



California Wind Energy Association

March 11, 2022

California Energy Commission
Docket No. 17-MISC-01
Docket Office
1516 Ninth Street
Sacramento CA 95814

Submitted Electronically via CEC website to Docket 17-MISC-01

Re: Comments following March 3, 2022, Workshop on Assembly Bill 525 Strategic Plan for Offshore Wind Energy Planning Goals

I. Introduction and Summary

The California Wind Energy Association (CalWEA) appreciates this opportunity to provide written comments on the subject matter of the March 3, 2022, Workshop on Assembly Bill 525 Strategic Plan for Offshore Wind Energy Planning Goals. It was very encouraging to see the level of agency collaboration and good working relationships that were made evident at the workshop. This inter-agency coordination and focus will be necessary to successfully tackle the substantial challenges that California faces in harnessing offshore wind, which is one of many critical components of achieving the state's extremely ambitious goal of transitioning from fossil fuels to clean energy.

By June 1, 2022, AB 525 requires the California Energy Commission ("Commission") to develop an assessment of the maximum feasible capacity of offshore wind to achieve reliability, ratepayer, employment, and decarbonization benefits and to establish offshore wind energy planning goals for 2030 and 2045. By December 31, 2022, the Commission must submit to the Natural Resources Agency and the relevant fiscal and policy committees of the Legislature a preliminary assessment of the economic benefits of offshore wind as they relate to seaport investments and workforce development needs and standards. By June 30, 2023, the Commission must submit a strategic plan to the California Natural Resources Agency and the Legislature. In establishing the planning goals, AB 525 requires the Commission to consider a number of things, including the following, which will be the primary focus of these comments: the need to develop a skilled and trained offshore wind workforce, the potential to attract supply-chain manufacturing for offshore wind components throughout the Pacific region, the need for economies of scale to reduce the costs of floating offshore wind, and the need to initiate long-term transmission and infrastructure planning to facilitate delivery of offshore wind energy to Californians.

In preparing the required assessments, the Commission must carefully consider two distinct paths for offshore wind: one path that relies largely on imported components from other countries, and another that builds up industrial capacity in the Pacific region that enables substantial domestic content. While the two paths will be similar in important ways, they will differ in terms of necessary near-term decisions, investments, and deployment timelines, and the outcomes will have very different implications for the development of a skilled and trained offshore wind workforce, the potential to attract supply-chain manufacturing for offshore wind components throughout the Pacific region, and the ability to meet planning targets and drive down costs as economies of scale are attained.

Thus, if California desires to obtain the economic and social benefits that offshore wind could bring – but are often simply assumed, careful planning will be required, along with near-term decisions that will support the investments that we will need to capture supply chain and jobs (particularly for the floating platforms) here in California. The Commission and its joint agency partners should not only highlight these important steps in its reports to the Natural Resources and the Legislature but pursue them in their nearer-term agency decisions.

In summary, CalWEA recommends that the AB 525 implementation process focus on:

- Establishing targets sufficient to achieve economies of scale and drive the development of a domestic supply chain;
- Establishing near-term goals using demonstration projects to lay the foundation for scale-up of California/West Coast industrial capacity to build floating platforms;
- Completing a ports assessment this year, particularly for Central Coast developments;
- Highlighting the need for the 2022 BOEM auctions to feature Multiple Factor Bidding that drives local supply chain development;
- Highlighting the need for the CPUC to adopt an offtake strategy prior to the BOEM auctions;
- Explore several possible ways of providing deliverable transmission status at the Central Coast; and
- Explore CEQA streamlining measures for all offshore-wind-related infrastructure.

II. Comments

A. **Planning Targets Must Be High Enough to Drive Economies of Scale and to Support a Domestic Supply Chain for the New Floating Technologies – but Scale-up Plan is Equally Critical**

1. Scale is important. In establishing the maximum feasible capacity of offshore wind, especially regarding ratepayer and employment benefits, CalWEA believes that the minimum target necessary to achieve economies of scale and drive the development of a domestic supply chain is 12 GW by 2045 along the Pacific Coast.

The SB 100 Joint Agency Report was based on RESOLVE modeling that artificially capped the amount of offshore wind at 10 gigawatts. The model selected all 10 GW, strongly suggesting that more would be cost-effective. The Commission should conduct runs of the SB 100 model to determine how much more offshore wind is justified as part of an overall portfolio that ensures reliability and minimizes costs in achieving the SB 100 goals. That model considers only the capacity that is cost-effective based on the total costs and benefits that the resource provides to the system overall. The Commission should consider other, more indirect or intangible benefits including various risk-reductions from greater resource diversity, economic benefits to the state, and less pressure to site resources on land.

