FILED
12/01/23
04:59 PM
R2005003

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes.	Rulemaking 20-05-003

REPLY COMMENTS OF OFFSHORE WIND CALIFORNIA ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON PROPOSED 2023 PREFERRED SYSTEM PLAN AND TRANSMISSION PLANNING PROCESS PORTFOLIOS

Adam Stern
Executive Director
Offshore Wind California
P.O. Box 955
Menlo Park, CA 94026
Tel. (510) 681-4483
Email: adam.stern@offshorewindca.org

Vidhya Prabhakaran
Anna Fero
DAVIS WRIGHT TREMAINE LLP
50 California Street, 23rd Floor
San Francisco, CA 94111
Tel. (415) 276-6500
Fax. (415) 276-6599
Email: vidhyaprabhakaran@dwt.com
Email: annafero@dwt.com

Attorneys for Offshore Wind California

Dated: December 1, 2023

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes.	Rulemaking 20-05-003

REPLY COMMENTS OF OFFSHORE WIND CALIFORNIA ON ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON PROPOSED 2023 PREFERRED SYSTEM PLAN AND TRANSMISSION PLANNING PROCESS PORTFOLIOS

In accordance with the October 5, 2023 *Administrative Law Judge's Ruling Seeking Comment on Proposed 2023 Preferred System Plan and Transmission Planning Process Portfolios* ("ALJ Ruling"), Offshore Wind California respectfully submits the following reply comments regarding the proposed 2023 Preferred System Plan (the "PSP") and Transmission Planning Process (the "TPP") portfolios. Offshore Wind California responds to the comments of American Clean Power – California ("ACP"), Vineyard Offshore, LLC ("Vineyard"), Natural Resources Defense Council and Union of Concerned Scientists ("NRDC-UCS"), Southern California Edison Company ("SCE"), the Public Advocates Office ("Cal Advocates"), the Solar Energy Industries Association and the Large-scale Solar Association (collectively the "Joint Solar Parties"), Green Power Institute ("GPI"), and the California Independent System Operator ("CAISO"). For the reasons described below, the California Public Utilities Commission ("Commission") should adopt a 25 million metric ton ("MMT") PSP portfolio that includes 25 gigawatts ("GW") of offshore wind by 2045.

I. INTRODUCTION

There is broad support for the Ruling's recommendation to use a 25 MMT by 2035 electric sector greenhouse gas ("GHG") target for the PSP.[1] As the Ruling recognizes, "[s]ince the impacts of climate change appear to be accelerating, our efforts in the electric sector should continue to be

[1] *See, e.g.* CAISO Comments at 1, ACP Comments at 1, Vineyard Comments at 5, NRDC-UCS Comments at 1, CalCCA Comments at ii, EDF Comments at 2.

aggressive."[2] "It is critical to adopt ambitious electric sector GHG targets and aggressive electrification forecasts now so appropriate transmission infrastructure and clean energy resources can be built to meet California's environmental and energy reliability goals."[3] A 25 MMT PSP is needed to achieve the State's renewable energy and GHG-reduction targets. Furthermore, the proposed 25 MMT Core Portfolio is substantially more diverse than previous portfolios, more than doubling the percentage of resources other than solar and four-hour batteries as a percentage of total non-gas capacity additions.[4] Greater diversity will increase the likelihood that California will achieve its goals in a timely manner and reduce various types of risks that could threaten achievement of the state's goals.[5]

However, the proposed 25 MMT Core Portfolio falls far short of California's and the federal government's offshore wind planning goals. The California Legislature has identified offshore wind as "a critical resource for California achieving its ambitious clean energy goals, while also adding to a diverse portfolio of energy resources to ensure system reliability."[6] Southern California Edison has called for 19 GW of offshore wind to meet California's carbon neutrality mandate by 2045.[7] The Governor earlier called for at least 20 GW of offshore wind by 2045, which the California Air Resources Board ("CARB") adopted in its 2022 Scoping Plan.[8] The California Energy Commission ("CEC") in August 2022 adopted Assembly Bill ("AB") 525 planning goals[9] of up to 5 GW by 2030 and 25 GW by 2045.[10] At a national level, the Biden-Harris Administration announced an inter-agency goal of deploying 30 GW of offshore wind energy by 2030, unlocking a pathway to 110 GW

