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*Comment Received From: Andrew Johnson
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**Comments from Defenders of Wildlife on the CEC's Draft Research
Concept for Offshore Wind 20-EPIC-01 EPIC 4 Investment Plan**

Additional submitted attachment is included below.



California Program Office

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August 18, 2021

Laurie ten Hope, Deputy Director
California Energy Commission
715 P Street
Sacramento, CA 95814

Docket 20-EPIC-01

Re: Recommendations for California Energy Commission (CEC) Electric Program Investment Charge (EPIC 4) Investment Plans 2021-2025

Dear Deputy Director ten Hope,

Defenders of Wildlife (Defenders) thanks the California Energy Commission (CEC) for hosting the Electric Program Investment Charge (EPIC) workshop on August 4, 2021, which offered a review of CEC staff's comprehensive list of Draft Initiatives for EPIC-4 and sought input and feedback from the public.

Defenders is a national, non-profit conservation organization formed in 1947 and dedicated to the protection of native animals and plants in their natural communities. To this end, we employ science, public education and participation, media, legislative advocacy, litigation and proactive on-the-ground solutions to impede accelerating rates of extinction, the associated loss of biological diversity, and habitat loss. We offer the following comments on behalf of our 2.2 million members and supporters in the United States, approximately 323,000 of whom reside in California.

Defenders supports responsible utility-scale Floating Offshore Win (FOSW) in California that avoids, minimize and mitigate adverse environmental impacts of FOSW development and operation. The CEC's commitment to transparency and the inclusion of all stakeholders and experts in the FOSW planning process will ensure that the state can both meet the state's energy and climate goals and protect California's extraordinary biodiversity and natural and cultural resources.

This letter comments on Initiatives 1 and 42 from the draft initiatives document.

Initiative 1: Floating Offshore Wind Energy Technologies

This first initiative under the header “Accelerate Cost Reductions for Renewable Generation Technologies” discusses the need to assess and minimize the environmental impacts of FOSW development. To advance FOSW as “a key clean supply resource for SB100 buildout,” research will have to generate data to “inform environmental mitigation, deployment planning, and permitting.” The supposition is that much work is needed in advance of siting, leasing and infrastructure planning. Defenders appreciates the impetus of state and federal agencies to move with haste on decarbonized power generation, but simply stating that FOSW development must minimize environmental impacts will not make it so. Planning and research for FOSW development in California should seek the *best results* for wildlife and the environment. Realizing the value of offshore wind energy can only occur by harmonizing energy acquisition with environmental responsibility, and the evolution to a clean energy future must not impart different kinds of damage to the function of natural systems. To ensure that the development of FOSW in California meets environmental goals, our state agencies, the federal government and the FOSW industry must make significant investments in infrastructure and technological and procedural advances to minimize or eliminate risks to coastal and offshore species and habitats.

Critical needs exist to a) acquire additional baseline data on all potentially affected species’ migratory patterns in and around, and to and from, the FOSW Call Areas; b) expand the development and testing of new technologies to avoid, minimize and mitigate adverse impacts, including cumulative impacts, to marine wildlife (e.g., marine mammals) and natural systems; and c) establish rigorous offshore and onshore monitoring programs well before site selection, during construction and operation of FOSW structures, and after decommissioning of FOSW facilities. Federal and state agencies have begun targeting large amounts of funding toward these needs; however, an overarching effort is needed to coordinate these various studies and programs to ensure they address key research questions and harmonize data-gathering efforts.

For example, in the Studies Development Plans in BOEM’s Environmental Studies Program, study number PC-21-04¹ (“A Vulnerability Index to Scale Effects of Offshore Renewable Energy on Marine Mammals and Sea Turtles of the Pacific OCS (VIMMS)”) must complement study number PC-17-01² (USGS, “Seabird and Marine Mammal Surveys Near Potential Renewable Energy Sites Offshore Central and Southern California”) and align with study number PR-19-ENT³ (NOAA, “Development of Computer Simulations to Assess Entanglement Risk to Whales and Leatherback Sea Turtles in Offshore Floating Wind Turbine Moorings, Cables, and Associated Derelict Fishing Gear Offshore California”).

These studies are foundational to determining whether FOSW can operate at utility-scale without causing extensive and irreparable harm to migratory species. The State of the Science Workshop on

¹ <https://www.boem.gov/sites/default/files/documents/environment/PC-21-04.pdf>

² https://www.boem.gov/sites/default/files/documents/environment/PC-17-01_0.pdf

³ <https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-science/PR-19-ENT.pdf>

Wildlife and Offshore Wind (OSW) Energy 2020: Cumulative Impacts issued its Marine Mammals Workgroup Report⁴ in July 2021. The report lists the following highest priority projects:

- *Estimate marine mammal habitat use, distribution, and abundance in OSW development areas by season, and identify dynamic environmental variables driving these patterns.*
- *Establish individual baseline movements and behavioral patterns (foraging, diving, reproduction, etc.) in OSW development areas.*
- *Identify acoustic exposure and contextual conditions associated with potential acute response to OSW stressors to support development and refinement of risk and consequence assessment.*

Defenders supports these and other projects to define and comprehend species' use patterns, understand marine mammal responses to known or estimated exposure conditions and inform consequence models that will underpin siting decisions, minimization measures, and mitigation strategies. In short, projects like these cannot wait. Given federal and state governmental pressures to advance FOSW in California, Environmental Impact Assessments and Reports will require new and accurate information to keep the FOSW moving in a way that respects environmental resources.

