New York State Offshore Wind

Frequently Asked Questions

NEW YORK STATE | Offshore Wind

Why offshore wind?

Offshore wind is a renewable energy resource that will provide clean, locally produced power where demand is highest, avoid harmful greenhouse gas emissions that contribute to climate change, and bring significant investments and well-paying jobs to communities along New York's Atlantic coast and up to the Capital Region. Importantly, transitioning to renewable sources of electricity will reduce harmful pollutants emitted from fossil-fuel generation sources, yielding tremendous health benefits including fewer incidents of illness and premature death. New York State is committed to advancing offshore wind in a way that maximizes competition to help ensure the lowest cost to ratepayers, while prioritizing equity through project benefits, economic development and fostering local job creation and workforce development opportunities. Offshore wind is a key component in New York's nation-leading climate law, the Climate Leadership and Community Protection Act (Climate Act), which calls for 70% of the State's electricity to come from renewable sources by 2030 and 9,000 MW of offshore wind energy by 2035, which can power up to 6 million homes.

How is New York State leading offshore wind development in the U.S.?

From the start, New York State has held the position that offshore wind energy development in the U.S. requires a comprehensive approach. With the largest offshore wind pipeline in the nation, New York's competitive processes have resulted in the selection of eight offshore wind projects. NYSERDA has awarded a total of seven offshore wind projects to bring clean power to the State's electricity grid – Empire Wind 1 (816 MW awarded in 2019; planned 810 MW awarded in 2024), Sunrise Wind (880 MW awarded in 2019; planned 924 MW awarded in 2024), Empire Wind 2 (1,260 MW awarded in 2021), Beacon Wind (1,230 MW awarded in 2021), Attentive Energy One (1,404 MW awarded in 2023), Community Offshore Wind (1,314 MW awarded in 2023), and Excelsior Wind (1,314 MW awarded in 2023). As of March 2024, NYSERDA has five projects in active development. **For up-to-date information about NYSERDA's active projects, visit** offshorewind.ny.gov. In addition, the Long Island Power Authority awarded a contract for the 132-megawatt South Fork Wind Farm, which delivered first power in December 2023. To support these and future offshore wind projects, offshore wind developers are investing in the State's workforce and resilient port facilities, making New York a leader in offshore wind supply chain development.

In addition to procuring offshore wind projects, New York places a premium on proactive planning and risk reduction, seeking to maximize benefits and minimize risk in the short and long term. As a result, New York State continues to play a critical leadership role in the development of the offshore wind industry in the U.S. through its technical working groups, facilitating important best practices, research and adaptive management strategies, and active stakeholder engagement approaches. New York State is a key partner developing regional strategies for supply chain development, fisheries compensation, and environmental research and monitoring through partnership with the federal government, regional states, and other regional bodies.

How will NYSERDA-awarded projects benefit all New Yorkers?

Working on behalf of the State's utilities, NYSERDA competitively selects offshore wind projects to deliver renewable energy to the State's electricity grid. Through contracts with offshore wind developers, NYSERDA procures Offshore Wind Renewable Energy Certificates (ORECs), which represent the environmental attributes (e.g. clean air, public health) associated with each unit of offshore wind renewable energy (megawatt hour) that is currently not accounted for in New York's energy markets. In enabling these projects, NYSERDA is working to ensure these clean energy resources come online to service the ambitious climate and public health goals of the Climate Act.

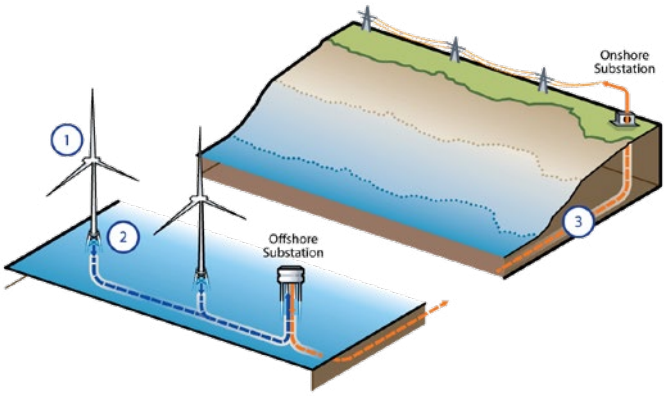
New York's portfolio of offshore wind projects is bringing billions of dollars in direct spending to the State, supporting thousands of high-quality jobs, and also yielding billions of dollars in health benefits. New York's offshore wind projects will yield significant new investments in resilient port infrastructure and supply chain opportunities in multiple regions of the State.

Once all five NYSERDA-contracted projects are fully operational, the average bill impact for residential customers statewide is expected to be $4.72 per month over the lives of the projects, based on projections of dynamic electricity market rates. Ratepayer costs associated with the renewable energy delivered remain stable over the 25-year term of the contracts and are not subject to the ups and downs of global fossil fuel markets.

How many jobs will offshore wind create?

New York's economy and its communities will benefit from clean air and billions of dollars in infrastructure investments and more than 10,000 new jobs in manufacturing, installation, and operation of offshore wind facilities. Consistent with the Climate Act's commitment to building climate equity, the NYSERDA project selection process prioritizes benefits to Disadvantaged Communities, and the OREC contracts include important provisions for wage and labor agreements by offshore wind developers as well as commitments to incentivize opportunities for Minority- and Women-Owned Businesses (M/WBEs) and Service-Disabled Veteran Owned Businesses (SDVOBs) to ensure that the projects deliver high-quality jobs for New York workers.

