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ACP-CA Comments on Draft AB 525 Strategic Plan

Additional submitted attachment is included below.

April 8, 2024
California Energy Commission 715 P Street
Sacramento, California 95814

Docket No. 17-MISC-01

RE: AB 525 Draft Strategic Plan

Dear Chair Hochschild and Commissioners,

American Clean Power-California (ACP-CA)[1] appreciates the opportunity to provide these comments on the California Energy Commission's (CEC) Draft AB 525 Offshore Wind Strategic Plan ("Draft strategic plan").

The CEC has led a groundbreaking effort to analyze the potential of offshore wind energy, define the state's offshore wind goals, consider challenges and policy support necessary to achieve those goals, and coordinate plans across state agencies. In developing and passing AB 525 in 2021, the state legislature identified the CEC as the primary agency responsible for the development of the offshore wind strategic plan for good reason. The agency is uniquely positioned in its ability to lead long-term energy planning, its close relationship with the California Public Utilities Commission (CPUC) and California Independent System Operator (CAISO) energy principals, its deep experience in permitting and siting energy infrastructure, and its ability to solicit thoughtful engagement from stakeholders. Through the AB 525 process, the CEC has also built a strong foundation for collaboration among agencies who will be directly responsible for offshore wind permitting.

Together with the appointment of a Senior Advisor for Offshore Wind at the Governor's Office and a growing and enthusiastic offshore wind legislative caucus, the state has what it needs to propel the CEC's offshore wind leadership into the next phase of offshore wind implementation. We implore the administration and legislature to continue to uplift the CEC as the state's strategic offshore wind lead agency with the capability to pull together numerous interconnected policy initiatives toward a cohesive set of policy and regulatory steps in the development of a new offshore wind industry for California. This

[1] The American Clean Power Association ("ACP") is the voice of companies from across the clean power sector that are providing cost-effective solutions to the climate crisis while creating jobs, spurring massive investment in the American economy, and driving high tech innovation across the United States. ACP's mission is to transform the U.S. power grid to a low-cost, reliable, and renewable power system. ACP - California is a state project of ACP, representing companies who develop, own, and operate utility-scale solar, storage, land-based wind, offshore wind, and transmission assets to power a clean and renewable economy for California and the West. The California Council of Offshore Wind Leaseholders (CCOWL), a council within ACP-California (ACP-CA), is dedicated to fostering the emerging California floating offshore wind market and advancing the state's first projects. The council members are Invenergy, RWE, Equinor, Golden State Wind, and Vineyard Offshore.

long-term vision and coordination role will be essential to the whole-of-government approach offshore wind requires.

With AB 525, it was the intent of the legislature for the state to create a strategic plan for how the state should develop an offshore wind industry at the right scale to provide economic development, climate mitigation, and energy system reliability for the long-term benefit of the state. The CEC should focus on this core intent as it finalizes the strategic plan. While the Draft strategic plan includes robust analysis and thoughtful considerations, ACP-CA recommends the Final strategic plan provide more concrete steps for implementation of the state's offshore wind goals, including identifying responsible agencies, timeframes and priorities. All state agencies involved in implementing offshore wind should be able to use the Final strategic plan to guide their own policy and regulatory priorities and initiatives in alignment with the state's offshore wind goals. An action plan is an essential element of any successful, implementable strategic plan and should be included in the final AB 525 plan.

In addition, the AB 525 Strategic Plan is an important market signal to the offshore wind developers, supply chain companies, and investors regarding California's commitment and ability to support a new floating offshore wind industry. The CEC should send strong signals with concrete planning steps to build market confidence.

ACP-CA's comments are organized as follows:

- Section I: we identify our most important requests for the Final strategic plan.
- Section II: we provide a broader review of the recommendations presented in each chapter of the Draft strategic plan including suggested additions and clarifications.
- Section III: we provide comments on the sea space planning chapter.
- Section IV: we offer additional comments on specific areas of the plan.
- Section V: we've highlighted areas of the text where we have found errors or omissions.

We offer all comments with sincere acknowledgement of the effort and time the CEC has invested in this draft plan.

I. Priority Changes and Additions Requested

We appreciate the tremendous time and effort that the CEC and its sister agencies spent preparing the Draft strategic plan, involving Native American Tribes and Tribal Nations ("Tribes") and stakeholders, and reaching agreement on key findings and recommendations. We also acknowledge that there are limits to what can be accomplished within a single multi-agency strategic plan before the vast majority of offshore wind implementation work has even begun. We expect the Final strategic plan will need to serve as a living document which the CEC can and should update periodically based on progress and lessons learned along the way.

That said, ACP-CA has a few priorities we would like to highlight for incorporation into the Final strategic plan for the purpose of creating a more comprehensive, well-rounded planning document to serve as an on-going reference as the industry and state government move into the next decade of offshore wind

implementation. Specifically, we recommend additional content and recommendations in the Final Strategic plan on the following five areas:

1. **Develop a more detailed plan for state and federal permitting coordination including a process timeline and interagency Memorandum of Understanding (MOU)**

The Final strategic plan should include critical details on the offshore wind permitting model recommended in the plan, including a commitment to develop a process timeline and an interagency MOU.

AB 525 required the CEC to "produce a permitting roadmap that describes timeframes and milestones for a coordinated, comprehensive, and efficient permitting process for offshore wind energy facilities…" and to "include a goal for the permitting timeframe, clearly define local, state, and federal agency roles, responsibilities, and decision-making authority, and include interfaces with federal agencies, including timing, sequence, and coordination with federal permitting agencies, and coordination between reviews under the California Environmental Quality Act." The permitting roadmap adopted by the CEC in April 2023 included discussion of various models for permitting offshore wind and provided descriptions and a general timeline of permitting activities,[2] but failed to produce a timeframe goal, milestones, schedule or roles and responsibilities within that proposed framework.

The Final strategic plan should describe the order of operations for review of offshore wind project applications and steps for how state and federal agencies will work together to coordinate on offshore wind project reviews across a detailed process timeline.[3] While we understand some agencies may be hesitant to commit to timeline or milestone goals, it is CEC's authority and obligation under AB 525 to develop this timeline within the roadmap.[4] Without it, there will be no benchmark or tool to ensure efficient and on-time permitting of offshore wind projects. As seen on the east coast, permitting delays and uncertainty can significantly compromise offshore wind project execution and economic viability.

Second, we request that the CEC and state agencies prioritize development of an MOU with the federal government. The final strategic plan should include this critical step, along with subsequent steps of an implementation plan for the Ocean REAT/REPG model. This is a top priority for the offshore wind industry.

The CEC's adopted Offshore Wind Permitting Roadmap included an Appendix B that detailed party commitments and next steps in a potential Interagency Agreement Option. While the Draft strategic plan includes the recommendation to pursue a coordinated permitting process (see "Permitting 1" in Table 1, below), and the permitting roadmap similarly indicated a preference for this approach, it

[2] "As shown, it could take between 6 and 10 years for a project developer to obtain all the needed federal approvals, 4 to 6 years to obtain the state approvals, and 2 to 3 years to obtain local approvals." CEC AB 525 Permitting Roadmap p 37

[3] If it is not possible to create this process as part of the Final strategic plan, the CEC should initiate the development of this process with state agencies and leaseholders as soon as possible, outside the AB 525 process.

[4] See also ACP-CA's comments on the permitting roadmap available at 17-MISC-01, July 19, 2023 https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=17-MISC-01

does not appear the state has implemented any of the specific steps to set up this approach, as outlined in Appendix B of the Draft Conceptual Permitting Roadmap, nor does the Draft strategic plan commit to any concrete next steps. The state must commit to a clear process for interagency coordination, not just an intention or recommendation to coordinate.

As a first step, the interagency process and timeline commitments should be formalized in an interagency MOU. Next, the state and federal permitting agencies should develop a more detailed plan for implementing the coordinated approach. The lack of coordination among agencies is already causing challenges for offshore wind leaseholders in California. For example, Appendix B of the permitting roadmap suggest the state will "Create and implement a schedule for interagency coordination on review of site assessment survey plans, SAPs, COPs, CEQA review and compliance, and applications for local, state, and federal entitlements." Three of California's leaseholders have submitted survey plans for BOEM and state agency review to date and have observed limited coordination among state and federal agencies and with leaseholders regarding the overall review procedures, expected timelines, acceptable scope and methodologies, and other requirements associated with site assessment surveys. Coordination among state agencies should be on a proactive basis, anticipating necessary points of collaboration and alignment, rather than reactive to leaseholder applications.

While we support the recommended permitting model in the Draft strategic plan, as well as the suggestion that the state "anchor" its permitting process and timeline to BOEM's, it is imperative that the CEC complete the permitting roadmap requirements of AB 525 with a specific set of timelines and milestones for the myriad permitting and environmental reviews that must be completed for each offshore wind project and adopt coordination processes across this timeline in an MOU.

We have provided additional comments on the permitting chapter in Sections II and IV, below.

