DOCKETED	
Docket Number:	17-MISC-01
Project Title:	California Offshore Renewable Energy
TN #:	243995
Document Title:	RWE Renewables AB525 Workshop Comments
Description:	N/A
Filer:	System
Organization:	RWE Renewables
Submitter Role:	Public
Submission Date:	7/11/2022 3:28:53 PM
Docketed Date:	7/11/2022

Comment Received From: RWE Renewables
Submitted On: 7/11/2022
Docket Number: 17-MISC-01

RWE Renewables AB525 Workshop Comments

Additional submitted attachment is included below.

Electronic Filing

July 11, 2022

Commissioner Kourtney Vaccaro
California Energy Commission
Docket No. 17-MISC-01
715 P Street
Sacramento, California 95814

Comments on June 27, 2022 Lead Commissioner Workshop on Assembly Bill 525

Dear Commissioner Vaccaro:

Thank you for the opportunity to comment on the June 27, 2022 Lead Commissioner Workshop on Assembly Bill 525 (AB 525). RWE Renewables appreciates the deliberative process related to AB 525 implementation, including reconsideration of planning targets and this additional workshop.

Offshore wind is an incredibly promising resource for California, which is dealing with significant energy issues and climate change impacts. Given the long lead-time and significant cost and scale associated with offshore wind energy development, it is critical that the state not underestimate the role for offshore wind in California's energy system – especially in the near-term. We will get what we plan for, and we hope those plans envision developing the world's leading floating offshore wind industry in California and rapid transitions to reliable, affordable clean energy and carbon neutrality in the State.

We offer three specific recommendations for the AB 525 planning goals and process moving forward:

- We support increasing the planning goals to 5 GW by 2030 and 20 GW by 2045 and endorse the comments of American Clean Power – California and Offshore Wind California.
- We encourage the CEC to commit to an ongoing evaluation of appropriate offshore wind energy planning targets, especially for 2035-2045, through

planning processes associated with AB 525, SB 423 and SB 100 implementation. These evaluations should specifically consider scenarios that achieve the state's carbon neutrality goals, support a truly zero carbon electricity grid in California (that is, 0 MMTCO$_2$e or de minimis emissions otherwise), and allow the state to move away from a never-ending reliance on fossil fuel power plants for grid reliability.

- In the AB 525 Strategic Plan, we encourage the CEC to evaluate and recommend offtake mechanisms to ensure early offshore wind energy projects have a path to market and the offshore wind industry can quickly grow in California.

About RWE Renewables

RWE Renewables Americas develops, owns and operates some of the most efficient, highest performing renewable energy projects in the United States – including onshore wind, photovoltaic renewable generation and energy storage – and has developed and constructed more than 5,000 megawatts of renewable capacity in the U.S. since 2007. We rank among the top 10 onshore wind companies in the U.S., with more than 900 employees in the U.S., and the number of projects in the U.S. is growing.

RWE is one of the world's leading companies in offshore wind, active across the entire value chain, from project conception and development to construction as well as operation and maintenance. The unparalleled expertise the company has earned over the last 20 years has resulted in 17 wind farms in operation. RWE Renewables recently secured area OCS-A 0539 in the New York Bight offshore lease auction, with a winning bid of $1.1 billion. The awarded seabed has the potential to host about 3 gigawatts (GW) of capacity, enough to power 1.1 million U.S. homes. The project is expected to be in operation by the end of the decade.

The U.S. market is a strong focus of ours and our strategy for renewables is geared toward growth: RWE will invest $1.66 billion annually to expand its wind, solar energy and storage technologies portfolio. RWE has committed to become carbon neutral by 2040, along with ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement.

Planning goals should enable success

We agree with the comments and recommendations of ACP-California, Offshore Wind California, and hundreds of public commenters encouraging CEC to increase initial planning targets to 5 GW in 2030 and 20 GW in 2045. The near-term, 2030 planning goals in particular, should at least align with and enable the full potential from the expected lease auctions this fall (4.6 GW), which a planning target of 5 GW would do.

Longer term planning targets should envision and support development of a broadly successful industry in California. The potential for offshore wind to contribute to a low cost, SB 100 compliant electricity grid is likely greater than 10 GW, given that essentially every scenario run as part of the SB 100 report took all 10 GW of offshore wind that was allowed in the modeling.[1] Current modeling by state agencies, including scenarios that artificially cap the capacity of offshore wind, do not completely evaluate the potential and need for offshore wind in California's clean energy portfolio.

Additionally – as described below and by presenters at the workshop, including UC Berkeley researchers – we encourage the CEC and other agencies to further evaluate electricity scenarios that go beyond the retail sales definition of SB 100 to fully decarbonize the electricity sector, incorporate increased electricity loads necessary to achieve carbon neutrality in California, and completely evaluate the role that offshore wind can play in achieving those objectives, including as a firm zero carbon resource.[2]

We encourage the CEC to commit to a deep dive look at these issues through various forums including developing the AB 525 strategic plan, implementing SB 423 and through the ongoing SB 100 process – and we encourage you to commit to updating offshore wind planning targets appropriately, should new

[1] https://www.energy.ca.gov/sb100

[2] SB 423 specifically references offshore wind in Section 1 and defines firm zero carbon resources as "electrical resources that can individually, or in combination, deliver zero-carbon electricity with high availability for the expected duration of multiday extreme or atypical weather events, including periods of low renewable energy generation, and facilitate integration of eligible renewable energy resources into the electrical grid and the transition to a zero-carbon electrical grid."

information suggest that 5 GW by 2030 and 20 GW by 2045 should be revised upwards.

