

# OFFSHORE WIND FARMS ARE SPINNING UP IN THE U.S. —AT LAST



ON JUNE 1, the Pilgrim nuclear plant in Massachusetts will shut down, a victim of rising costs and [a technology](#) that is struggling to [remain economically viable](#) in the United States. But the electricity generated by the aging nuclear station soon will be replaced by another carbon-free source: a fleet of 84 offshore wind turbines rising nearly 650 feet above the ocean's surface.

The developers of the [Vineyard Wind](#) project say their turbines—anchored about 14 miles south of Martha's Vineyard—will generate 800 megawatts of electricity once they start spinning sometime in 2022. That's equivalent to the output of a large coal-fired power plant and more than Pilgrim's 640 megawatts.

“Offshore wind has arrived,” says Erich Stephens, chief development officer for Vineyard Wind, a developer based in New Bedford, Massachusetts, that is backed by Danish and Spanish wind energy firms. He explains that the costs have fallen enough to make developers take it seriously. “Not only is wind power less expensive, but you can place the turbines in deeper water, and do it less expensively than before.”

Last week, the Massachusetts Department of Public Utilities [awarded](#) Vineyard Wind a 20-year contract to provide electricity at 8.9 cents per kilowatt-hour. That's about a third the cost of other renewables (such as Canadian hydropower), and it's estimated that ratepayers will save \$1.3 billion in energy costs over the life of the deal.



Can offshore wind pick up the slack from Pilgrim and other fading nukes? Its proponents think so, as long they can respond to concerns about potential harm to fisheries and marine life, as well as successfully connect to the existing power grid on land. Wind power is [nothing new](#) in the US, with 56,000 turbines in 41 states, Guam, and Puerto Rico producing a total of 96,433 MW nationwide. But wind farms located offshore, where wind blows steady and strong, unobstructed by buildings or mountains, have yet to start cranking.

In recent years, however, the turbines have grown bigger and the towers taller, able to generate three times more power than they could five years ago. The technology needed to install them farther away from shore has improved as well, making them more palatable to nearby communities. When it comes to wind turbines, bigger is better, says David Hattery, practice group coordinator for power at K&L Gates, a Seattle law firm that represents wind power manufacturers and developers. Bigger turbines and blades perform better under the forces generated by strong ocean winds.