2. Provide more specific, regulatory-oriented recommendations for offshore wind transmission planning.

The Draft strategic plan recognizes the importance of timely planning and investment in transmission infrastructure to integrate offshore wind into the California electric grid. The plan provides robust analysis of transmission alternatives and potential costs. However, the concluding recommendation in the transmission chapter are relatively weak compared to other chapters. In addition to continued assessment, analysis, and regional coordination, the plan should provide concrete recommendations for how to plan for and approve transmission and accommodate offshore wind interconnection requests within the existing state transmission planning and interconnection frameworks. At the time of writing these comments, the CAISO's draft 2023-2024 Transmission Plan proposes to approve necessary transmission upgrades to support integration of 1.6 GW of offshore wind in the North Coast, having assessed a total need for integration of 4.7 GW of offshore wind. This is a critical first step toward the build out of offshore wind transmission infrastructure that the Final strategic plan should celebrate and build upon.

Specific transmission recommendations are discussed further in Section II below.

3. Commit to develop a plan for financing staging and integration (S&I) ports

The Final strategic plan should include a recommendation to develop a funding strategy to support the ports of Humboldt and Long Beach as the state's first offshore wind staging and integration facilities.

The Draft strategic plan analyzes multiple port functions and locations to support the offshore wind industry and concludes with recommendations to "continue to support/collaborate/engage" on various aspects of port readiness. Similar to the transmission chapter, the port infrastructure chapter should conclude with more specific, direct recommendations to address the most critical port upgrade needs.

The Final State Lands Commission Offshore Wind Port Readiness Plan concludes, "[Staging and Integration] are the most critical sites that require urgent funding. These sites must be developed as soon as possible to provide the State with the best opportunity to achieve the offshore wind planning goals."[5] This is because floating offshore wind turbines' size requires assembly and manufacturing of certain components at port side and currently there are no port terminals in California capable of this S&I function. The Draft strategic plan acknowledges this conclusion in the Port readiness plan as well as the total investment requirement for all types of offshore wind port infrastructure. The Final strategic plan should identify the Port of Humboldt and Port of Long Beach as the best candidates for S&I ports. The development of an S&I funding strategy should also be a specific, standalone recommendation of the plan, as discussed in Section II below.

4. Commit to develop a plan for capacity building for Tribes

The Draft strategic plan highlights the need for capacity building among Tribes, local communities, and local governments in several chapters and subchapters. The CEC should add a recommendation for the state to develop, together with the federal government and Tribes, a plan for collecting and distributing financial resources to be used by community groups, Tribes, and local governments to engage directly in the planning, design, and development of various clean energy infrastructure projects in the state, including offshore wind. For offshore wind projects, Tribal capacity building should address participation in the permitting process, technical assistance, training to serve as project monitors and observers, and engagement in development of community benefit agreements, among other things.

5. Provide more detail on specific steps for CEC and state agency action related to each recommendation.

In order to ensure the strategic plan is actionable, the CEC should include specifics for each recommendation in the Final strategic plan including: who is responsible, the timeframe for action, and the relevant existing policy or regulatory venues for action or progress. This detail should be summarized in a near-term schedule of priority actions planned by the state. Without this level of detail, it will be difficult to judge the state's progress against the strategic plan in future years or to understand where there are critical policy gaps.

[5] AB 525 Port Readiness Plan, July 19, 2023, available: https://www.slc.ca.gov/renewable-energy/port-readiness-plan/

In addition to these priority content recommendations, we suggest the CEC amend the document to provide greater context and clarity in the following areas:

6. **Include greater context setting regarding the likely impacts from climate change to marine habitats and species, marine businesses, and coastal communities.**

The impacts related to the increasing effects from continued unmitigated climate change is accelerating extinction risks and leading to more severe impacts on habitats and species as well as the loss of cultural resources from the worsening effects of sea level rise and storms. These impacts should be a benchmark against which evaluates the significance of direct offshore wind-related impacts in the Final strategic plan and going forward.

7. **Provide better framing in the discussion of stakeholder concerns and suggested mitigations.**

The Final strategic plan should clarify that the state has neither substantiated every potential offshore wind impact nor endorsed every potential mitigation option discussed in the report.

As required by AB 525, the Draft strategic plan discusses "potential impacts on coastal resources, fisheries, Native American and Indigenous peoples, and national defense, and strategies for addressing those potential impacts." While we recognize that this report provides a high-level review of potential impacts at an appropriate level for the purposes of AB 525, the Final strategic plan should provide proper context to guide readers.

The "reasonable inferences," characterized in Chapter 4 of the Draft strategic plan are in some cases based on assumed interactions and perceived risks. In many instances, the CEC neither substantiates nor refutes concerns about potential impacts. We appreciate the CEC's efforts to ensure stakeholders' feedback is reflected in the report, but the inclusion of all concerns without proper framing could be read as the CEC endorsing or validating them, which could perpetuate misinformation. In each instance where a concern is unsubstantiated by best available science, the CEC should note this.[6] We've provided a few examples where best available science does not substantiate concerns in Section V, Table 3.

ACP-CA also requests that the CEC provide a more thorough disclaimer that the mitigation measures discussed in the plans are not yet requirements of offshore wind approvals and permits.[7] The mitigation measures discussed may or may not be appropriate or feasible based on assessment of potential impacts and technical and economic feasibility standards. Responsible agencies will select mitigation measures for each individual project at the appropriate time based on the activities and impacts of an individual project, the scale of the impact, the current understanding of the best

[6] Alternatively, if the task of adequately responding to each stakeholder concern in the report is too arduous at this time, the CEC could instead separate out this "unanswered" feedback in the Draft strategic plan as part of a separate appendix. Appendix B of the Draft strategic plan on "potential impacts and mitigation strategies" identifies many potential mitigation strategies identified by different stakeholders which must be further analyzed for suitability and feasibility in the context of anticipated impacts. Similar feedback that was included in Volume II could be consolidated into Volume III Appendix B.

[7] Currently Appendix B of Volume 3 notes only that "The descriptions in this appendix of impacts and mitigation strategies are general in nature, describing the overall characteristics of potential impacts (grouped by environmental resource) and the approaches that may be taken to mitigate their effects. These are based on current knowledge of and experience with offshore and onshore development."

available science, the status of the technology, and the practicability of the solution. The Final strategic plan should clarify for the public that measures for minimizing or mitigating impacts suggested by stakeholders will be potentially adopted by the appropriate agencies with permitting authority for offshore wind if they are found to be environmentally and technically feasible and appropriate for mitigating impacts of a specific individual project.

The CEC should also clarify where or how mitigation measures will be analyzed and considered (e.g., responsible agency, permit, or process). Otherwise, the plan could create the misperception that there are inadequate processes or venues to analyze and mitigate project effects.[8]

8. Include the AB 525 goals report within the strategic plan

The final strategic plan should include the primary findings, conclusions and adopted goals from the AB 525 Planning Goals Interim report[9]. These planning goals provide proper direction and focus for all subsequent chapters and recommendations and are integral to the strategic plan. The CEC should embed the AB 525 goals into the recommendations and action plans developed for Chapter 11, describing how each recommendation serves the state's offshore wind goals.

9. Include discussion of the importance of central procurement and offtake contracts within the strategic plan

Although AB 525 didn't require the CEC to plan or assess power contract offtake, ACP-CA recommends the final strategic plan include a discussion of how offshore wind power contracting relates to the other major pillars of offshore wind development in the state. Put simply, investors in offshore wind projects and offshore wind ports need a clear line of site to a potential revenue source from the sale of energy produced from multiple, large-scale offshore wind farms to make forward progress and continued investments in project permitting and engineering. Later, developers will need signed offtake contracts before beginning construction of offshore wind projects and port developers will need certainty on developers' ability to pay rents at terminals before they can begin construction. Offshore wind component suppliers and manufacturers also need line of sight and a long-term, predictable pipeline of product volume (e.g., anticipated purchase orders) to enable necessary investments across the value chain. Similarly, the CAISO will require offshore wind projects to satisfy commercial readiness requirements[10] to award transmission deliverability on any new or existing transmission to offshore wind interconnection customers. These realities should be woven into the strategic plan. In addition, we recommend the AB 525 report expand the brief discussion in Chapter 1 about AB 1373 (2023) to further discuss the importance and benefits of central procurement of offshore wind, as well as the process for implementing this program at the CPUC and Department of Water Resources (DWR).

[8] For example, the Draft strategic plan highlights requests from the fishing industry for compensatory beginning before the start of surveys (which are not expected to pose any significant impact to the fishing industry) and without redirection in the draft report to the Coastal Commission's offshore wind fishing statewide mitigation strategy, currently under development.

[9] Available here: https://efiling.energy.ca.gov/GetDocument.aspx?tn=244285

[10] Commercial Viability Criteria (CVC) in the CAISO interconnection process includes a requirement of an executed Power Purchase Agreement.