---

[2] Ruling at 21.
[3] SCE Comments at 5.
[4] California Wind Energy Association ("CalWEA") Comments at 4.
[5] *Id.* at 3.
[6] 09/09/21- Assembly Floor Analysis at 2 (AB 525) (Chiu, 2021), https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=202120220AB525.
[7] *See Countdown to 2045 Realizing California's Pathway to Net Zero*, Edison International at 5 & 9 (Sept. 2023) ("SCE Countdown to 2045"), https://download.newsroom.edison.com/create_memory_file/?f_id=6508e6633d63325f2e763f1b&content_verified=True.
[8] CARB, *2022 Scoping Plan for Achieving Carbon Neutrality* (Dec. 2022) ("2022 Scoping Plan") at 75, https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf.
[9] *See Offshore Wind Energy Development Off the California Coast,* CEC (Aug. 2022) ("CEC AB 525 Report"), https://www.energy.ca.gov/filebrowser/download/4361.
[10] *Id*.

by 2050.[11] If the Commission adopts a PSP that selects only 4.5 GW of offshore wind from 2035 through 2045,[12] the Commission will hamper the development of transmission necessary to support development of offshore wind off California's North and Central Coasts, undermining state and federal commitments.

The Commission should not rely solely on RESOLVE modeling, which fails to account for a variety of benefits and policy objectives achievable if offshore wind is developed at scale. As ACP observes, "[a] myopic view of cost-minimization risks missing the broader benefits of holistic, long-term economy-wide GHG reduction strategies in which major investments in the electric system ultimately yield savings for ratepayers."[13] To align with the CEC's planning goals and unlock offshore wind's broad climate, clean-energy, and grid-reliability benefits, the Commission should adopt a 25 MMT PSP portfolio that includes 25 GW of offshore wind by 2045.

II. THE RESOLVE MODEL DOES NOT ADEQUATELY ACCOUNT FOR OFFSHORE WIND'S FULL RANGE OF BENEFITS

As highlighted by several parties, RESOLVE is not an adequate tool to plan for and integrate long lead-time resources with unique system value and uncertain cost profiles, nor should it be relied on to meet California's long-term policy objectives.[14] RESOLVE has a number of limitations that cause it to under-select offshore wind.

First, the RESOLVE model does not have the capability to accurately model costs over time for emerging, long lead-time resources such as offshore wind,[15] nor can it fully account for economies of scale and other efficiencies from proactive offshore wind planning and development.[16] As proposed by NRDC-UCS, the Commission can address the uncertainty of costs associated with emerging technologies like offshore "by modeling low, medium and high-cost sensitivities."[17]

Second, RESOLVE cannot predict or acknowledge the role of public policy in creating and

[11] White House, *Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs* (Mar. 29, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/.
[12] ALJ Ruling at 21.
[13] ACP Comments at 4.
[14] *Id.* at 4, Vineyard Comments at 13.
[15] ACP Comments at 13.
[16] Offshore Wind California ("OWC") Comments at 6-8.
[17] NRDC-UCS Comments at 6.

growing new industries and markets.[18] For example, RESOLVE is not capable of accurately reflecting the impact that scaled-up federal and state infrastructure support programs may have on resource development.[19] AB 1373 has led to the establishment of a central procurement entity for long lead time resources. NRDC-UCS states that "[t]his could affect costs through leveraging economies of scale and contract bundling."[20] As proposed by NRDC-UCS, the Commission should "ensure that the possibility of lower offshore wind costs achieved through central procurement is included in its modeling assumptions."[21]