2. Scale-up is equally important. As important to the overall 2045 goal are the initial and interim steps that will be crucial to the development of a California/West Coast supply chain, particularly the floating platforms. Based on the plans of load-serving entities, the CPUC has included 120 MW of offshore wind in 2026, 295 MW in 2030 and 1,708 MW in 3032 in its recent Preferred System Plan.¹ As discussed further below, CalWEA believes meeting these near-term goals will lay a critical foundation for sustainable scale-up of in-state and regional industrial capacity to build floating platforms for all future installations. Turbine parts almost inevitably will be imported from Europe and/or the U.S. East Coast for the projects resulting from the 2022 BOEM auction, but there is great potential for California companies and workers to provide the fabrication, construction, and assembly of floating platforms and the final integration and installation phases.

B. Much Greater Certainty is Needed to Support a California/West Coast Supply Chain that Will Deliver Economic Benefits to the State

1. Floating platforms require demonstration. The floating offshore wind technology is relatively new and the deployment of floating platforms for 12- to 15-MW turbines has not been demonstrated anywhere in the world to date. Only three floating wind platform designs have been deployed at scale to date and none of these is in U.S. waters. The technical, environmental, economic, and social aspects of commercial offshore wind in California have likewise not been demonstrated in real-world conditions. Floating platforms will be of huge scale with unprecedented logistical challenges. Europe has already deployed floating offshore wind projects at pilot scale, with recent awards in the United Kingdom at the 100-MW scale.² Early deployments of floating offshore wind technology at demonstration scale will be crucial to foster the development of a local supply chain, ports, and workforce to support California's offshore wind industry.

2. A complete ports assessment is needed this year. Ports will be needed to assemble the floating foundations as well as the integration of the turbines and foundations. To support development at Morro Bay, these activities will require ports at numerous coastal

¹ CPUC Decision 22-02-004 at Table 2 (Feb. 15, 2022).

² See The Crown Estate, "Three new test and demonstration floating wind projects in the Celtic Sea to progress to next stage" (July 27, 2021). <https://www.thecrownestate.co.uk/en-gb/media-and-insights/news/three-new-test-and-demonstration-floating-wind-projects-in-the-celtic-sea-to-progress-to-next-stage/>.

locations, possibly from the South Coast to the Bay Area. Development at the North Coast will require substantial investments. A complete ports assessment is needed this year, especially to support the initial projects at Morro Bay. That assessment would identify available port space, possible upgrade needs, and funding requirements to further assess those needs.

3. Demonstration projects in state waters offer a critical opportunity.

The proposed demonstration projects in state waters³ – which can be online at least four years ahead of BOEM projects – should be used to support the build-up of the ports, supply chain, and workforce that offshore wind projects will need if they are to assemble floating platforms in California. These projects can generate “real” information to evaluate real-world environmental impacts and validate mitigation measures, which will reduce conflicts in the commercial-scale build-out. California or U.S. manufacturing of floating foundation components, anchoring systems and potentially other components (blades, nacelles, substations, cables, etc.) would also require considerable time and planning to allow sufficient time for the local supply chain to mature.

4. BOEM auctions should incentivize local supply-chain build-up.

Offshore wind is a global, competitive industry. As much as California project developers may want to support the development of a local workforce and supply chain, they will face considerable market pressure to source foreign-manufactured and constructed inputs rather than locally made products. This is particularly true given the very high auction prices seen recently for the New York Bight. With California auction bids expected to be in the hundreds of millions of dollars each and projects’ total costs in the billions, competing developers will feel pressure to squeeze out costs to increase their bid price by cutting costs elsewhere in their projects. The result is that developers will feel pressure to use imported inputs that fail to create local supply chain, jobs and other community benefits.

The problem is compounded by the fact that California is starting from scratch in terms of infrastructure. California has no offshore wind ports -- either for platform assembly or final turbine integration. Floating platforms will be less expensive and easier to import on barges from Asia.

To have any chance of supporting a California/West Coast offshore wind industry for the initial Morro Bay or Humboldt projects, therefore, the Commission’s plan should include a specific strategy to promote the development of an in-state supply chain. Supporting state-water demonstration projects will be an important element of that, as discussed above. In addition, the Commission should strongly encourage BOEM to substantially modify the auction structure used for East Coast leasing to incentivize a California/West Coast regional supply chain.

³ The California State Lands Commission has received, and staff is evaluating, two applications for floating offshore wind projects in state waters. The two projects are CADEMO, which would demonstrate two different floating wind technologies by installing four 12-15 MW floating wind turbines in the area; and the Ideol Vandenberg Air Force Pilot Project, which would install four floating offshore wind turbines with a maximum generation capacity of 10MW each.

<https://www.slc.ca.gov/renewable-energy/offshore-wind-applications/>.

The AB 525 implementation process should highlight the importance of BOEM designing its California auction mechanism to include a Multiple Factor Bidding strategy to counteract powerful market forces that could undermine state benefits. California needs BOEM auction terms that offset the monetary advantage of imports and that create a competitive “race to the top” among developers to promote a high-road, domestic supply chain that includes local content, local ports, and project-wide labor agreements covering both onshore and offshore construction and installation, including disadvantaged hiring and workforce training.

