DOCKETED	
Docket Number:	17-MISC-01
Project Title:	California Offshore Renewable Energy
TN #:	243703
Document Title:	Equinor USA Comments - in CEC-800-2022-001, Lead Commissioner Workshop
Description:	N/A
Filer:	System
Organization:	Equinor USA
Submitter Role:	Public
Submission Date:	6/24/2022 1:58:04 PM
Docketed Date:	6/24/2022

Comment Received From: Equinor USA
Submitted On: 6/24/2022
Docket Number: 17-MISC-01

Comment of Equinor USA in CEC-800-2022-001, Lead Commissioner Workshop

Additional submitted attachment is included below.

Comments of Equinor USA

RE: CEC-800-2022-001:

Draft California Energy Commission Report on: Offshore Wind Energy Development in Federal Waters Off the California Coast: Maximum Feasible Capacity and Megawatt Planning Goals for 2030 and 2045 dated May 6, 2022 (authors: Scott Flint, Rhetta DeMesa, Pamela Doughman and Elizabeth Huber) **for June 27, 2022 Lead Commissioner Workshop**

Act now and act boldly and comprehensively to ensure offshore wind can deliver much needed higher capacity de-carbonized energy to meet the 2030 and 2045 clean energy and climate goals:

Equinor USA ("Equinor") is supportive of the California Energy Commission staff's overall platform expressed in the Draft Report that furthers California's commitment to floating offshore wind. Offshore wind is critical resource to meet California's energy and climate goals and to support energy self-reliance and grid/climate resilience. The reliability of the state's electricity delivery system and its ability to timely achieve climate goals, especially the earlier term 2030 goals, will be driven in part by the strength and execution of delivering on robust planning goals and the overall policy framework outlined in a Final Report of this commission.

The overall strategy and structure of this phase of AB 525 implementation for growing offshore wind infrastructure to augment the diverse portfolio of renewable energy required by SB 100 will determine both the affordability of this resource and the ability to deliver it at sufficient scale to timely meet these existential goals while enhancing and sustaining energy reliability throughout California's energy transformation. It cannot be stated strongly enough that offshore wind is the lowest impact resource that will be available in the portfolio at higher capacity and most coincident with the growing peak demand in the state and that it will also serve to reduce terrestrial conflicts and enhance resilience in a region experiencing extreme climate impacts. Setting planning goals of 5 gigawatts (GW) by 2030 and 20 GW by 2045, given the escalation in electricity demand that is forecast for these periods and the need to address pressing climate impacts alongside achieving emission reductions, is imperative. We cannot achieve what we do not plan for, and we cannot afford from a climate and a human and economic cost perspective to aim lower than to press for what offshore wind technology can provide if given the opportunity.

California has to build up sufficiently for the 2030 horizon to minimize and mitigate climate impacts, reducing fossil fuel reliance and actively addressing resilience to reduce climate related emissions that are currently offsetting the industrial reductions we are achieving. We also need to plan for sufficient build up of long lead time resources like offshore wind by 2030 as well as for 2045 to comprehensively address reliability, ending the cycle of stop-gap efforts. These stop gaps are incrementally and cumulatively costlier economically and environmentally

than actively augmenting portfolio diversification with resources with initially above market costs that will wholistically contribute to overall cost reductions. Wildfire is the main cost-driver in electric rates in California, followed by transmission/distribution; and offshore wind integration into a diverse portfolio of renewables and de-carbonized resources – will contribute to reduced wildfire and other climate related risks and a transformed, more efficient and cost-effective grid.

Scale is needed for reliability and to address climate – and current lease space recently allocated for the federal auction offshore of California will accommodate 5 GW by 2030, with future lease auctions providing appropriate sea space for a 2045 planning goal of 20GW. These levels of planning goals also allow for appropriate build out of supply chain and the ability to step up to the larger amounts of offshore wind needed by 2045 most efficiently.

