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Offshore wind, but make it float

An illustration of floating offshore wind turbines. | Josh Bauer/National Renewable Energy Laboratory

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The Biden administration is betting on floating offshore wind power to turbocharge its low-carbon agenda.

The new but quickly developing technology is designed to wrangle powerful gusts from the deep blue and could greatly expand the nation's supply of wind power, writes POLITICO's E&E News reporter David laconangelo.

Energy Secretary Jennifer Granholm recently called floating offshore wind "one of the most promising clean energy technologies for the 21st century."

How it works: Conventional offshore wind turbines are anchored to foundations buried directly into the ocean floor. But once water gets more than 200 feet deep, these structures become incredibly costly if not impossible to build. Floating wind turbines, on the other hand, rest on buoyant platforms anchored to the seabed by a chain or rope.

The administration is especially eyeing the technology for Northern California, where some of the nation's strongest offshore winds blow but the continental shelf drops off quickly. The first offshore wind sale in the Pacific Ocean last year netted \$757 million — all for floating wind.

The benefits could be huge: Two-thirds of U.S. offshore wind resources are in deepwater areas. On the East Coast, where turbines are already rising in shallow waters, some governors say a second layer of floating projects far out of sight could capitalize on stronger winds while avoiding opposition from coastal residents who call turbines an eyesore.

But here's the rub: The U.S. now has zero floating wind projects, and building out the infrastructure from scratch would likely cost a lot. The administration aims to slash costs up to 70 percent by 2035 — a goal known as its Floating Offshore Wind Shot.

Another major issue is how to get the wind power from the turbine to the grid. The administration has allocated \$100 million from the Inflation Reduction Act to launch a 20-month study on how to build these transmission networks, some of which would need to be more than 65 miles long.

Still, President Joe Biden's team remains seemingly undaunted.

"We are positioning ourselves not just to catch up and seize the lead, but really to forge the frontier of a new technology," Ali Zaidi, the White House's national climate adviser, said at a recent offshore wind summit.