V. Comments on Recommendations in the Strategic Plan

ACP-CA strongly supports several recommendations in the Strategic Plan. With additional detail and concrete steps for implementation, these recommendations will serve the state well in launching a successful, scalable, and responsible offshore wind industry.

In Table 1, ACP-CA has provided comments where we would like to see clarifications or corrections. We also suggest adding several critical recommendations for state action and coordination that we believe are missing from the Draft strategic plan. These are marked in Table 1 as "New" and highlighted in yellow.

We recognize that the recommendations collectively require a tremendous amount of staff time and resources and may need to be prioritized or sequenced appropriately over the next several years. We have indicated with an asterisk in the recommendation "code" those recommendations which are high priorities for the offshore wind industry over the next three years of implementation.

Table 1: Comments on Recommendations

Code Name **2024-2026 ACP-CA priority*	**Draft strategic plan Recommendation**	**ACP-CA Comment**
Marine 1	Support comprehensive environmental research and monitoring that uses best available science and monitoring technologies, traditional ecological knowledge, and baseline and long-term monitoring to guide project siting, assess project-level and cumulative impacts during construction and ongoing operations, and inform adaptative management strategies throughout the project lifecycle and future sea space planning and lease sales. This effort should incorporate scientific advice from academia, governments, tribes, non-governmental organizations, the offshore wind industry, and other interested entities.	Support but should clarify what "support[ing] research" means in this recommendation. Does the CEC intend for this to be a state-led research program separate from the baseline and site-specific studies that will occur through permitting? And separate from the analysis that BOEM will conduct under the programmatic environmental impact statement (PEIS)? If so, what is the funding source and what is the timeline for this comprehensive research?
Marine 2	Continue promoting coordination and collaboration among lessees on surveys, comprehensive monitoring plans, and project implementation to minimize environmental impacts, leverage resources, and increase efficiency.	Support but note that collaboration among lessees is not always possible or practical given different project development timelines and strategies as well as competitive sensitivities. CEC should also work with BOEM and California State Lands Commission (CSLC) on a common framework for Tribal engagement and

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		consultation for the development of avoidance, minimization and mitigation strategies.
Marine 3	Develop a comprehensive mitigation framework that prioritizes avoidance and identifies strategies to minimize and offset impacts to marine life and habitats from offshore wind development and ongoing operations, including impacts from port development. Adaptive management strategies should also be identified to facilitate rapid response to unanticipated impacts.	Suggest removing or clarifying that mitigation frameworks will be developed through state and federal permitting processes, primarily NEPA and CEQA. Take care that this (and other references to state development of comprehensive mitigation programs, e.g., p. 61) do not suggest to stakeholders that CEC or another agency will develop a mitigation framework separate from, conflicting with, or duplicative of the existing permitting processes. The final plan should also distinguish and explain the differences between the permitting processes and timeframes of port infrastructure projects and offshore wind projects.
Tribal 1*	The study, development, and operation of offshore wind related projects should include early, often, and meaningful consultations with California Native American tribes and collaborative development of appropriate avoidance, minimization, and mitigation strategies for impacts to tribal cultural resources, natural resources, cultural, social, economic, and other interests.	Support but provide greater detail on how the CEC and state permitting agencies intend to promote this goal.
Tribal 2	Continue to study and develop public safety measures to reduce violent crime and sexual and gender-based violence particularly against Native American and other vulnerable populations.	Support but should also clarify whether the public safety measures will be part of a broader state approach to the MMIP crisis, specific to offshore wind in the state, or specific to each offshore wind project. We note the MMIP crisis requires broader state attention beyond the confines a state OSW strategy. The CEC and offshore wind developers should engage directly with tribes to shape these strategies as they relate to offshore wind projects.
Tribal 3	Encourage project proponents to contract with California Native American tribes for cultural and environmental monitoring before, during, and after construction of offshore wind projects, port improvements, and expansion of transmission infrastructure.	Support. We note California's first leaseholders intend to do this.
Tribal 4	State and federal agencies should explore opportunities for increased tribal access and stewardship in state and federal waters.	Support but recommendation should clarify what type of access and stewardship is contemplated as well as the process and timeline for exploring these opportunities.

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*NEW Tribal 5	The CEC should work with the administration and Tribes to create a long-term funding mechanism to support capacity building for Tribes in and adjacent to offshore wind development areas, including grants and financial assistance for technical support, cultural resource assessments, training and environmental monitoring, and time spent by tribal leaders engaging in offshore wind design and development processes.	Capacity building is essential to government engagement with tribes. The state should clarify its approach to capacity building in the final plan.
Fishing 1	The latest commercial, recreational, subsistence, and cultural fishing data should be used to conduct analyses assessing spatial and temporal trends in fishing effort and value metrics in the offshore and nearshore environments, in consultation with California Native American tribes and the California Offshore Wind Fisheries Working Group. These efforts will inform deployment within existing lease areas and planning for port development and sea space for future offshore wind projects.	Support, but important for there to be agreement up front about what data will be used and how new data can be incorporated in a manner that doesn't significantly disrupt prior analysis and process.
*Fishing 2	Continue to support the California Offshore Wind Fisheries Working Group in developing a statewide strategy for avoidance, minimization, and mitigation of impacts to fishing and fisheries that prioritizes fisheries productivity, viability, long-term resilience, and safe navigation.	Support. Important to reference this active process in all sections of the Draft strategic plan covering fishing impacts and mitigation strategies. Through the 7C working group process, the state should adopt a common mitigation approach and should avoid duplicative or inconsistent mitigation requirements to address fishing impacts.
Fishing 3	Continue working with researchers, offshore wind leaseholders, tribes, and other state and federal agencies to develop a strategy to avoid, minimize, and mitigate impacts to ongoing fisheries surveys that inform fisheries management.	Support.
National Defense 1	The state should continue to coordinate with the DOD to prevent potential offshore wind development from encroaching on military testing, training, and operations areas.	
*Underserved Communities 1	The study, development and operation of offshore wind related projects should include early regular, and meaningful	Support

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	community outreach and engagement with underserved communities, non-governmental organizations, local governments, and other potentially impacted underserved groups.	
Underserved Communities 2	Offshore wind development and operation should avoid, minimize or mitigate impacts to underserved communities, including those in and around ports.	Support, to the extent practicable.
*Underserved Communities 3	Evaluate and identify ways to increase capacity for stakeholders to engage in the permitting, development, and mitigation of offshore wind development	Support. The state should review and, if needed, consider supplementing programs available to support capacity building among underserved communities near clean energy infrastructure developments in the state, including offshore wind projects and offshore wind port developments.
*Sea Space 1	Continue suitable sea space identification, research, analysis and refinement, in coordination with BOEM, underserved and tribal communities, and stakeholders to inform the feasibility of offshore wind development that minimizes impacts to California's coast and ocean resources	Support, but include a plan to work with BOEM in the Joint task force to engage stakeholders and industry on a process and timeline for determining the next wind energy areas. Close agency communication and sharing of data and resources is critical for responsible development of the OCS. We also recommend conducting a "lessons learned" exercise from the 2022 auction and subsequent round of leases executed in 2023. There are several areas of improvement that need to be considered before a second auction proceeds.
NEW Sea Space 2	The CEC should work with the U.S. Coast Guard (USCG) to ensure compatibility between new offshore wind sea space and proposed PACPars fairways	In particular, the state should work with the USCG to consider narrowing proposed fairways or adjusting them westward to avoid intersection with the most technically feasible sea-space identified in the Draft strategic plan.
Port 1	Continue to support, in coordination with federal, tribal, and local governments, developers, and underserved and local communities a port development and readiness framework. This should include consideration of potential funding sources and strategies, as well as local content and prevailing wages, to identify port site developments needed for offshore wind project development and operations.	This should be narrowed and more specific. Suggest focusing on financing strategy for offshore wind ports infrastructure upgrades. Near-term focus should be on S&I ports and how to finance them with the most efficient, affordable form of capital. We discourage the CEC from including consideration of local content requirements and prevailing wages in this recommendation. The former is better addressed through an incentive-based approach and development of a strong pipeline of offshore wind orders while the latter is an appropriate consideration for workforce recommendations, taking note of existing

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		standards already imposed via AB 1373 (2023), among other state laws. We would also suggest the Final strategic plan include a plan to develop a permitting timeline goal for OSW ports to coordinate state permitting activities for S&I port upgrades.
Port 2	A port development and readiness framework should continue to be coordinated with larger West Coast port network evaluation efforts and state and national supply chain development.	Support. California should lead a regional strategy by example and by defining its own port infrastructure goals and commitments that will support a future regional network.
Port 3	Continue to collaborate with ports and harbor districts, tribal governments, underserved communities, local communities, port users and tenants, and developers to understand the unique challenges and opportunities of each port and harbor district and their potential role in supporting offshore wind development and operations.	Support
Port 4	Continue to engage with industry leaders, developers, and supply chain entities to explore options to support local supply chain development.	Support but should acknowledge tradeoffs between local content requirements and costs. Consider incentives that promote local supply chain instead of strict or inflexible requirements. In particular, ACP-CA suggests the state and the strategic plan focus on 1) stimulating *volume* of component orders through power offtake procurements and 2) investing in port and waterfront infrastructure. These are the best tactics to both ensure the first OSW projects in the state can be built cost-effectively and to stimulate and attract local investment.
*NEW Port 5	The CEC, together with GOBiz, should develop a framework for the complete funding of staging and integration ports for offshore wind development in California that includes exploration of various sources of state and federal grants, public debt and loans guarantees, and private equity, considers the long-term business potential of new port terminals, and seeks the best approaches for leveraging the most cost-effective, secure forms of capital.	The plan should prioritize S&I solutions as the most critical component of port and supply chain infrastructure to launch the offshore wind industry. Draw clear conclusions in final strategic plan identifying Humboldt and Long Beach as the best locations for the first staging and integration port terminals to supply California projects.
NEW Port 6	The CEC, in consultation with CARB, should analyze and develop a strategy for the construction or sourcing of the specialized vessels needed for offshore wind construction and operations and	This recommendation is a response to the vessel and marine operations conclusions about CARB-compliant vessel availability and Jones Act in the Draft strategic plan (p 155).

