

Massachusetts Gains Foothold in Offshore Wind Power, Long Ignored in U.S.

The wind farms have increasingly become mainstream sources of power in Northern Europe, but the United States has largely not pursued the technology.

By STANLEY REED and IVAN PENN MAY 23, 2018

NEW BEDFORD, Mass. — On the waterfront of this fabled former whaling hub, the outlines of a major new industry are starting to appear.

Crews of research boats perform last-minute tuneups before heading out to map the bottom of the Atlantic Ocean. A large weather buoy decked out with gear for measuring wind speeds waits on the quay for repairs. And a 1,200-foot stretch of the port has been beefed up to bear enormous loads.

New Bedford hopes to soon be the operations center for the first major offshore wind farm in the United States, bringing billions of dollars of investment and thousands of jobs to the town and other ports on the East Coast.

On Wednesday, that effort took a major step forward as the State of Massachusetts, after holding an auction, selected a group made up of a Danish investment firm and a Spanish utility to erect giant turbines on the ocean bottom, beginning about 15 miles off Martha's Vineyard. This initial project will generate 800 megawatts of electricity, roughly enough to power a half a million homes. At the same time,

Rhode Island announced it would award a 400-megawatt offshore wind project to another bidder in the auction.

The groups must now work out the details of their contracts with the states' utilities.

“We see this not just as a project but as the beginning of an industry,” Lars Thaaning Pedersen, the chief executive of Vineyard Wind, which was awarded the Massachusetts contract, said in an interview.

Offshore wind farms have increasingly become mainstream sources of power in Northern Europe, and are fast becoming among the cheapest sources of electricity in countries like Britain and Germany. Those power sources in those two countries already account for more than 12 gigawatts of electricity generation capacity.

But the United States has largely not followed that lead, with just one relatively small offshore wind farm built off the coast of Rhode Island. Currently, the entire country's offshore wind capacity is just 30 megawatts.

Jeff Grybowski, chief executive of Deepwater Wind, which won the Rhode Island portion, said that together the two projects add up to a European-scale package. “This shows the U.S. is catching up rapidly to the developments in Europe,” he said.

Such projects have run into opposition here over both cost and aesthetics — utilities are typically required to opt for the cheapest sources of power, and communities have resisted plans regarded as eyesores. Senator Edward M. Kennedy helped block a wind project off the coast of Cape Cod that would have been visible from the family estate.

But the technology has the potential to bring large supplies of energy to the Northeast. Arrays of wind turbines with generation capacities comparable to major conventional power plants would be mostly out of sight, albeit within easy transmission reach of large population centers like Boston and New York City.

“We could run the whole East Coast on offshore wind,” said Amory B. Lovins, co-founder and chief scientist at the Rocky Mountain Institute, a Colorado-based nonprofit organization that advises on renewable energy.

Massachusetts is looking to capitalize. It wants to add 1,600 megawatts of electricity by 2027. That would be enough to power a third of all residential homes in the state and supply 11 percent of its overall needs. The Massachusetts Clean Energy Center, a state agency, also estimates that the projects could generate 9,850 jobs over 10 years, and add \$2.1 billion to the state’s economy.

Developers say the state’s plan includes a series of projects large enough to help spawn a network of local suppliers of everything from components for the turbines to services like maintaining them, and drive down costs. Other states are pushing forward as well. Connecticut will soon name a developer for an offshore wind project of its own, while New York and New Jersey have both announced ambitious plans.

New England is particularly well suited to offshore wind farms. There is not enough land for wind turbines onshore, and the area is not ideal for solar power. At the same time, Massachusetts has been under pressure to find new sources of energy to replace aging conventional and nuclear plants, as well as meet targets for reducing greenhouse gas emissions blamed for climate change.

The state is betting that, by investing in offshore wind decades after Northern Europe first tested the technology, it can avoid some of the growing pains experienced across the Atlantic.

For years, projects there required large government subsidies to be economically viable. Recently, technical advances and plummeting prices have meant that countries like Germany and the Netherlands have been able to award offshore wind projects with zero subsidies. As a bonus, offshore wind farms have supported thousands of jobs in port cities in the region.

Two of the three bids in Massachusetts came from European developers. The winner was a joint venture of Copenhagen Infrastructure Partners, a Danish

renewable energy investment firm, and a subsidiary of Iberdrola, a Spanish utility. The other bids came from a consortium led by the Danish wind giant Orsted, and Deepwater Wind, which is based in Providence, R.I., and mainly owned by D.E. Shaw, an investment firm.

“We know in light of Northern Europe’s experience with offshore wind that many U.S. ports will benefit from the arrival of the industry here,” Jon Mitchell, the New Bedford mayor, said in an interview.

New Bedford has benefited from a lucrative sector before. In the mid-19th century, its whaling industry made it one of the wealthiest cities in the United States. “Nowhere in all America will you find more patrician-like houses; parks and gardens more opulent, than in New Bedford,” Herman Melville wrote in his epic novel, “Moby-Dick.”

In the hopes of another such boost, the Massachusetts Clean Energy Center, the state agency, has already spent \$113 million dredging the harbor and expanding and reinforcing a 29-acre marine commerce terminal. The state is preparing it to load the components of turbines that stretch up to 600 feet high and weigh many tons onto special vessels for installation at sea.

Whether Massachusetts can pull off its ambitious plans will depend to some degree on local issues — and not everyone in the area is enthusiastic.

In particular, some of New Bedford’s fishermen are worried. The city’s port is already home to hundreds of fishing boats, as well as seafood auction houses and processing plants. It generates about \$3.3 billion a year and supports about 6,200 jobs, according to the local authorities.

“You don’t want to destroy one type of sustainable energy harvest with another one,” said Kevin Stokesbury, a professor at the School for Marine Science and Technology at the University of Massachusetts at Dartmouth.

Eric Hansen, a scallop fisherman, said that he and his colleagues were concerned about threading their way through a relatively narrow allotted path through

spinning turbines.

“Think fog, heavy seas,” he said.

Even so, wind power is gaining its adherents.

Opposition to offshore wind in the state appears to have quieted since the death of Mr. Kennedy in 2009. The senator and his family successfully resisted a project off Cape Cod that would have been the first offshore wind farm in the United States, a project proposed in 2001.

The area’s high electricity prices may prove, counterintuitively, to be a plus. Power prices in Massachusetts are the second highest in the nation, behind only Hawaii’s, and high rates prevail in much of the rest of New England and in New York. As a result, customers might be more willing to pay the increased early prices for power generated by offshore wind.

The economic boost, too, is appealing, especially in a once-affluent city of 100,000 people.

Kevin McLaughlin employs more than 100 people in his shipyards across the harbor at Fairhaven, and has already won additional work from offshore operators.

“As long as there are boats that will be here,” he said, “it is business for us.”

Follow Stanley Reed and Ivan Penn on Twitter: @stanleyreed12 and @ivanlpenn.

Stanley Reed reported from New Bedford, and Ivan Penn from Los Angeles.

A version of this article appears in print on May 24, 2018, on Page B1 of the New York edition with the headline: From Whale Oil to Wind Power.