Wind	1,230 MW 600,000+ homes	50 miles off Montauk, connects to Astoria via cable under LI Sound		Expected to be operational by 2028

power millions of homes, and are critical to continuing to advance offshore wind projects that will allow New York to achieve 9,000 MW by 2035.

This lease auction demonstrated the intense interest and value of offshore wind and sets the stage for a multi-billion dollar investment in renewable energy projects, domestic supply chain, and regional ports and harbors, creating tens of thousands of good union jobs while addressing the climate crisis. New York State announced a third offshore wind solicitation in 2022, which calls for additional projects generating at least 2,000 MW, or enough to power 1.5 million homes. The winners will be announced in 2023.



## Growing the Green Economy

In addition to selecting Beacon Wind and Empire Wind 2 as the next two projects in New York’s offshore wind pipeline, New York State also announced significant investments in infrastructure and education that will help spur our regional economies. A key component of New York’s transition to offshore wind is investing in manufacturing, installation, operations and maintenance of these turbines, which will ensure the state becomes a hub of offshore wind

development and create an estimated 10,000 local, green jobs.<sup>13</sup> Some of the key offshore wind infrastructure investments include:

- Capitol Region**  
 The first offshore wind tower manufacturing facility in the US will be developed at the Port of Albany. This facility plans to produce 150 towers each year, bringing the offshore wind industry to the Capitol region and creating 500 local jobs.<sup>14</sup> Just south of Albany, the Port of Coeymans has also been chosen to be a manufacturing

## Lease Numbers

OCS-A 0544

OCS-A 0537

OCS-A 0538

OCS-A 0539

OCS-A 0541

OCS-A 0542

## Winning Companies

Mid-Atlantic Offshore Wind LLC  
(partnership with Copenhagen Infrastructure Partners,  
and Invenergy Wind Offshore)

OW Ocean Winds East, LLC:  
(EDP Renewables and ENGIE)

Attentive Energy LLC  
(EBW North America and TotalEnergies)

Bight Wind Holdings, LLC  
(RWE Renewables and National Grid)

Atlantic Shores Offshore Wind Bight, LLC  
(Shell New Energies US and EDF Renewables)

Invenergy Wind Offshore LLC  
(Invenergy and energyRe)

facility for offshore wind components.

- **New York City**

The South Brooklyn Marine Terminal in Sunset Park is set to be another major offshore wind hub and will house the largest offshore wind port in the nation. The SBMT, which will specialize in assembly, operations and maintenance of the turbines, and is projected to create over 1,200 jobs based in the waterfront environmental justice community.<sup>15</sup>

- **Long Island**

New York's first offshore wind operations and maintenance facility is being developed in East Setauket, and Port Jefferson is slated to be home to the nation's first service operations vessel. The vessel is needed to perform operations and maintenance on offshore turbines and will be the first one to carry the US flag. The Port Jefferson port and East Setauket facility will create approximately 100 local jobs combined.<sup>16</sup>

Long Island is also receiving significant investments in education and workforce development programs to ensure New

Yorkers benefit financially from the emerging offshore wind industry. Suffolk County Community College is home to a \$10 million National Offshore Wind Training Center, which will help create a skilled workforce for the offshore wind industry. In 2021, Governor Cuomo also announced plans to launch a \$20 million Offshore Wind Training Institute with plans to train and certify 2,500 workers. The Institute will be a partnership between SUNY Farmingdale and Stony Brook University.<sup>17</sup>

New York's offshore wind farms combined are expected to produce 10,000 local green jobs. New York's leadership will not only create good jobs and boost regional economies, it will also lead to significant health and community benefits. These offshore wind projects will allow for the phase out of polluting fossil fuel plants in Queens and Nassau County, leading to improved air quality and \$1 billion in health impact benefits.<sup>18</sup> The progress New York is continuing to make on offshore wind will result in substantial improvements in our environment, our health, and our economy.

# About Wind Works

Wind Works Long Island is a coalition of environmental, labor, faith-based and community groups. We are a growing force behind educating the Long Island community on the benefits of renewable energy, particularly offshore wind. This coalition formed in 2020 to support responsibly sited offshore wind farms off the coast of Long Island and foster public engagement in the ongoing environmental and technical review processes for these critical projects.

Wind Works Long Island believes that public understanding of offshore wind and support for individual wind farms is critical to meeting New York's climate change goals and transition our island away from fossil fuels. While some of our core coalition members have been at the forefront of the fight for offshore wind on Long Island for over a decade, many of our key members have mobilized in response to the current need for offshore wind projects that hold the promise of finally bringing clean, renewable wind energy to our communities. Please visit [windworkslongisland.org](http://windworkslongisland.org) for more information and to receive updates on these offshore wind projects.

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