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California is going big on offshore wind. That's good for climate, but not enough

A floating offshore wind farm in Scotland, operated by Equinor.

(Michal Wachucik / Equinor)



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This story was originally published in Boiling Point, a newsletter about climate change and the environment.

It's been a good week for offshore wind power.

Heading into Labor Day Weekend, California Gov. Gavin Newsom announced a deal with legislative leaders that could prompt construction of California's first offshore wind farms — an expensive but valuable resource that researchers have found can play a key role in reaching 100% clean energy. The deal could also lead to development of new geothermal power plants in the Imperial Valley, and a "pumped storage" hydropower project in San Diego County — more useful tools for ditching fossil fuels.

The bill was approved by the state Senate's energy committee in a 14-3 vote on Wednesday evening. It still needs approval from two-thirds of lawmakers in the Senate and Assembly by end of session Sept. 14 before it heads to Newsom's desk.

"We've set some of the most ambitious clean energy goals in the nation to break the vicious cycle of climate change-caused energy emergencies — we need every tool at our disposal to achieve them," Newsom said in a written statement.

The challenge for offshore wind developers is that it doesn't make economic sense to build just a handful of costly floating wind turbines — big projects are the only logical investment. And there haven't been any utility companies or local governments able to step forward and sign a large enough contract to give developers the financial certainty they need to start construction.

The <u>deal</u> struck by Newsom, Assembly Speaker Robert Rivas (D-Salinas) and Senate leader Toni Atkins (D-San Diego) would allow the state's Department of Water Resources to sign long-term electricity contracts on behalf of all Californians.

Specifically, the department would purchase "diverse clean energy resources" that take a long time to develop and aren't already being bought in sufficient amounts — if the Public Utilities Commission first determines those resources are necessary.

Basically, state lawmakers want to see renewable energy projects beyond just solar farms, onshore wind turbines and

batteries. Those resources have the lowest costs, and they're expected to do the bulk of the work getting California — and the rest of the country, one hopes — to 100% climate-friendly power. But they're not enough. Between ever-hotter heat waves and occasional lengthy periods with low sunlight and wind, we'll need other stuff to fill out the final 10% or 20%.

America's first offshore wind farm, off the coast of Rhode Island.

(Michael Dwyer / Associated Press)

Floating wind turbines in the Pacific could be especially valuable because California's ocean breezes <u>blow more consistently</u> than onshore winds. They also stay strong into the evening, after sundown, making them a good complement to solar power.



Then there's pumped hydropower, which can store larger amounts of energy than typical lithium-ion batteries. The <u>San Vicente project</u> in San Diego County, which could get a contract through the deal in Sacramento, would pump water uphill from a lower reservoir when there's extra power on the grid, then release water to flow through generators when more power is needed.

Geothermal power plants, meanwhile, can <u>tap into Earth's subterranean heat</u> and generate climate-friendly energy 24/7 — and some of them can produce lithium for electric-vehicle batteries, too. Just last month, the parent company of Chrysler, Jeep and other leading car brands announced it would <u>invest \$100 million</u> in a lithium and geothermal energy project being developed by Controlled Thermal Resources along the shores of California's Salton Sea. (See my previous reporting on that project here.)

But back to the deal between Newsom and lawmakers.

For some perspective, I spoke with Alex Jackson, California director for the American Clean Power Assn., an industry trade group. He described the legislation — along with a <u>recently approved bill</u> to speed up infrastructure permitting, and <u>last summer's deal</u> to make it easier for state officials to approve solar and wind farms over local objections — as a "down payment."

For the Golden State to move beyond fossil fuels — and eliminate its reliance on polluting facilities such as <u>coastal gas</u> <u>plants</u> and the <u>Aliso Canyon gas storage field</u> — building renewable energy needs to be much simpler and faster, Jackson said.

"Infrastructure projects, which were once the source of pollution and inequity, are now absolutely foundational to getting us out of an existential crisis," he said. "We have to let this be the start of much more significant reforms."

New data published this week serve as a reminder of why that's so important.

European Union scientists <u>reported</u> Wednesday that the last three months were the hottest summer on record globally, by a lot — and the hottest individual June, July and August too. Also Wednesday, the U.S. National Oceanic and Atmospheric Administration <u>reported</u> record-high greenhouse gases in the atmosphere, record-hot ocean waters and record-high sea levels in 2022.

California alone can't solve this problem. So it matters to us that the Biden administration approved its fourth offshore wind farm along the East Coast last month. It also matters that there wasn't much response to the administration's first offshore wind auction in the Gulf of Mexico last week, in part because the Gulf states haven't committed to buying any wind power.

But much of the world looks to California on confronting the climate crisis. What happens here doesn't stay here...