How Offshore Wind Works



1. *Offshore turbines capture the wind's energy and generate electricity.*
2. *Foundations secure turbines to the ocean floor and cables transmit electricity to an offshore substation.*
3. *Electricity flows through a buried cable to an onshore substation and is transferred to the existing transmission network to be distributed statewide to the grid.*

How can New Yorkers be trained to join the offshore wind workforce?

The State is taking new steps to support workforce development in partnership with the private sector, including $20 million in State funding for a network of training facilities called the Offshore Wind Training Institute (OWTI), and more than $140 million in workforce development commitments from offshore wind project developers, prioritizing investments in New York's historically disadvantaged communities in alignment with New York's Climate Act.

How are offshore wind projects sited?

The federal government has jurisdiction over U.S. waters greater than three nautical miles from shore. Specifically, the Bureau of Ocean Energy Management (BOEM) within the U.S. Department of Interior identifies offshore wind energy areas and issues leases to developers through an auction process. The leases provide offshore wind developers with the exclusive right to try to advance offshore wind energy on that lease. Selecting ocean areas for offshore wind development and connecting the power to New York's electricity grid are highly regulated processes involving many federal and state agencies that require intensive consideration and study of environmental, cultural, maritime, economic, and social factors. These complex processes include many checks and balances and considerable opportunities for stakeholder engagement to promote a considered solution that offers the least impact for each project. For more information, see the federal Bureau of Ocean Energy Management (BOEM) regulatory framework and the New York State Article VII process guide.

Are marine and coastal species protected?

New York State continues to actively study marine mammals, sea turtles, birds, bats, and fish and fisheries to ensure that offshore wind will be responsibly sited and developed. The offshore wind permitting process is incredibly thorough, and involves federal, state, and local authorities who review and consider every aspect of the project's impact to the environment and wildlife. The approach is to first avoid impacts, then minimize what cannot be avoided, and finally mitigate any remaining impacts. Additionally, regulators can request research from project developers or advance their own research priorities to address uncertainty in project implications.

New York State leads an Environmental Technical Working Group (E-TWG) comprised of environmental organizations, developers, and regional state and federal regulators. Above and beyond the federal and state laws that protect marine and coastal environments and wildlife, the E-TWG is developing Best Management Practices for offshore wind that are protective of wildlife at all stages of development and hosts a biennial State of the Science workshop to ensure communications between scientists and developers. Additionally, NYSERDA contractually obligates project developers to provide financial support for regional monitoring of wildlife and submit and evolve Environmental Mitigation Plans to formalize adaptive management through discussions with environmental stakeholders.

Will fishing and shipping continue around wind farms?

New York State and the federal government do not anticipate imposing any restrictions on fishing around the wind turbines. NYSERDA requires the submission of Fisheries Mitigation Plans as part of the offshore wind developers' contracts. The Mitigation Plans from awarded projects are shared and discussed with the State's Fisheries Technical Working Group (F-TWG), comprised of commercial fishermen, developers, and regional state and federal regulators.

As the project advances, the Mitigation Plans will evolve to include input from the F-TWG on topics that include strategies for turbine configurations and spacing. Additionally, NYSERDA contractually obligates developers to provide financial support for regional monitoring of key commercial fish stocks.

Safe navigation is vital to preserve the significant maritime activity that occurs off New York's coast. The State conducted studies and continuously consults with the maritime industry to understand their operational requirements to ensure impacts to shipping are minimized. In consultation with the United States Coast Guard, wind farm developers are required to perform a navigational risk assessment. Additionally, the turbine bases will be lit so they are visible to mariners and marked on navigation charts, in keeping with safety measures of other offshore structures.

Why is New York investing in ports to support offshore wind?

Due to the size of offshore wind components (a single rotor blade may be greater than 350 feet long), major components must be delivered to a project by marine vessel and rely heavily on port infrastructure for their manufacturing, assembly, staging and delivery to a wind farm. Crew and service equipment access to the wind farm long-term, in support of its 25-year operations and maintenance, are also important port uses for offshore wind. In addition to early public and private port investments in New York City, the Capital Region, and Long Island, NYSERDA's third offshore wind solicitation awards included nearly $1 billion in combined public and private investments in offshore wind blade and nacelle manufacturing facilities in the Capital Region. With five active ports and dozens more of potential development interest to this evolving industry, these investments reinforce New York's position as the hub of the burgeoning U.S. offshore wind industry.

What happens at the end of a turbine's 25-year life span?

The federal government requires that offshore wind farm developers submit a decommissioning plan as well as post a bond to cover the cost of decommissioning the wind farm when it has reached the end of its useful life.

Use Your Thumb

How big will wind turbines appear from shore?

The closest offshore wind farm to New York's coast will be the Empire Wind 1 project, located approximately 14 miles from Jones Beach State Park on Long Island at its closest point. If you fully extend your arm and look at your thumb, the turbines may be visible under clear weather conditions at less than a quarter the size of your thumbnail. All other projects will be farther from shore, with visibility decreasing significantly beyond 20-25 miles from shore.

Visit nyserda.ny.gov/offshorewind for more information on offshore wind in New York State.

NEW YORK STATE | NYSERDA