Third, due to its primary focus on the least-cost dispatch, RESOLVE does not fully capture the ancillary benefits of offshore wind and related transmission development.[22] For example, the intrinsic value of resource diversity is under-represented in the least-cost modeling.[23] As described by ACP,[24] resource diversity benefits include: (1) the ability to mitigate supply chain risks from overdependence on a more limited set of technologies;[25] (2) management of land-use conflict and balance between conservation and clean energy goals when siting generation and transmission;[26] (3) contribution to broader regional resource development objectives and capacity needs for multi-state decarbonization; (4) contribution to in-state local economic development goals;[27] and (5) the ability to advance multiple pathways toward successful achievement of SB 100 and economy-wide climate mitigation as a hedge against future unknowns and risks. The Pacific Northwest National Laboratory ("PNNL") recently completed a Bureau of Ocean Energy Management funded study that found:

> The pursuit of lowest cost of energy at the plant level, though helpful in the initial maturation of bulk-scale renewable energy technologies, has also resulted in plants which require significant compensating reserves, often fossil-fueled, at the system level. Intermittent renewable energy generation poses unique capacity challenges which

[18] ACP Comments at 12.
[19] *Id.* at 6.
[20] NRDC-UCS Comments at 6.
[21] *Id.*
[22] OWC Comments at 8; Vineyard Comments at 13.
[23] ACP Comments at 1 & 6-7. This leads to an excessive dependence on solar and storage resources to satisfy the portfolio's resource adequacy requirements. Vineyard Comments, Attachment A at 1.
[24] ACP Comments at 12.
[25] *See also* OWC Comments at 8; Vineyard Comments at 14 (RESOLVE fails to acknowledge the potential risks posed by supply chain constraints).
[26] *See also* Vineyard Comments at 14 (RESOLVE fails to acknowledge the potential risks posed by land-use conflicts and permitting).
[27] OWC Comments at 8 (large scale offshore wind development offers workforce benefits).

> increasingly depend on weather events at varying timescales, from sub-hourly ramping to decadal droughts. Geographic and technological diversity may provide a solution to many of these challenges […] OSW on the U.S. West Coast is a resource that poses system value today through diversification of a renewable energy resource portfolio, rather than on a leading cost of energy basis.[28]

Fourth, RESOLVE makes overly generous import availability assumptions that are based on historical flows. The model also makes problematic emissions assumptions. The combination of these questionable assumptions limits the model's identification of reliability and clean generation gaps that can be filled by more diverse, clean generation.[29]

Finally, RESOLVE's limited ability to calculate realistic curtailment rates fails to reflect real-world saturation effects that lead to an overreliance on solar for clean energy at the expense of other clean resources.[30]

The Commission should not allow the limitations of the RESOLVE modeling to hamstring California's progress towards the robust development of its offshore wind resources. "Ultimately, the Commission should advance a public policy approach to proactively address resource diversity and inclusion of critical long lead time resources [like offshore wind] through use of a central procurement option as directed in AB 1373."[31]

III. PARTIES OVERSTATE THE UNCERTAINTY OF OFFSHORE WIND AND DISREGARD THE STATE'S LONGER TERM POLICY GOALS

Several parties overstate the uncertainty of offshore wind procurement in California while disregarding California's long-term policy goals and commitments. For example, Cal Advocates highlights the recent increase in offshore wind cost estimates, as well as the fact that offshore wind is "as-yet untested with actual procurement processes in California," as reasons to "revisit" the

---

[28] Douville TC, Severy M, Datta S, Siddiqui S, He L, Oikonomou K, Nekkalapu S, Boff D, Maharjan M, Nguyen Q, Harris K, Zhu J, Zhou S, Henry B, Busch J. 2023. An Offshore Wind Energy Development Strategy to Maximize Electrical System Benefits in Southern Oregon and Northern California: National Offshore Wind Research and Development Consortium & U.S. Department of the Interior, Bureau of Ocean Energy Management (Sep. 2023) ("PNNL Study") at ES-1, https://nationaloffshorewind.org/wp-content/uploads/SoOR_NorCA_OSW_Development_Strategy_Report__PNNL_NOWRDC_BOEM_092923-1.pdf.