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	maintenance, in compliance with future CARB and EPA emissions standards as well as Federal Jones Act vessel flagging and crewing requirements.	
Workforce 1	Identify immediate and long-term workforce needs, understand diversity gaps, develop targeted and equitable hiring standards, establish training curricula and programs, fund training and education centers, recruit entry-level as well as experienced workers, set local, tribal, and equitable hiring standards, and prioritize prevailing wage and union labor.	Support. As part of this, we would also like to see refinement in the public messaging from the state about workforce expectations given the variety of projections and reports informing the Draft strategic plan currently.
Workforce 2	Coordinate with local communities, tribes, workforce training centers, government agencies, community organizations, employers, high schools, community colleges, and universities to create career opportunities, workforce training, and economic development benefits.	Support
Workforce 3	Support the development of project labor agreements that provide local and underserved communities and tribes with meaningful economic benefits from offshore wind development.	Support. Should reference AB 1373 (2023) labor provisions and BOEM lease terms to avoid duplication.
Permitting 1	The state should consider developing and implementing a coordinated, comprehensive, and efficient process for permitting offshore wind and related projects based on the previously successful Renewable Energy Action Team (REAT) and Renewable Energy Policy Group (REPG) models developed in 2008 to permit utility-scale renewable energy projects in the California desert.	Support but the CEC should strengthen this recommendation to "The state should create and implement…". The REAT and REPG models have been fully vetted and considered at this point and the state should move into implementation.
Permitting 2	The state should engage early and consistently with BOEM on its offshore wind programmatic environmental impact study to ensure the analysis is reflective of the state's priorities as it relates to data collection, analysis methodology, impact identification, and mitigation measures.	Support. The state should engage in the development of the PEIS as a coordinating agency with BOEM to enable California agencies to tier project-specific reviews off the analysis and conclusions in the PEIS.[11]

[11] See also ACP-CA comments on BOEM NOP for California Offshore Wind PEIS available at https://www.regulations.gov/comment/BOEM-2023-0061-0140

Code Name **2024-2026 ACP-CA priority*	**Draft strategic plan Recommendation**	**ACP-CA Comment**
*NEW Permitting 3	Commit to implementing a coordinated interagency agreement approach to permitting offshore wind including development of an interagency MOU, permitting checklists with aligned application requirements, and timelines, as outlined in Appendix B of the April 2023 Permitting Roadmap. The permitting timeline will be anchored on BOEM's offshore wind permitting approach and allow for concurrent reviews where appropriate. The CEC and/or Special Advisor to the Governor's Office will be tasked with ensuring permitting steps at each agency adhere to the steps and schedule outlined in the timeline, to the extent practicable.	This recommendation is consistent with the adopted permitting roadmap and the recommendation above to pursue a coordinated permitting approach (Permitting 1). Specifically, a timeline for permitting coordination is required by AB 525 and critical to ensuring timely, effective permitting of offshore wind projects. The report acknowledges that without coordination and leadership to ensure timely reviews, permitting could typically take ten years. ACP-CA has emphasized the importance of a timeline in several previous comment letters.[12] Transparent and predictable schedules will enhance visibility to stakeholders, build confidence in the process and outcomes, and provide certainty needed by developers for their internal project development schedules. In addition, the state must sufficiently and sustainably fund its permitting agencies to enable coordination and efficient permitting. Based on the timeline for permitting and environmental reviews, the CEC should include in the Final strategic plan an estimate of staffing and funding requirements for each agency over the next 10-year period. This estimate can serve as the basis for annual budget processes to enable the administration and legislature to comprehensively evaluate the funding requirements for offshore wind permitting across agencies.
*NEW Permitting 4	The CEC should engage all agencies identified for the Ocean Renewable Energy Action Team/ Renewable Energy Policy Group (REAT/REPG) to develop detailed processes and plans for ongoing coordination and collaboration across the offshore wind permitting timeline.	As a supplement to "New Permitting 3," above, the Final strategic plan should further develop an implementation plan for the Ocean REAT/REPG model. Leaseholders are already encountering problems in lack of coordination between BOEM and state agencies regarding survey plans, emphasizing the clear need for an improved process for coordination.
Transmission 1	Continue assessing transmission alternatives for the North and Central Coast offshore wind development to meet the offshore wind planning goals, including analyzing corridors, routes, and rights-of-way for promising transmission pathways, including land-based (overhead and underground, HVAC and HVDC) and subsea cable alternatives.	Support, but should be done in collaboration with CAISO.

[12] See ACP-CA and OWC comments from February 10, 2023 and ACP-CA Comments from July 19, 2023 available at CEC docket 17-MISC-01.

Code Name **2024-2026 ACP-CA priority*	**Draft strategic plan Recommendation**	**ACP-CA Comment**
Transmission 2	Consider phased approaches to transmission development to examine both short-term and long-term offshore wind development needs, costs, and benefits that balance these factors.	Support, but each phase should support multiple commercial scale projects.
Transmission 3	Foster regional bulk transmission planning efforts to support offshore wind development along the West Coast to maximize the potential benefits throughout the Western Interconnection.	Support, but take caution not to leave developers waiting around for regional solutions that depend on market developments or the support or actions of other states beyond California's control. Note DOE's caution on this point as reported on pg. 231.
Transmission 4	Explore innovative approaches, such as networked or backbone systems, and implementation mechanisms, to efficiently bring offshore wind energy to shore to meet the offshore wind planning goals.	Support, but consider adding research priorities, such as EPIC funding support to advance development of dynamic export cables, floating converter stations, and other transmission technology advancement needs identified in the report. Should also beware of practical and financial limitations to meshed or backbone transmission solutions which may be better suited to a second or third wave of offshore wind project developments in Northern-CA/Southern-OR.
Transmission 5	Inform existing transmission planning processes by systematically identifying and prioritizing alternative points of interconnection that limit the number of landfall sites and minimize environmental impacts and long run costs.	Transmission planning processes generally examine routes between an interconnection point and a load center or between an interconnection point and a grid hub rather than assessing different interconnection points. Note that interconnection points on-shore will largely be determined by cost, environmental, and technical analyses of individual developers. Importantly, the CEC should work with CDFW, State Lands Commission and Coastal Commission to examine the best regulatory or programmatic solutions for permitting export cables through state marine protected areas where necessary to achieve the most environmentally sound and/or cost-effective cable routing.
*NEW Transmission 6	The CPUC should incorporate AB 525 planning goals and findings on future offshore wind sea-space into future Integrated Resource planning (IRP) portfolios and send sufficient long-term planning direction to the CAISO on the location, timeframe, and quantity of offshore wind for incorporation into the Transmission Planning Process (TPP) such	The CEC should continue to engage closely with the Governor's office and the CPUC on key decisions in the IRP proceeding as this is the predominant forum for converting transmission analysis into true planning, permitting and construction of new transmission infrastructure. The Transmission Planning Process (TPP) is a critical process for long-lead time resources, especially those dependent on new transmission.

Code Name *2024-2026 ACP-CA priority	Draft strategic plan Recommendation	ACP-CA Comment
	that offshore wind projects and associated transmission progress together at the right scale and on time.	New transmission is primarily planned and approved through interconnection processes, the CAISO transmission planning process ("TPP"), or through incumbent transmission owner's internal processes. The only existing process that can meaningfully plan for new transmission needed to access offshore wind within a reasonable amount of time is the TPP.

VI. Comments on Sea-Space analysis and Next Steps

ACP-CA appreciates the CEC's thorough and rational approach for considering additional sea-space suitable to achieve the state's 25 GW offshore wind goal, as required by AB 525. We offer the following recommendations for advancing this sea-space analysis to the next phase.

