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## **Berkeley Lab - Offshore Wind Energy Comments**

Attached.

Thank you!

Additional submitted attachment is included below.



July 26, 2021

Chair David Hochschild California Energy Commission 1516 Ninth Street Sacramento, CA 95814

RE: Lawrence Berkeley National Laboratory Recommendations for the Development of the EPIC 4 Investment Plan - **Offshore Wind Energy workshop** 

Thank you for the opportunity to provide comments on the EPIC 4 Investment Plan and for the CEC's leadership to develop the new breakthrough technologies that will help the State realize its ambitious climate and clean energy goals.

California's offshore wind (OSW) resources are considerable, and Berkeley Lab strongly supports the CEC's efforts to identify and invest in potential breakthrough technologies to improve efficiency and reduce greenhouse gas emissions from OSW research and development (R&D).

• The topics raised during the workshop mostly focused on R&D needs before and during OSW installation. There was less discussion of Operation and Maintenance (O&M) post installation. R&D is needed for O&M as a high priority because it contributes significantly to the levelized cost of energy (LCOE), operation longevity, safety and efficiency of OSW. O&M contributes to approximately a third of the LCOE, is important for operation efficiency/safety, and is an opportunity for cost reduction. Due to unique challenges faced on the Pacific coast such as deep water, unknown benthic conditions, earthquakes and other geohazards, O&M is critically important and the potential O&M cost for OSW could be much higher. Innovations are needed for intelligent and resilient O&M solutions to reduce OSW cost and improve long term efficiency and safety.

Berkeley Lab appreciates the opportunity to provide these comments in support of development of the EPIC 4 Investment Plan.

Sincerely,

Alecia Ward Leader, Program and Business Development Energy Technologies Area award@lbl.gov Jim Hawley Director, State and External Relations jchawley@lbl.gov