[29] Vineyard Comments, Appendix A at 1.

[30] *Id.*

[31] ACP Comments at 6.

amount of offshore wind recommended in the PSP.[32] Pointing to "the difficulties being experienced today in offshore wind development on the U.S. East Coast," the Joint Solar Parties urge the Commission to "moderate and extend the forecasted buildout of offshore wind due to its technological, cost, timing, and infrastructure uncertainties."[33] However, the Commission should find that "California is not simply a passive beneficiary of commercial maturation: the cost declines we see in clean energy resources are the direct result of ambitious state policies and historic investments made in the past two decades."[34]

Offshore wind is not the first innovative technology that California has fostered. As highlighted by ACP, "California has a long history of utilizing public policy to create new markets and launch new industries, including for solar, battery storage, and electric vehicles."[35] Moreover, short-term setbacks – such as the recent cancellation of New Jersey offshore wind projects due to current inflation and steel supply chain issues caused by the war in Ukraine – should not stymie California's long term planning goals.

As CEC Chair David Hochschild commented at the close of a recent CEC workshop:

> I think there's been a lot of attention over the last few weeks on what's just happened in New Jersey and the collapse of that particular project and upward price trend of wind right now, steel prices going up with the war and so on. I just wanted to really articulate for everybody, we are taking a long-term view on offshore wind. … And if you look at all clean-energy technologies, including offshore wind, the price trend over the long haul has been a downward trend. But there are periodic upward ticks in price. That's what we're seeing now, caused by some external factors. That does not change our commitment. Our commitment is a long-term commitment. Through innovation and through scale we're going to drive the cost down, and this is foundational work that really we shouldn't get too distracted by events like what just happened in New Jersey I just want to articulate that because I think it's really important framing for how we view this resource and why the Governor and the Legislature have directed us to have these planning goals and work to build this industry.[36]

---

[32] Cal Advocates Comments at 12.
[33] Joint Solar Parties Comments at 8-9.
[34] ACP Comments at 12.
[35] *Id*.
[36] CEC, *Staff Workshop on AB 209 Offshore Wind Waterfront Facilities Improvement Program* (Nov. 3, 2023) at 3:12:41 to 3:13:42, OSW Waterfront Facility Improvement Program Workshop - Zoom.

GPI worries that "it seems uncertain" that offshore will materialize by 2032 without resource-specific procurement orders.[37] However, load serving entities are already incorporating significant offshore wind capacity into their integrated resource plans ("IRPs"). For example, SCE alone is accounting for almost 1.8 GW of offshore wind by 2035 in its revised IRP.[38] Moreover, the enactment of AB 1373 and the creation of the Strategic Reliability Reserve Resource Program "should help eliminate the doubt about whether [there is] sufficient procurement for offshore wind resources at both Humboldt and Morro Bay."[39]

IV. THE COMMISSION MUST SEND A STRONG, CONSISTENT SIGNAL TO CAISO

Not only does the proposed PSP fail to meet the State's offshore wind planning objectives, it also shows significantly less planned and expected capacity overall than the resource portfolio that the Commission adopted in D.23-02-040 for use in the CAISO's 2023-2024 TPP. This is at odds with Edison International's recent *Countdown to 2045* report, which "demonstrates the need for a major leap in the pace of deployment in all aspects of the clean energy transition, including … up to 15 percent of utility-scale generation coming from new and emerging technologies such as floating offshore wind … and new transmission and distribution grid projects added at up to four times and ten times their historical rates, respectively."[40] As urged by the CAISO, "[p]lanning for the level of clean resources and grid investments needed through 2035 and beyond is necessary now and should span the next decade rather than accumulate at the end of the decade."[41]

Moreover, such "large shifts in resource portfolios" from year to year "can result in both planning and commercial uncertainty in forward years, potentially risking reliability in the process and downstream decisions."[42] "Stability in resource portfolios over successive years is also critical to support certainty in impacted planning processes and decisions, including transmission planning, procurement, and interconnection."[43] If changing resource portfolios cause CAISO to identify a near-