5. An offtake plan is needed prior to the BOEM auctions. The recent East Coast auctions have been successful because the fixed-bottom technology is proven and available, substantial port space exists, and offtake certainty was in place – all in all, far more certainty than we have in California right now. In our comments above, we discussed ways of promoting the domestic supply of floating platforms and port development. Regarding offtake, in its recent decision on the Preferred System Plan, the California Public Utilities Commission (CPUC) made the important statement that it “will revisit [the] question of specific offshore wind procurement requirements” in the upcoming phase of its Integrated Resource Planning (IRP) process. “Specifically, ... [w]e will explore the procurement approaches to this large-scale and complex resource. For example, we will explore the development or selection of an appropriate entity to conduct offshore wind procurement, and to ensure that it is procured in the interests of ratepayers. These steps will help continue to give prospective developers appropriate expectations about contracting opportunities.”⁴

The AB 525 implementation process should highlight the need for the CPUC to adopt an approach to procure the capacity included in the adopted plan – both the mid-decade and 2032 targets -- prior to the BOEM auctions to provide developers with the certainty needed to calculate benefits and risks and submit bids accordingly.

6. A transmission plan is needed. The AB 525 implementation process should highlight the need for, and take steps toward, the Joint Agencies’ and the CAISO’s development of specific transmission plans for the Central and the North Coast offshore wind developments. The strength of the grid at the Central Coast and the weakness of the grid in Northern California require completely different strategies.

There are several possible ways of providing deliverable transmission status at the Central Coast. Making more efficient use of the grid by reforming the CAISO’s deliverability assessment methodology is the timeliest and least costly one. CalWEA has discussed this at length in CPUC testimony and CAISO proposals.⁵ Alternatively, PG&E could relinquish its transmission rights for the Diablo Canyon nuclear plants. Finally, new transmission could be planned between Central California and Los Angeles, which would simultaneously resolving existing congestion

⁴ Note 1 *supra* at PDF-page 145-6.

⁵ See CalWEA’s September 1, 2021, testimony in CPUC R.20-11-003 on deliverability reform (available at <https://www.calwea.org/public-filing/extreme-weather-proceeding-testimony-deliverability-reform>) and CalWEA’s October 18, 2021, joint Policy Initiatives Catalog submission to CAISO with the California Energy Storage Alliance (available at <https://www.calwea.org/public-filing/stakeholder-initiatives-proposal-cesa-deliverability-reform>).

on Path 26. Building subsea transmission would provide additional grid-resiliency benefits. The Commission should explore each of these possibilities in the AB 525 process.

Planning for the North Coast will require modifications to the CAISO's 20-year planning effort, as we explained in recent comments to the CAISO. While any single 20-year plan must realistically remain conceptual, given a multitude of uncertainties that will unfold in that timeframe, incremental, but real, progress towards the long-term plan could and should still be made. To do that, CalWEA proposed that some upgrades be selected in each annual transmission planning cycle that will build towards the 20-year plan. To identify those upgrades, CalWEA recommends that the CAISO work with the CPUC and CEC to develop a least-regrets (essentially no-regrets) 20-year planning process in which three significantly different, but plausible, 2040 resource scenarios be created for which actual (rather than conceptual) transmission plans are independently developed. Those upgrades that are common to all three scenarios should move forward in the annual TPP cycle for presentation to the CAISO board for approval. Those upgrades that are common to two out of the three scenarios should be closely monitored as part of annual TPP cycle as replacement (potentially more costly replacement) solutions to address reliability, economic and/or policy upgrades that are identified in the TPP. This least-regrets process would ideally be outlined in the final 2022 20-year Outlook and apply in the subsequent IRP and TPP cycles.

We encourage the Commission, as part of the AB 525 process, to explore the notion of developing three long-term resource scenarios for the above process and to specifically consider three plausible build-out scenarios for the North Coast. For example, one scenario might include the use of hydrogen to transfer a portion of the North Coast offshore wind output to the rest of the state.

7. CEQA streamlining measures will be needed. CEQA streamlining measures are needed for all offshore-wind-related infrastructure to ensure that the projects don't get paralyzed and perhaps killed by years of lawsuits. This is the subtext of a new bill, SB 1274 (McGuire), which would add a clean energy transmission project within or adjacent to the County of Humboldt to an existing category of development projects that can seek CEQA streamlining benefits before the lead agency certifies the final EIR for the project.

Another streamlining concept would be to allow the CEQA review conducted by state or local agencies for onshore infrastructure to focus exclusively on the direct onshore and offshore impacts of the onshore infrastructure facilities only and to refer the reader to other CEQA and NEPA documents for analysis of the environmental impacts of the offshore wind energy generation facilities and not to repeat such analysis or undertake an independent analysis. Given the multiple other analyses of the environmental impacts of the offshore turbines under both NEPA and CEQA, it would be inefficient and unnecessary to require further CEQA review of the offshore facilities in CEQA documents prepared to support approval of onshore support facilities.

The Commission should consider these and other ideas as part of planning for offshore wind.

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CalWEA appreciates this opportunity to comment and looks forward to further participation in this important process.

Sincerely,

A handwritten signature in cursive script that reads "Nancy Rader".

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