First, we recognize that the total sea-space identified, up to 4,600 square miles, may mislead or alarm certain stakeholders into thinking this quantity of offshore wind is actively targeted for development. The CEC should take care to explain the BOEM process for evaluating sea-space, issuing a call for information and nominations, designating wind energy areas, conducting environmental assessments and consistency reviews, receiving feedback from other state and federal agencies, and issuing proposed and final sale notices before a sea-space auction could occur. This is provided in Volume III but should also be referenced in Volume II alongside key findings and recommendations. We also recommend the CEC explain the linkage between offshore wind leases and oil and gas auctions per the Federal Inflation Reduction Act which may impose timeline restrictions on the next California auction. It is important for stakeholders to understand the sea-space analysis in the Final strategic plan proceeds but does not replace the BOEM process.

Second, we request that the CEC adjust its assumptions about offshore wind area power density. Based on discussions with leaseholders on how they are planning projects, as well as most recent industry analysis,[13] we believe a higher density factor of 7 MW/km2 should be assumed. We recommend adjusting this assumption as it has significant impacts on the total sea-space requirements to achieve the state's offshore wind goals. Our summary analysis supporting this higher density assumption is provided in Attachment 1.

Third, industry generally does not believe that sea-space with water depths beyond 1,500 meters is technically or economically feasible at this time. The existing floating offshore wind leases are in waters at ~1,300 meter depth, which is the deepest water for planned floating offshore wind installations globally. Development in areas with twice the water depths would require at least double the quantity of mooring cables to secure floating platforms to the seafloor. This would cause a major increase in offshore wind costs and exacerbates uncertainties that hinder responsible siting. Furthermore,

[13] See Enevoldsen, Peter & Jacobson, Mark. (2021). Data investigation of installed and output power densities of onshore and offshore wind turbines worldwide. Energy for Sustainable Development. 60. 40-51. 10.1016/j.esd.2020.11.004.

transportation costs and electric cabling costs would be much higher for projects located fifty miles from shore. These factors should be weighted heavily against the general conclusion that "to avoid the highest conflict areas and minimize impacts, offshore wind infrastructure should be deployed as far from the coast as possible." We note that 20-25 miles from shore, the location of existing leases, is already far enough to avoid the most substantial co-occurrence of offshore wind with species, habitats, and other ocean-uses and shifting new developments even farther from shore may have declining benefits, especially compared to increases in costs.

Fourth, we recommend that the CEC commit to engaging with the USCG on the PACPars analysis ahead of finalization of the proposed fairways. [14] Otherwise, the only feasible sea-space identified in the Draft strategic plan may be the areas in Del Norte and Mendocino regions east of the fairways.

Given the above adjustments, we suggest that the CEC may be able to identify in the Final strategic plan a much smaller area for future offshore wind development, focusing on the nearer shore regions in Del Norte and Mendocino. We recommend the CEC identify a potential area in the eastern sections of the North Coast Sea Space regions totaling ~2,000-3,000 km2 which should be sufficient to close the gap between existing leases (capable of roughly 10 GW) and the state's 25 GW goal. This does not foreclose the opportunity to add additional sea space in the future, but would be an appropriate quantity for the purposes of the AB 525 plan.

Table 2: Sea-Space findings Adjustments with corrected power density

		Potential Capacity (MW)			**Additional Sea-Space Required to achieve AB 525 Goals (km2)**
	Area (km 2)	**Low (AB 525)**	**High (AB 525)**	**Industry Corrected**	
Humboldt Leases	536	1,608	2,680	3,752	
North Coast Sea Space	8,950	26,850	44,750	62,650	2,060 (23% of North Coast Sea Space)
Morro Bay Leases	975	2,925	4,875	6,825	
South-Central Coast Sea Space	1,462	4,386	7,310	10,234	

VII. Discussion of Other Issues in the Report

Tribal subchapter

We appreciate and commend the CEC for its engagement with Tribes and the summary provided in the AB 525 plan which highlight the history, cultural heritage, and relationship to natural resources

[14] ACP comments to the U.S. Coast Guard regarding the Port Access Route Study: The Pacific Coast From Washington to California; Notification of Study, January 25, 2022. Available at https://cleanpower.org/resources/comments-re-port-access-route-study-the-pacific-coast-from-washington-to-california/

that will inform how tribes engage with the state and companies on offshore wind proposals as well as their specific concerns and desires related to offshore wind. Offshore wind developers are in the early stages of relationship building and learning with Tribes who may be affected by offshore wind in their regions. Meaningful Tribal engagement is not only a requirement of offshore wind leases and project permitting but also imperative to developing successful, mutually beneficial project partnerships.

ACP-CA recognizes the significant time and effort required for individual Tribes and tribal leaders to effectively participate in offshore wind development discussions, including broad conversations with state agencies, as well as more specific discussions on project design planning, permitting, and community benefit agreements. We also acknowledge that many tribes lack the resources to compensate participants for their time, or to hire additional staff or technical resources to engage in offshore wind development. As such, capacity building for Tribes is a priority issue for implementation of AB 525 and we request that the CEC include a recommendation in the Final strategic plan on the state's plan to address this need. This framework should be developed in close consultation with Tribes in order to reflect the type of resources and capacity they need, how they can or want to receive resources or financial support, and to avoid competition and promote equity.

In addition, the interagency MOU and coordination needed for the Ocean REAT/REPG should facilitate, with Tribes, the development of a consistent and efficient framework for tribal engagement and participation, including standards for communication and engagement, as well as capacity building.

Port and Waterfront Infrastructure Chapter

ACP-CA commends the CSLC on its Port Readiness planning which fed into the Port and Waterfront Infrastructure Chapter of the Draft strategic plan. We support many of the findings and conclusions in this chapter. We further suggest a stronger focus on Staging and Integration facilities and what the state needs to do to advance the proposed projects in Humboldt and at the Port of Long Beach. We note the conclusion in the Draft strategic plan that, "the Port Plan shows it may not be possible to meet the 2030 planning goal of 2 to 5 GW as it takes several years to complete planning, engineering, permitting and regulatory approval, and construction." While we acknowledge this risk, the state must not let up on its goals. Achieving 5+ GW of offshore wind by 2035, following major infrastructure investments at the ports, would be a definitive win for the state and the offshore wind industry.

As ACP-CA commented in our letter on the AB 525 ports workshop,[15] the Port Readiness analysis shows that Port of Humboldt and Long Beach are the best alternatives for priority S&I development today. The CEC should affirmatively state this conclusion in the final ports and workforce development chapter of the AB 525 Strategic Plan. Doing so will enable policymakers and stakeholders to move beyond alternative analysis and toward action planning and implementation for the first phase of offshore wind development. It is also critical to prioritize development of these first S&I ports built to serve the first five offshore wind projects in Morro Bay and Humboldt. Solving this infrastructure challenge will not only kick start the offshore industry but will also unleash additional planning and investments aimed at manufacturing and O&M ports. Early learning from

[15] See ACP-CA June 13, 2023 comments at 17-MISC-01

upgrades at Humboldt and Long Beach will also aid in the identification and development of future west coast S&I facilities.

As such, the CEC should clarify the conclusion in the port chapter that, "Particularly important are programs to encourage early-stage port development, including port readiness, concept design, and engineering, as well as permitting and environmental assessments."[16] While encouraging early-stage readiness for manufacturing and operations and maintenance facilities will be important in future years, the continued permitting, design, and engineering work at Port of Long Beach and in Humboldt, as well as the preparation of a broader funding strategy to secure the $5-6 Billion in upgrades needed at these facilities, is of paramount importance in the near term. The ports chapter of the Final strategic plan should focus on getting the first two S&I ports funded and completed. We also recommend that the final strategic plan include a timeline for permitting and construction at the S&I ports which demonstrates how the separate processes of port development and offshore wind project development must align toward the state's goals.

Transmission Chapters

The Transmission Technology chapter does a thorough job assessing the state of offshore transmission technology and exploring various transmission design alternatives. The Transmission Planning and Interconnection chapter summarizes several important studies, including from the report from the Schatz Energy Research Center on transmission route and capacity alternatives to access North Coast and Oregon offshore wind. However, these chapters inadequately address how offshore wind will fit into the CAISO's transmission planning process (TPP) framework and new interconnection process. The TPP is the preeminent process for approving and awarding contracts to build major new transmission capacity in the state and by far the most likely process by which new transmission capacity for offshore wind will be approved and constructed. While the process is discussed at a high level across two pages of the Draft strategic plan, the CEC should expand this discussion to include an analysis of how recent and future IRP decisions will inform TPP cycles and whether and how those decisions will align with the timeframe for offshore wind transmission construction and the parallel development of offshore wind projects. The timeline provided on page 268 of the Draft strategic plan is a useful starting point but must include the IRP and TPP cycles where decisions on offshore wind transmission are made. Doing so, along with presenting the timeframe for transmission approvals and construction, will illustrate the risk of falling behind in transmission planning by missing an opportunity to advance offshore wind transmission in the next TPP base case.