[37] GPI Comments at 27.
[38] *See* Southern California Edison Company's (U338-E) Compliance Filing Correcting its 2023 Integrated Resource Plan, Rulemaking 20-05-003 (Oct. 16, 2023), https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M520/K614/520614148.PDF.
[39] Vineyard Comments at 11-12, ACP Comments at 11.
[40] SCE Comments at 5.
[41] *Id.*
[42] CAISO Comments at 2.
[43] *Id.* at 1.

term need for new transmission, there will be insufficient time for transmission development including project solicitation, permitting, and construction to support the shifting resource portfolio.[44]

This is especially true for offshore wind. An Energy Innovation report finds that, "because changes to transmission planning take at least 10 years to result in new transmission, we must reform transmission planning and cost allocation practices in the 2020s to pave the way for rapid and competitive offshore wind growth from 2035 to 2045. Delaying the process just five years could cut the benefits in half."[45] Proactively planning transmission for offshore wind, on the other hand, would allow California to maximize the value of offshore wind. The PNNL study found that proactive transmission design could significantly mitigate offshore wind's diminishing marginal value as installed capacity increases on the West Coast.[46] Similar, two studies by The Brattle Group for Anbaric (an independent transmission developer) found that proactive planning of offshore wind transmission solutions significantly reduces both costs (e.g., by $0.5 billion for an additional 3.6 GW of offshore wind in New England) and environmental impacts (e.g., by halving the number of ocean cable miles installed).[47]

California must act quickly to "grow a robust offshore wind industry to develop novel technology for floating turbine platforms and sea floor anchors, undersea transmission, specialized ports and vessels for installation and maintenance and a customized supply chain consisting of facilities that today take half a decade or more to construct."[48] If the CAISO only plans transmission for 4.5 GW of offshore wind, California will have insufficient transmission infrastructure to support California's SB 100 mandate.

---

[44] CAISO at 2-3.
[45] Michael O'Boyle et. al., *Policy Priorities to Ensure Offshore Wind Plays a Central Role in Our Net-Zero Future*, Energy Innovation (Aug. 2023) ("Energy Innovation Report") at 36, https://2035report.com/offshorewind/wp-content/uploads/2023/07/Energy-Innovation_2035-3.0-OffshoreWind-Policy-Report.pdf.
[46] PNNL Study, *supra* n. 28, at ES-4.
[47] Samuel Newell et. al. *Offshore Wind Transmission: An Analysis of New England and New York Offshore Wind Integration*, Brattle Group (Feb. 5, 2021) at 10 & 21, https://www.brattle.com/insights-events/publications/offshore-wind-transmission-an-analysis-of-new-england-and-new-york-offshore-wind-integration/.
[48] SCE Countdown to 2045 at 9.

V. CONCLUSION

California is positioned to play a critical role in enabling and leading the scalable deployment of floating offshore wind technology and unlocking this clean energy resource's broad climate, clean-energy, and grid-reliability benefits. The Commission should seek to capture the full benefits of deploying offshore wind energy at a scale that will help lower prices for offshore wind in California, as it has for other innovative technologies. The Commission must serve as a catalyst for offshore wind by selecting robust offshore wind capacity in Northern as well as Central California for transmission planning purposes.

For all the reasons noted above, the Commission should align its renewable energy resource recommendations with the state's offshore wind planning goals and adopt a 25 MMT PSP portfolio that includes 25 GW of offshore wind by 2045.

Respectfully submitted,

By: /s/_____

Vidhya Prabhakaran
Anna Fero
DAVIS WRIGHT TREMAINE LLP
50 California Street, 23rd Floor
San Francisco, CA 94111
Tel. (415) 276-6500
Fax. (415) 276-6599
Email: vidhyaprabhakaran@dwt.com
Email: annafero@dwt.com
Attorneys for Offshore Wind California

Dated: December 1, 2023