Current energy planning underappreciates new clean energy needs

The California Air Resources Board's (CARB's) recent draft 2022 Scoping Plan Update identifies significant new electricity loads and clean energy requirements to achieve carbon neutrality in California. This includes "unprecedented load growth" that must be met with clean energy resources.[3] Above and beyond those grid-connected loads, the Scoping Plan identifies significant additional new energy requirements for hydrogen production (~40 GW) and undefined energy requirements for direct air capture of CO_2.

These loads, while not quantified in the Scoping Plan, could be enormous. For example, research cited in a WRI review of the technology suggests energy requirements for direct air capture systems might average 2.45 MWh/tCO_2.[4] Scaled to the levels of carbon dioxide removals per year identified in the Proposed Scenario (95 $MMTCO_2$/year), would require an additional 233 TWh/year of new clean energy resources, which is more than all in-state electricity generation today.[5] The UC Berkeley presentation estimated a lower, but still significant, incremental load of ~100 TWh to achieve this level of carbon dioxide removal.[6]

Altogether, the Proposed Scenario in the draft Scoping Plan Update would require at least 9 GW/year of new solar and storage capacity to serve grid-connected load growth, an additional ~2 GW/year of behind the meter solar to support hydrogen production,[7] and an undefined, but likely very significant, capacity expansion to support carbon dioxide removal. This dwarfs current energy planning such as the SB 100 report, which suggested "record-breaking" clean energy capacity additions of 6 GW/year for 25 years.[8] It is also

[3] Pg. 156
[4] https://files.wri.org/d8/s3fs-public/technological-carbon-removal-united-states_0.pdf
[5] https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-generation-capacity-and-energy
[6] Slide 6, https://efiling.energy.ca.gov/GetDocument.aspx?tn=243710&DocumentContentId=77544
[7] https://ww2.arb.ca.gov/sites/default/files/2022-03/SP22-Model-Results-E3-ppt.pdf
[8] https://www.energy.ca.gov/news/2021-03/california-releases-report-charting-path-100-percent-clean-electricity

significantly greater than current clean energy deployments, including "historic" clean energy procurement requirements by the CPUC of 11,500 MW over 2023-2026 (less than 3 GW/year)[9] and CAISO planning to add 2.7 GW/year to 4 GW/year of new transmission capacity.[10]

RWE Renewables suggests that CEC incorporate energy loads needed to meet the state's carbon neutrality goals into its energy demand forecasts as part of the Integrated Energy Policy Report (IEPR) and into grid analyses pursuant to AB 525, SB 423 and SB 100.

Offshore wind offers one of the most promising resources to support significant additional clean energy capacity and generation

While these energy requirements may feel daunting, we expect that additional analysis that further explores opportunities presented by offshore wind and other firm zero carbon resources, like green hydrogen, will reveal pathways forward with lower capacity requirements, costs, emissions and land use impacts than currently identified. Offshore wind represents one of the most scalable and lowest impact forms of new renewable energy for California, which can likely be deployed in greater quantities and with minimal incremental land use impacts as the state identifies new electricity loads necessary to achieve carbon neutrality. In addition to increasing the initial offshore wind planning targets, CEC should commit to revaluating them – especially the 2045 target – and revising it upwards should additional analyses suggest that appropriate.

Successfully deploying offshore wind at scale requires California's commitment and a pathway to market

In addition to planning for new electricity loads and energy resources needed to achieve carbon neutrality, the state needs to take steps to enable these necessary resources to come online. For offshore wind, as a long lead-time resource, a clear path to market – including an offtake mechanism – is especially important to support the development of these multibillion dollar projects and the port and manufacturing facilities that will be needed to support them. This is something

[9] https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M389/K478/389478892.PDF
[10] http://www.caiso.com/Documents/California-ISO-Board-Approves-Transmission-Plan-for-Next-10-Years.pdf

the CEC has already identified as important in its Report to the Governor on Priority SB 100 Actions to Accelerate the Transition to Carbon-Free Energy, which includes a recommendation to "Consider statutory and regulatory changes to create a central procurement entity or a new cost-recovery mechanism to secure the development for certain large, long-lead time resources."[11]

As the CEC turns its attention from planning targets to evaluating economic benefits associated with offshore wind and a strategic plan for the sector, we hope you will highlight the need to develop offtake mechanisms to support development of this important industry in California. We hope you will review and consider the recommendations proposed herein and put forth an offtake proposal that will ensure offshore wind projects can be quickly deployed to support California's energy and climate goals. In particular, we encourage you to host a workshop on this topic as soon as possible, to begin the conversation as part of the strategic plan development and provide a strong signal to the market that California is fully behind offshore wind.

Thank you for the opportunity to comment on this workshop. RWE Renewables looks forward to working with CEC to advance California's clean energy and climate change goals, including through the development of offshore wind.

Sincerely,

Erin Kester
Director, Government Relations – Offshore, West Coast, U.S.
M +1-503-915-0031
erin.kester@rwe.com

RWE Renewables
www.rwe.com

[11] Pg. 19, https://www.energy.ca.gov/sites/default/files/2021-09/CEC-200-2021-008.pdf