Initiative 42: Advancing the Environmental Sustainability of Energy Deployments

The description of this initiative talks about ensuring “that the anticipated rapid growth of clean energy deployments to achieve SB 100 targets meets other environmental and sustainability objectives.” All of the research advancements listed under this initiative’s description—developing new assessment tools, assessing environmental risks from new project technologies, developing new mitigation and monitoring techniques—must be achieved for this initiative to succeed.

Responsible development of OSW infrastructure demands upfront investment in research and planning to ensure that environmental questions are answered and protections are in place before the push from developers, the haste to create new jobs and the promise of future investment threaten to overwhelm the science. Rather than rushing toward lease sales and construction, state and federal agencies and industry representatives need to first investigate the challenging questions FOSW presents for coastal and pelagic wildlife, nearshore and benthic ecosystems human communities. Doing this will lessen the potential long-term financial risks associated with causing environmental harm during construction and operation and help assure the environmental sustainability of FOSW facilities.

Rather than a patchwork approach to ecological monitoring for at-risk species and environmental resources, a concerted series of multi-year studies is required to document wildlife movements and migration patterns in and around the FOSW Call Areas and through the coastal and in-port transit zones for shipping traffic. Related study is needed to evaluate and mitigate the impacts of subsea and surface transmission lines, power grid connections and power storage areas before leasing,

⁴ https://a6481a0e-2fbd-460f-b1df-f8ca1504074a.filesusr.com/ugd/78f0c4_75022670bf6f4bc6b001727e7be618ef.pdf

permitting and construction occurs. Existing data suggest that the Call Areas in California overlap important wildlife transit corridors. Additional research (e.g., modeling, population viability analysis) is needed to understand whether the siting of FOSW turbines and associated construction and servicing operations will displace, attract or otherwise create deleterious effects—especially population-level effects—on coastal and pelagic wildlife and associated ecosystems in those areas.

Funding should be provided to impanel expert working groups that can identify lists of priority studies needed to better understand the cumulative impacts on marine wildlife and natural systems as the offshore wind industry develops in California. These working groups should also make recommendations on minimization and mitigation measures to help ensure that offshore renewable energy generation coexists with nature (e.g., by conducting construction activities during seasons when migratory marine mammal, sea turtle and bird species are not—or are less likely to be—present in the lease areas). The CEC and other agencies must a) make long-term programmatic commitments to study and apply new monitoring technologies that will mitigate any harmful effects of FOSW, b) chronicle and evaluate the utility of existing monitoring capabilities and c) identify failsafe mechanisms to protect migratory species.

EPIC FOSW research priorities for Initiatives 1 and 42 should focus on:

- Analyzing secondary wildlife entanglement risks from FOSW turbine structures
- Analyzing marine mammal habitat displacement risks from FOSW siting and operations
- Analyzing distribution impacts to marine mammals and fishes
- Analyzing offshore wind-related structure impacts on benthic habitats
- Assessing acoustic impacts associated with FOSW on marine mammals
- Evaluating electromagnetic field risks to sensitive species
- Creating a monitoring technologies development roadmap

Research must target critical questions and data gaps relating to migratory species, commercial marine activities and environmental sustainability specific to the identified Call Areas, and that data has to reside in an accessible location for all parties. The Offshore Renewable Wind Energy Gateway,⁵ designed on the DataBasin⁶ platform to support BOEM's California Intergovernmental Renewable Energy Task Force, is a valued resource in this regard; however, the Gateway requires continued funding and expertise to remain current with pertinent data. Over the next several years, priority studies will generate extensive datasets on wind resources, ecological and natural resources, commercial and recreational uses and stakeholder values that will have to flow into the Gateway to maintain its utility as a mapping and analysis tool. It is critically important that the Gateway receives adequate and sustained funding in the coming years.

⁵ <https://caoffshorewind.databasin.org/>

⁶ <https://databasin.org/>

Conclusion

Defenders appreciates the CEC's continued efforts to understand the intertwining issues of FOSW development and the protection of California's marine wildlife and ecosystems. EPIC funding should support the needed intensive, long-term scientific study of the cumulative impacts of FOSW on marine and coastal natural resources. Please contact me at ajohnson@defenders.org if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads "Andrew B. Johnson". The signature is written in a cursive, flowing style.

Andrew Johnson
California Representative

cc:

Wade Crowfoot, California Natural Resources Agency
Armando Quintero, California Department of Parks and Recreation
Jack Ainsworth, California Coastal Commission
Charles Bonham, California Department of Fish and Wildlife
Jennifer Lucchesi, California State Lands Commission
Mark Gold, Ocean Protection Council