

California Sets Ambitious Offshore Wind Planning Goals

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California's updated planning goals for offshore wind: between 2 to 5 GW by 2030 and 25 GW by 2045. The California Energy Commission ("CEC") formally adopted the foregoing planning goals pursuant to its obligations under Assembly Bill No. 525 ("AB 525"), which requires various steps and analyses to help California determine its strategic plan for offshore wind. These planning goals are also part of California's larger renewable energy goals, which require 100 percent of retail sales of electricity to end-use customers and electricity procured by state agencies to come from eligible renewable energy sources and zero-carbon resources by the end of 2045. The offshore wind targets are based on the CEC's evaluation of the maximum feasible capacity of offshore wind that can be sited in federal waters off the California coast, in alignment with the state's decarbonization, reliability, and economic benefit goals. This evaluation culminated in the CEC's August 10, 2022 report, "Offshore Wind Energy Development off the California Coast" (the "Report"), which was released in conjunction with the announcement. California's planning goals represent the most ambitious of any state in the United States, but as the Report acknowledges, they are "aspirational" and depend on significant investments in transmission, port infrastructure, and workforces to be achievable.

Report Highlights

The report is just the first of several offshore wind planning deliverables the CEC is expected to deliver under AB 525. AB 525 required the CEC to consider 12 factors in establishing the state's offshore wind planning goals, and to issue its recommendation by June 1, 2022. On May 6, 2022, the CEC published a draft report recommending planning goals of 3 GW by 2030 and up to 15 GW by 2045. At a May 18, 2022 public hearing on the draft report, commenters

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highlighted three studies released after the draft report that suggested higher targets were feasible and more appropriate. As a result, the Commission held an additional workshop on June 27, 2022 and incorporated additional revisions in the final report.

The final planning goals assume 2-5 GW of offshore wind development from either the full build-out of the Morro Bay Wind Energy Area (“WEA”) or partial build-out of the Morro Bay and Humboldt WEAs by 2030. The Bureau of Ocean Energy Management (“BOEM”), the federal agency tasked with leasing parcels of the Outer Continental Shelf for renewable energy development, is expected to hold an auction for lease areas in the Morro Bay and Humboldt WEAs later this year. The 2045 planning goal assumes the availability of additional federal lease areas, technological advancements (including larger turbines), and cost reductions that will support accelerated development.

AB 525 also requires the identification of offshore areas necessary to accommodate the CEC’s planning goals, consistent with protecting cultural and biological resources. The Report notes that the CEC has coordinated with federal, state, and local agencies but that the analysis remains ongoing. The analysis completed thus far supports 21.8 GW of feasible development capacity in federal waters but is subject to revision. For this reason, the CEC notes that the planning goals should not be “seen as a ‘floor’ or ‘ceiling’ for offshore wind procurement in California.” Instead, they are intended to be used as guidelines in the larger effort to develop California’s offshore wind strategic plan and will be refined as further information becomes available.

In the final report, CEC states that it considered all 12 factors required by AB 525 but placed particular focus on five of the goals:

- The need for alignment with the state’s decarbonization goals as outlined in the 100 Percent Clean Energy Act of 2018 and the associated Joint Agency Report.
- The need to initiate long-term transmission and infrastructure planning to facilitate the delivery of offshore wind energy to Californians.
- The need for reliable renewable energy that accommodates California’s shifting peak load.
- The generation profile of offshore wind off the California coast.
- The potential impacts on coastal resources, fisheries, Native American and Indigenous peoples, and national defense, and strategies for addressing those potential impacts.

The CEC also acknowledged that its more ambitious approach was informed by Governor Gavin Newsom’s [July 22, 2022 letter](#) to the Chair of the California Air Resources Board, in which he urged the CEC to establish an offshore wind planning goal of at least 20 GW by 2045 in alignment with the need for urgent climate action.¹

As to transmission, the Report notes the significant transmission upgrades needed to capture the large resource potential off of California's Northern and Central Coast areas. The CEC considered the California Public Utility Commission's ("CPUC") Integrated Resource Plan ("IRP") process and Transmission Planning Process ("TPP"), which will eventually be aligned with the final strategic plan. For this reason, the final planning goals exceed the current IRP and TPP assumptions so as not to artificially constrain the analysis. The Report also notes the opportunity for repurposing existing infrastructure, specifically citing the opportunity presented by the retirement of the 2,225 MW Diablo Canyon Nuclear Power Plant.²

The CEC's next steps are to (1) complete a preliminary assessment of the economic benefits of offshore wind in terms of port infrastructure, manufacturing, and workforce development; and (2) develop a permitting roadmap for offshore wind. The CEC must complete and deliver these reports to the California Natural Resources Agency and the legislature by December 31, 2022.

California's Offshore Wind Future

Similar to East Coast states pursuing offshore wind development, California intends to use its strategic plan to streamline the development and permitting process at the state level while optimizing the associated infrastructure and workforce benefits. California's development of its strategic plan is timely considering the federal government's [announcement](#) that it plans to auction off the first lease areas offshore California later this year. As the Report acknowledges, completing any project by 2030 will require significant mobilization of resources and coordinated permitting and planning processes.

Moreover, at the CPUC's direction, the California Independent System Operator ("CAISO") evaluated the transmission upgrades needed to accommodate between 8.3 GW and 21.1 GW of offshore wind through the 2021-2022 transmission planning process. CAISO identified \$30.5 billion in required transmission investments. Its subsequent 20-Year Transmission Outlook (developed in coordination with the CEC) estimated that \$8.11 billion of this total would be needed to integrate offshore wind from just the Morro Bay and Humboldt WEAs, with the bulk of this sum needed to bring energy from the Humboldt WEA to load.

Although not explicitly discussed in the Report, some stakeholders advocate for an offshore transmission backbone connecting multiple offshore wind projects, arguing that doing so would facilitate landfalls, increase interconnection capacity, and reduce costs more efficiently. New Jersey and PJM Interconnection, L.L.C. are evaluating similar proposals to develop backbone transmission (and other solutions) to facilitate the interconnection of offshore wind resources to meet New Jersey's clean energy goals. A selection decision

is expected before the end of the year. Further, New York is pursuing a similar goal in its current OREC solicitation, which requires projects to be capable of connecting to other projects to form a “meshed” offshore grid. California’s ability to permit and build the necessary transmission upgrades in a coordinated and efficient manner will be central to achieving its offshore wind planning targets.

1. One of the 12 factors outlined in AB 525 includes “any executive action from the Governor regarding offshore wind.”
2. Following the issuance of the CEC’s report, Gov. Newsom proposed legislation to extend the operating life of the Diablo Canyon Nuclear Power Plant as late as 2035,