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Additional submitted attachment is included below.

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November 13, 2020

California Energy Commission
Docket Unit, MS-4
Docket No. 19-ERDD-01
1516 Ninth Street
Sacramento, California 95814-5512

Electronically filed to the Docket

RE: Defenders of Wildlife's Comments on the California Energy Commission's Draft Research Concept, "Advance to Next-Generation Offshore Wind Energy Technology" (Docket Number 19-ERDD-01)

Dear Commissioners,

Staff from Defenders of Wildlife (Defenders) attended the California Energy Commission's scoping workshop on October 22, and we have reviewed the Draft Research Concept, "Advance to Next-Generation Offshore Wind Energy Technology." Please accept these comments on behalf of our 279,000 members and supporters in California.

Floating Offshore Wind (FOSW) along the California coast could provide significant energy, climate and economic benefits for local communities, California and the western grid. Defenders supports responsibly developed FOSW energy as an essential part of a clean energy portfolio; however, construction and deployment activities must safeguard valuable and vulnerable ocean and terrestrial habitats, fish and wildlife, cultural resources and communities.

Defenders advocates using Smart from the Start processes, which incorporate science, geospatial analysis and stakeholder input to locate energy generation and transmission sites that avoid unnecessary conflicts. Elements of this approach have been used in the development of the Desert Renewable Energy Conservation Plan, the San Joaquin Valley least-conflict studies and the California Energy Commission's busbar mapping work for the California Public Utility Commission and the California Independent System Operator. Smart from the Start processes seek to understand how the components of anticipated development could modify the environment.

To that end, FOSW siting strategies must help avoid or reduce impacts to sensitive species and habitats. These strategies must consider the impacts and conflicts caused by the physical structures at sea (i.e., turbines, floating platforms, anchoring and energy-transmission cables, etc.); by the in-port redevelopment and construction activities, onshore substations and transmission to end users on the grid; and even by vessel traffic (e.g., frequency, routing, speed) transiting between shore and FOSW sites. The research and development process will have to include pre-deployment monitoring, pre- and post-construction monitoring, the development of new monitoring techniques to understand impacts, a commitment to adaptive management as new information and technology become available, and a commitment to sharing data. Some baseline data exist on the current status of in-port and at-sea habitats that will be affected by FOSW construction, deployment and transmission, but additional research must be incorporated into the overall project plan to generate robust data on impacts to wild systems and species and to gauge the success or failure of mitigation measures. Past, current and future surveys of marine mammals and birds funded by the Bureau of Ocean Energy Management (BOEM) are relevant to FOSW siting, cabling and operation; however, the overall research concept should incorporate all best available scientific information of species' movement/migration patterns, behavior and potential responses to mitigation measures. Robust baseline data are needed for future environmental impact assessments and for designing effective mitigation measures.

The recent CEC-funded study titled, "Research and Development Opportunities for Offshore Wind Energy in California" (August 2020, prepared by Guidehouse), mentioned using "smart curtailment and deterrence" as ways to overcome or reduce the potential impacts of FOSW technologies on wildlife. But no detail or informed analysis is provided. The study, prepared through the involvement of and consultation with representatives of the energy and technology industries but without the involvement of wildlife experts, does not offer meaningful strategies to mitigate wildlife disturbance. Any acoustic or other harassment devices meant to deter marine species from contact with and potential harm from FOSW structures will require further study of their efficacy before deployment, will necessitate extensive federal review and authorization, and will demand regular monitoring after deployment.

The draft research concept outlines the need to mitigate or minimize disruption to wildlife and ecosystems, but a full conceptualization of research needs on this topic will require a great deal more detail. In particular, project managers will have to determine whether the siting of FOSW structures will displace species; disrupt species' behavior; or alter the density, distribution and diversity of prey species.[1] Similarly, in-port construction may cause disruption and damage to habitats and ecosystem processes. Studies should build on the baseline states of in-port systems (e.g., eelgrass habitat[2]) to predict changes and minimize impacts.

[1] Kraus, S.D., R.D. Kenney, and L. Thomas. 2019. A Framework for Studying the Effects of Offshore Wind Development on Marine Mammals and Turtles. Report prepared for the Massachusetts Clean Energy Center, Boston, MA 02110, and the Bureau of Ocean Energy Management. May 2019.

[2] Humboldt Bay Eelgrass Comprehensive Management Plan, 2017.

The consortium that addresses the technical and environmental challenges of FOSW must include representation from a broad range of stakeholders, including federal, state and local governmental agencies; affected industries; conservation organizations; local and regional communities; and any historically disenfranchised groups. An enterprise of this scope will not succeed if excluded groups raise conflict issues down the road. Achieving successful FOSW energy in California will require the full integration of planning, project design and stakeholder engagement. CEC research initiatives, BOEM research, studies from the Schatz Center at Humboldt State, and other relevant wildlife and habitat studies must present a complete picture of the risks posed by FOSW activities to marine and coastal species and ecosystems.

Determining risks and developing Risk Retirement Pathways[3] for identified environmental stressors—for example, collision risks, underwater noise effects, electromagnetic field effects, habitat changes, alterations to physical systems, and displacement and barrier effects—must form the foundation of mitigation and minimization planning for FOSW in California.

Defenders would be pleased to participate in any FOSW stakeholder discussions that involve the protection of wildlife and sensitive coastal and marine habitats. Please contact us if you have any questions.

Sincerely,

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[3] Copping, A.E., Freeman, M.C., Gorton, A.M., and Hemery, L.G. 2019. A Risk Retirement Pathway for Potential Effects of Underwater Noise and Electromagnetic Fields for Marine Renewable Energy. *OCEANS 2019 MTS/IEEE SEATTLE*, 1–5.