Similarly, the Draft strategic plan discusses transmission procurement options considered in New York, New Jersey, and Great Britain[17] but fails to acknowledge the standard transmission procurement process in California under the TPP. While we encourage creative solutions for transmission construction, such as through issuance of competitive solicitations on transmission solutions approved by the CAISO, the CEC need not reinvent the wheel on how California considers and approves new transmission projects. Instead, the Fraft strategic plan should identify the next

[16] Draft strategic plan p. 156
[17] Draft strategic plan p. 231-234

steps and policy levers that will ensure transmission planning for offshore wind occurs on time and at the right scale within the IRP and TPP processes.

We also support the discussion of interconnection process enhancements in the Draft strategic plan[18] and the unique circumstances of offshore wind that require greater interconnection certainty. ACP-CA has been actively participating in the CAISO's Interconnection Process Enhancements stakeholder process[19] and we appreciate the CAISO's attention to the needs of long-lead time resources in priority resource zones as well as its contemplation of processes for reserving deliverability and aligning timelines such that offshore wind projects can take advantage of new transmission capacity approved in the future to access offshore wind resources.

Permitting Chapter

ACP-CA supports the recommendations included in the Draft strategic plan on permitting but, as described above, requests greater detail and stronger commitments to implement the preferred permitting model as soon as possible.

We agree that a coordinated approach, such as an Ocean REAT/REPG model, could best facilitate collaboration and efficiencies across agencies. We also support the recommendation that California participate in rather than duplicate a programmatic environmental review of the first five offshore wind projects. We refer the CEC to our comments to BOEM on the Notice of Preparation of a Programmatic EIS for California Offshore Wind which explain the importance of enabling tiering for project-specific permitting and designing appropriate and feasible Avoidance, Minimization, Mitigation and Monitoring Measures (AMMMs).[20]

However, ACP-CA finds the strategic plan as well as the AB 525 permitting road map, to be lacking in key areas. As stated above, the final plan should include a predictable, agreed-upon, transparent timeline for agency reviews and stakeholder engagement. ACP-CA has previously discussed the value of including a detailed schedule or Gantt chart that depicts developer/agency early engagement, coordinated agency reviews and sequencing.[21] We understand that some agencies responsible for permitting may be hesitant to commit to specific timelines. However, the risk to agencies of falling behind on timelines (which are not strictly enforceable but provide important guidelines) is far smaller than the risk to project developers of pursuing project permitting across various agencies

[18] Draft strategic plan p. 226-227

[19] See ACP-CA Comments available https://stakeholdercenter.caiso.com/Comments/AllComments/aab81f7d-e930-4b23-9f41-1fa8dac4576c#org-969cd118-7533-4e9b-abee-979bfb1f11ae and https://stakeholdercenter.caiso.com/Comments/AllComments/db2a7c50-3962-46ad-b217-59749bef1704#org-c14109df-7c74-4b92-9ee6-120e1c844d55

[20] See ACP Comments filed on BOEM's NOP, available https://www.regulations.gov/comment/BOEM-2023-0061-0140

[21] See ACP-CA July 2023 Comments to CEC 17-MISC-01 and ACP-CA/Offshore Wind California Joint Comments February 2023 to CEC 17-MISC-01

with completely unbounded timeframes for completion and unclear or conflicting requirements. This level of uncertainty will severely compromise project planning and financing.

Second, the final strategic plan should present a stronger point of view from the CEC on the importance of creating certainty and efficiencies in the permitting process. The Draft strategic plan reflects the concerns of eNGOs as expressed in a joint comment letter that discourage concurrent permitting processes or tiering of project-specific environmental reviews from a programmatic review. While recognizing these views, the Final strategic plan should take an affirmative stance on the need for efficiency and predictability in offshore wind permitting as a core tenant of a successful statewide offshore wind strategy. The permitting process for offshore wind projects in California is irrefutably extensive and rigorous, as evidenced by the myriad steps and permits outlined in the AB 525 permitting roadmap, as well as the record of federal offshore wind permitting processes on the east coast. It is essential for the CEC to provide leadership and direction in the final strategic plan by prioritizing efficiency and predictability in the offshore wind permitting process.

Third, the Final strategic plan should include process improvements implemented via state statute, such as the California Coastal Commission's (CCC) use of a consolidated coastal development permit process for offshore wind projects.[22]

Finally, we strongly recommend that the final strategic plan include specific next steps for the state to initiate the Ocean REAT/REPG process. These include development of MOUs with relevant agencies, consideration for the role of tribal leaders in this process, planned coordination across the timeline developed as part of this strategic plan, and agreement on dispute resolution processes. We note there are likely to be challenges that arise in aligning the timelines of developer processes, state permitting process with federal review processes (e.g., with the use of FAST-41), including the BOEM NEPA process, National Marine Fisheries Service (NMFS) Endangered Species Act (ESA) consultations, and Marine Mammal Protection Act (MMPA) permitting process. The sequential approach to federal permitting steps on the east coast has led to delays, and the California process is expected to be even more complicated. The final strategic plan should include implementation steps for aligning and sequencing state, federal and developer permitting processes, allowing for both efficiency and flexibility to accommodate unexpected challenges. ACP-CA's principles and perspectives on the permitting roadmap are further provided in our July 2023 comments to the CEC docket.[23]

VIII. **Errors and Omissions**

The Draft strategic plan covers a range of topics and considerations for the development of California offshore wind. In Table 3, we have provided comments on specific text in the Draft strategic plan where we would like to see corrections or additions.

[22] PRC 30601.4

[23] ACP-CA Permitting Roadmap comments, submitted to CEC 17-MISC-01 July 19, 2023

Table 3: Errors, omissions, and areas of disagreement in the Draft strategic plan

Chapter/ page	Topic	ACP-CA Comment
Volume II		
2/20	Creating an industry	This chapter should be expanded to highlight the potential for California to lead a global floating offshore wind industry and California's new participation in the Global Offshore Wind Alliance.
3/40-43	CADEMO Report	ACP-CA disagrees with the conclusion reported that "The CADEMO Report suggests that economic and workforce estimates for these two projects could provide insights into near-term commercial offshore wind projects in the Humboldt Bay and Morro Bay Call Areas." Scale matters to the potential job creation impact of offshore wind, especially when it comes to job creation in offshore wind manufacturing. The final report should not rely on Morro Bay job estimates based on CADEMO report and should provide less focus on the CADEMO report overall.
3	Job creation estimates	The report includes several job creation ranges and potentials based on various scenarios. The final report should provide a conclusion statement about the best estimate or range for offshore wind and offshore wind port jobs expected to be created to support a 25 capacity GW OSW goal.[24]
3/36	Error in assumption used by Catalyst	Consider updating the total cost of a port development and updating conclusions. $125 Million for seaport development is not consistent with report finding elsewhere. One S&I port terminal is estimated at $700M - $1.1B (section 6, page 136 – cost per 80 acres (1 S&I site).
3/ 45	Local supply chain	We agree with importance of developing a local supply chain, but the report should soften conclusions about imported supply chain causing risks of "local shocks". We note there will be a short-term need for component imports as industry is in its early stages in California and before local component manufacturing is built up. A long-term schedule of power offtake contract solicitations is the best driver of developer purchase orders which ultimately will inform siting of new manufacturing facilities locally. A local supply chain will come as the industry matures.
4	Marine Impacts	Discussion of marine impacts should be better contextualized based on what we know about the current lease areas. The conclusions of the Conservation Biology Institute and Point Blue analyses referenced in the sea space planning chapter demonstrate the relatively low expected co-occurrence of sensitive species and habitats within the lease areas and this analysis should be brought forward into the marine impacts discussion in Chapter 4. Similarly, this section should also include discussion of the benefits of offshore wind to mitigating climate change induced impacts to marine resources.
4/49	State of science	Discussion on level of uncertainty about offshore wind impacts, ground for inferring impacts, and what will be best understood through project-specific designs should be supplemented to refer to the permitting and project development process, and how that process will improve the state of science and public understanding and allow projects to move forward with proper monitoring and adaptive management. Otherwise, the discussion creates the perception that there will always be significant uncertainty regarding impacts.