<u>Address hurdles comprehensively, collaborate to achieve best outcomes for cost, climate and reliability:</u>

As the commission, the state and all stakeholders move forward with this next phase of AB 525 implementation within the crucial climate lens of SB 100, maximizing the benefits of resources, accelerating their deployment, and aligning actions across regions and sectors to reduce costs and improve synergies should be the focus. Longer lead time resources require forward planning for systemwide integration, and the longer we wait to decide and execute on the best configuration of an optimized diverse portfolio that includes sufficient offshore wind for reliability and to reduce climate impacts, the more intense those impacts will continue to be alongside lingering, expensive reliability issues. It is imperative to assess the grid and climate value of floating offshore wind as opposed to current cost/price on a generation only basis. Part of addressing cost is to effectively develop a path to scale through planning goals and a policy framework that maximizes cost-effective deployment, and to support energy portfolio affordability through market structures that protect ratepayers while ensuring sufficient resource diversity in an economically efficient manner. As in our prior comments submitted before the May 18 Workshop, Equinor respectfully calls attention to 3 areas of crucial importance in assessing some refinements necessary in a final report and a plan forward for offshore wind.

1. Floating offshore wind at scale is a **high value resource** to address:
    a. **Reliability** (higher output per turbine, available when most needed both as to time of day and seasonal peaks – at scale; higher capacity factor/more hours of the day/a good fit with other resources including storage, hydrogen for planning purposes, and to prevent overbuild or peak shortages/highly compatible with a smart, flexible grid and remote dispatch)
    b. **Accelerated climate response (**substantial, long term replacement for peakers and other gas plants to address overall emission reductions and climate inequities in heavily impacted communities/is not subject to land-based threats,

like wildfire, and contributes to wildfire risk reduction/does not strain land-based resources or compete for water, etc.)

c. **Achievement of SB 100 goals on time at lower cost (**5 GW build out and delivery in 2030 timeframe and 20 GW by 2045 are crucial to achieving the clean energy goals and emission reductions in a low impact/scale deployment with higher value/higher output long term energy operation – higher initial planning goal of 5GW and getting to 20 GW by 2045 better suited to accelerating climate response and cost-effectively addressing reliability via portfolio diversity than 3 GW/10GW in the draft Report)

2. **Planning goals must signal support for development at scale and address the plan for scale up from 2030 to 2045 goals** -
   a. Signal sent with planning goals and an overall framework to build out and support floating offshore wind is **crucial to cost-effective deployment and ongoing innovation**
   b. **Robust goals at scale and a step up/staging plan** to achievement of 2045 are **critical to support ports/transmission and supply chain build out and the massive economic and workforce development opportunities** this resource will bring, while driving down upfront costs and providing ongoing benefit across sectors.
   c. **Local content support and realization of broad community benefits will be driven by scale deployment** and long term commitment to communities as developers build and then operate facilities, as ports innovate and broader functionalities support multiple resources/industries beyond offshore wind; and supply chain resources develop and expand to meet regional needs
3. **Affordability of energy portfolio requires front loading floating offshore wind deployment with certainty and predictability via planning goals and policy framework**
   a. **Policy framework and a plan for build out and support for floating offshore wind in California must provide confidence to investor community to address affordability at the outset -** a clear mechanism for offtake of delivered energy will reduce capital costs at the outset. The existence of an effective procurement mechanism and identification of level of resource support drives innovation and cost reductions going forward in addition to attracting initial, lower cost investment.
   b. **Ratepayers are protected** with a structured 'system-needs procurement mechanism' for a resource the size of offshore wind with long lead time to deployment that is necessarily capital intensive. Facilitating scale procurement matched to system need that provides an approved revenue stream/ability to achieve return over a longer period of time reduces end use price for a resource that is a public good.

Economies of scale must be realized and a plan for structured procurement at scale at the outset reduces upfront costs and will insulate ratepayers over time through the certainty of a regulated, voluntary procurement based on system need that does not disproportionately burden some providers/end users over others and shares costs and benefits broadly. **The draft report is silent on this area of AB 525 but should acknowledge the need for offtake certainty to spur initial cost reductions and the broad span of economic development that larger scale, lowest cost deployment can deliver.** Equinor looks forward to a Final Report that clearly outlines a planning framework that empowers realization of cost-effective scale deployment of this high value resource for California.

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