Chapter/ page	Topic	ACP-CA Comment
4/49	State of floating technology	"Floating offshore wind technology is in its infancy..." We recommend changing this statement as floating offshore wind is an emerging technology that has been rapidly growing over the last decade.
4/51	Figure 4-1	Figure 4-1 identifies burial of inter-array cables as "potential mitigation strategy". All offshore wind energy areas in California are in deep waters, over 3,000 feet in most cases, where burial of inter-array cables is infeasible.
4/50	Categories of impacts	The Draft strategic plan covers impacts from OSW projects themselves, ports, and transmission. These are also discussed in Volume III appendices. However, each of those three types of development will go through separate and distinct permitting processes. This should be made clear to stakeholders so they understood how and where various potential impacts will be analyzed and addressed.
4/55-56	Bird impacts	The plan should note that very few avian populations travel as far out as the existing or future offshore wind lease areas, pulling in conclusions from elsewhere in the report (e.g., p 93 and p. 109).
4/ 56	Entanglement	The Draft strategic plan says "Strategies to address this issue include considering use of best available mooring systems and inter-array cables that include sensors to detect when debris gets snagged on them…." We are uncertain about the feasibility of this strategy. Running power and communication cables to sensors across a mooring system for accurate communication within a specific timeframe to determine the presence of debris is likely very expensive and routine monitoring by O&M staff is likely a better approach.
4/56	Underwater Noise	The Draft strategic plan says that "Geophysical surveys off California will likely be conducted with low-energy equipment, which would significantly reduce potential impact to marine mammals and sea turtles." Leaseholders are required to conduct geophysical surveys using low-energy equipment in the BOEM lease agreements. Finally, as noted by the State Lands Commission in the March 29 workshop, the state already manages a list of low-energy approved equipment and provides permitting for geophysical survey work in state waters. We recommend CEC including a more detailed explanation of how the low energy acoustic equipment affects different marine life and mitigation strategies to minimize potential effects on marine species.
4/56-57	Underwater Noise	This statement should be corrected or deleted: "The use of sound in geophysical surveys may affect the behavior of marine mammals by masking their ability to hear important environmental sounds and requiring more intense vocalizations; intense sounds may damage their ability to hear." Note the very significant differences between the sound sources used in oil and gas exploration as compared to site characterization for offshore wind, as highlighted in a recent Marine Mammal Commission report. [25] BOEM has similarly presented information on the potential impacts from site characterization activity and found no connection to whale mortality and very little risk of behavioral

[25]See: https://www.mmc.gov/wp-content/uploads/Update-on-Strandings-of-Large-Whales-along-the-East-Coast-2.21.2023.pdf & Ruppel, Carolyn D., Thomas C. Weber, Erica R. Staaterman, Stanley J. Labak, and Patrick E. Hart. "Categorizing active marine acoustic sources based on their potential to affect marine animals." *Journal of Marine Science and Engineering* 10, no. 9 (2022): 1278.

Chapter/ page	Topic	ACP-CA Comment
		disturbance.[26] We also recommend that the CEC include a discussion of the state of science on impact to whales from offshore wind noting the extreme disinformation campaign on this issue on the east coast that will likely challenge presentation of facts and science here.[27]
4/58	Ship strike risk	This should be contextualized with information on the number of vessels in the water currently and the very low relative portion of offshore wind related vessels. Should also refer to voluntary and obligatory vessel speed reduction programs and other standard mitigations, such as endangered species observers.
4/59	Upwelling	The CEC should reference recent studies on hydrodynamic effects of offshore wind which conclude "The spatial extent and magnitude of hydrodynamic effects and the nature of any associated ecological impacts are less certain but are likely to be up to an order of magnitude less than changes due to natural variability and climate change."[28]
4/60	Export cables	The Draft plan reports, "Strategies to minimize impacts from export cables include requiring export cables from the WEAs to use consolidated routes to shore, requiring burial of the cables, and requiring verification surveys to confirm that the cable remains buried or is in its expected location." Requiring the different project developers to collocate export cables is challenging because different developers may look to interconnect at different locations and having multiple cables share a single landing site can be infeasinble. Burial of cables may be infeasible depending on type and location of substation (floating or not) as well as the complex cost and technical requirements to burry cable anywhere. Verification surveys over the lifetime of the project may be excessive.
4/60	Ports	The plan states, "port development would likely require pile driving and other sources of underwater noise, which may impact nearby fish and marine mammals, though existing mitigation strategies, such as bubble curtains, would reduce these impacts." Rather than referring specifically to bubble curtains, instead note any port development permit application will require adequate noise mitigation measures per the requirements in the relevant permitting procedures.
4/75	Fishing ground loss	The report should note that offshore wind leases are a small fraction of the ocean, not overlapping with the most important fishing grounds in either region, as demonstrated in the sea-space analysis, and conclusions on page 115.
4/75	Fishing engagement	The Draft plan states, "Fishing industry representatives have actively participated in federal and state offshore wind meetings and processes since 2016. They have expressed frustration and uncertainty about offshore wind overall, often commenting about lack of data, information, and engagement from the lessees." It is important to note leases are less than one year old so engagement with leaseholders has naturally been limited as compared to the longer-term engagement with government entities. The five California lessees

[26] See: https://anjec.org/wp-content/uploads/2023/06/ANJEC_climate_webinar_acoustics_whales_May31.pdf
[27] See: https://cleanpower.org/resources/clean-energy-opponents-are-wrong-about-whale-deaths/
[28] See: https://cleanpower.org/wp-content/uploads/2023/10/ACP_OSW-Hydrodynamics-and-NARW_Whitepaper_2023.pdf
30 See: https://www.nationalacademies.org/news/2023/10/briefings-to-congress/potential-hydrodynamic-impacts-of-offshore-wind-energy-on-nantucket-shoals-regional-ecology---an-evaluation-from-wind-to-whales

Chapter/ page	Topic	ACP-CA Comment
		have been engaging with fishermen since lease execution date, conducting early and frequent outreach to develop Fisheries Communication Plans (FCPs) in partnership with fishermen, and actively participating in the CCC's 7c Fisheries Working Group.
4/75-76	Fishing impacts/Gear loss	Impacts listed in this section are based on perceived potential issues and sea space use interferences rather than specific to the wind energy areas identified for development. Damage or loss of fishing gear is an impact addressed in the lessees' FCPs. CEC should recognize this in the Final strategic plan.
5/80	Figure 5-1	Figure 5-1 (AB 525 Sea Space Areas of Interest) identifies a "CA Exclusive Economic Zone" in the legend. The definition of Exclusive Economic Zone is prescribed by the 1982 United Nations Convention on the Law of the Sea and defined as an area of the sea in which a sovereign state has exclusive rights regarding the exploration and use of marine resources, including energy production from water and wind. The United States exercises sovereignty over its Exclusive Economic Zone (EEZ). In their website, NOAA states that under certain U.S. fisheries laws, such as the Magnuson-Stevens Fishery Conservation and Management Act, the term "exclusive economic zone" is defined as having an inner boundary that is coterminous with the seaward (or outer) boundary of each of the coastal states. We recommend CEC to clarify and correct Figure 5-1 for an adequate representation of marine boundaries.
5/109	Marine Turtles	The Final strategic plan should note that considerations examined by BOEM in developing the Morro Bay WEA include: (a) historic properties, (b) visual impacts, (c) places and resources of importance to Tribes, (d) **marine mammals and sea turtles**, and (e) other infrastructure.[29] The Morro Bay WEA was analyzed and identified as suitable for offshore wind development using the state of the best available scientific knowledge regarding Endangered Species Act (ESA) listed marine mammal distribution and critical habitat.
5/121	Generation potential	Correct power density to 7MW/km2
5/124	Decisions based on empirical biological data	This chapter states, "The potential impacts from offshore wind development are not fully understood because it is a new technology not previously used in conditions like those off the California Coast. Therefore, it is critical that offshore wind projects and decisions are based on empirical biological data collected at appropriate scales to accurately understand the potential impacts on marine life." We recommend advocating for use of the best available scientific knowledge for planning and permitting decisions. The use of "empirical biological data" is not fully defined by CEC in Chapter 5 and may lead to misinterpretation by permitting agencies.

[29] See: https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/2202_AppA_MB_AreaIDMemo_Signed.pdf

Chapter/ page	Topic	ACP-CA Comment
6/131	Ports	Would encourage this statement to trigger a plan of action, rather than statement that one goal may not happen. "The Port Plan shows it may not be possible to meet the 2030 planning goal of 2 to 5 GW as it takes several years to complete planning, engineering, permitting and regulatory approval, and construction."
6/132	S&I Port specifications	Upland psf capacity should be minimum 3000psf. Towers, tower stands and upending systems are not shown quayside in layout.
6/138	Manufacturing port specifications	Upland psf capacity should be minimum 3000psf especially for nacelles. Ground bearing pressure depends on component type. Tower manufacturing facilities would ideally have no airdraft restrictions some sections need to be transported vertically.
6/141	O&M Ports	Table 6.6 is in line with our expectations with the exception of wharf loading and upland/yard loading. We would expect 1,000 psf not 500 psf. 350ft wharf length would be more aligned with O&M Service Operation Vessel (SOV) requirements. Minimum 3 acres for one project supporting O&M facility. Figure 6-4, wharf/berth structures are preferred for O&M instead of pier marine structures due to crane and loading operations.
6/	Categorizing port types	Chapter 6 cites the Port Plan, which concludes that a multi-port strategy will be needed and could require more than 16 large and 10 small port sites to support offshore wind development in the state. It also distinguishes 3 different port types based on offshore wind activities: Staging and Integration, Manufacturing and Fabrication and O&M. For clarity, we suggest identifying how many of each port type would be needed to support the industry instead of saying 16 “large” and 10 “small” ports. Those terms are relative/not defined in the Chapter.
6/148	Port conclusions	Table 6-11 identifies port locations based on site type – with only 5 locations identified plus “10 small sites” for O&M. The number of ports identified in this table does not match the Port Plan conclusions. Although this table is described in the plan as “one potential port development approach” it is confusing that it doesn’t match the conclusions of the port readiness plan. If there are intended changes in conclusions between the Final Port Readiness Plan and this chapter of the Strategic Plan, those updates should be explicitly noted and explained.
7/160	Workforce and costs	Reference to costs here is odd, but should tie economic benefits to evaluation of cost-effectiveness if referenced.
7/160-161	Workforce numbers	It is confusing to have job need/job creation estimates here as well as in Chapter 3. Consider consolidating.
7/174	Project Labor Agreements	Should correct the statement that “FSN stipulates entering into PLAs”; refer to specific lease language on PLAs which says, “The Lessee must make every reasonable effort to enter a Project Labor Agreement(s) (PLA) that covers the construction stage of any project proposed for the leased area, and that applies to all contractors.”
7/	Workforce and Labor	Should add in a discussion of the workforce provisions for offshore wind projects created by AB 1373 (2023) which will only be in effect if the central procurement function is exercised for the contracting of offshore wind projects.
7/178	Workforce conclusions	Conclusions in this chapter should better highlight potential economic growth, creating stable, long-lasting, high-paying jobs, centered on apprenticeships and post-secondary training and education.

Chapter/ page	Topic	ACP-CA Comment
8/191	Transmission options	It is confusing to discuss transmission options for a very small injection of offshore wind in the North Coast. No developer is proposing this at this time. Could be misleading that offshore wind projects are "select-a-size" when in fact they have minimum scale requirements for cost-effectiveness. The plan should instead focus on conclusions for 1,000 MW or greater offshore wind development scenarios in the North Coast.
8/199, 213	Power density assumptions	Update for future studies to 7 MW/km2
8/213	CHNMS	The reference to the Chumash Heritage National Marine Sanctuary needs to note and discuss implications of CHNMS for electric cables, not just the wind energy areas.
8/214	Morro Bay interconnection	Note need to access 6 GW of interconnection, not just 5. Not just an issue of when Diablo Canyon closes but how to accommodate full build out of Morro Bay lease areas.
9/230-237	Transmission ownership and cost allocation	Odd to discuss NJ and NY models without describing standard CA process and how projects could be approved through TPP and the Transmission Access Charge vs. Merchant funded. Could also discuss subscriber PTO model and how that might work for privately built offshore infrastructure.
238	Local reliability	The plan should explain that distribution system planning for local reliability and bulk transmission system are different planning and approval processes with different responsible parties (IOUs and CAISO, respectively). CEC should consider how pursue both or how OSW could leverage investments in both transmission and distribution system upgrades.
10/	Survey activities	Although Chapter 10 cites the Permitting Roadmap adopted in April 2022, we suggest including relevant text from the Permitting Roadmap that stresses the need "for coordination and engagement with lessees <u>from prefiling through permitting</u> to encompass site assessment surveys, SAPs, COPs, CEQA review and compliance, and applications for local, state, and federal entitlements."
11/268	Timeline	The permitting sections on this timeline are very broad and don't reflect current BOEM processes such as the separate processes for review of a Subsea Cable State Water ROW through CEQA/NEPA vs. the review of a COP under CEQA/NEPA.
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Appendix B/pg 20	Potential Impacts and Mitigation Strategies	The draft strategic plan states "operational adjustments to seasonal or time-of-day operation could be made to reduce impacts to migratory birds if studies indicate a substantial impact" but this type of blanket curtailment has not been shown to be effective for migratory birds.
Appendix B/26	Fishing Grounds Access	In naming mitigation options for maximizing access to productive fishing grounds, the CEC should also consider whether freeing up other areas currently off-limits to commercial fishing (such as essential fish habitat areas) may be warranted especially if offshore wind farms create de facto protected areas for fish habitat. This concept could enable broader consideration of the state's approach to balancing the goals of enabling fishing activity and promoting fisheries conservation beyond the limited incidents where those priorities interact with proposed offshore wind development.
Appendix B/26	Compensatory Mitigation for Fishing	Pages 26-27 includes several elements from fisherman taken directly from a proposal for fishing compensation from the California Fishermen's Resiliency Association community benefit agreement template. Some recommendations

Chapter/ page	Topic	ACP-CA Comment
		reported here, such as "annual funding would begin at the site-assessment phase and continue for the life of the lease," are unreasonable based on standard practice of designing mitigations in response to specific impacts. Site assessments are not expected to significantly impact the fishing industry, and any impacts will be mitigated as prescribed in the environmental assessment prepared by BOEM and conditions of Coastal Zone Management Act concurrence by the California Coastal Commission prior to the lease auction. This section also wholly ignores SB 286 (2023) and the Coastal Commission's Condition 7C workgroup process currently underway to develop a template for compensatory mitigation at the statewide level.
Appendix B/27	Obstructions of Port Facilities Usage	The Draft strategic plan recommends "Spatially separate offshore wind energy industry and fishing industry port and shore-side facilities, as well as aquaculture production and processing sites." This approach may undermine potential for offshore wind developers to utilize expertise and collaborate with fishing industry.
Appendix B/28	Cables	The Draft plan recommends, "Align shore-bound wind energy electric transmission cables adjacent to existing buried undersea broadband fiber-optic and other shore-bound cables, consistent with existing fishery organization site agreements (where feasible)." Selecting a cable landfall site requires a careful optimization of multiple factors including: proximity to electrical grid point of interconnection, commercial viability of real estate rights, environmental permitting, and constructability. Adding another constraint to the mix that requires only collocating with existing cables will be a major risk to the project In addition, there must be an offset between cable lines to avoid doing damage during construction or maintenance.
Appendix B/31	Atmospheric and Oceanographic Processes	The Draft strategic plan states, "the offshore wind project would collect and share with the Surface Currents Program real-time telemetry of surface currents, waves, and other oceanographic data." We note that before commercial operation date, information could only be shared confidentiality due to sensitive information related to the project's competitiveness in acquiring offtake contracts.
Appendix B/ 36	Aesthetics Mitigation Strategy	The Draft strategic plan suggests a mitigation that "lighting does not blink or flash"; however, standard FAA required lighting on turbines to blink or flash. Prior the plan notes, "strategies to mitigate the visual impacts of offshore facilities viewed from onshore would be limited by safety requirements," and this is an example of this limitation.

IX. Conclusion

We appreciate the opportunity to comment on the Draft strategic plan and reiterate our gratitude to the CEC for preparing this extensive report. We look forward to continuing to engage with the CEC and its sister permitting and energy agencies to translate key findings in the plan into additional clear, actionable, prioritized implementation steps.

The CEC has led an extensive process for engaging responsible agencies in the state and collecting input from a range of stakeholders. The final plan should conclude with the state's commitments to its 2045 and interim offshore wind goals, acknowledging the supreme value that offshore wind will bring to the state in terms of economic development, grid reliability and climate mitigation. It should also acknowledge that despite near-term uncertainties, the state and federal government have a clear and robust process for assessing potential impacts from offshore wind projects and developing strategies to minimize, mitigate, and monitor those impacts, which will allow the state and the industry to move forward in a sustainable, responsible manner.

Now is the time to turn the page from high-level planning and evaluation to detailed, concrete steps of implementation.

Sincerely,

Molly Croll
Director, Pacific Offshore Wind
American Clean Power Association

ATTACHMENT 1

ACP-California Sea Space Analysis for Offshore Wind

		Potential Capacity (MW)			
	Area (km 2)	**Low (AB 525)**	**High (AB 525)**	**Industry Corrected (7MW/km2)**	**Additional Space Required to achieve AB 525 Goals (km2)**
Humboldt Leases	536	1,608	2,680	3,752	
North Coast Sea Space	8950	26,850	44,750	62,650	2,060
Morro Bay Leases	975	2,925	4,875	6,825	
South-Central Coast Sea Space	1462	4,386	7,310	10,234	

Sources

Enevoldsen, Peter & Jacobson, Mark. (2021). Data investigation of installed and output power densities of onshore and offshore wind turbines worldwide. Energy for Sustainable Development. 60. 40-51. 10.1016/j.esd.2020.11.004.

DNV https://topsectorenergie.nl/documents/334/20220519_RAP_DNV_Optimal_Offshore_Wind_Turbine_Size_and_Standardisation_F.pdf

NREL https://efiling.energy.ca.gov/GetDocument.aspx?tn=243707&DocumentContentId=77539

CPUC I&A doc https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/2023-irp-cycle-events-and-materials/draft_2023_i_and_a.pdf

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