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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

CALIFORNIA WIND ENERGY ASSOCIATION REPLY COMMENTS ON PROPOSED 2023 PREFERRED SYSTEM PLAN AND TRANSMISSION PLANNING PROCESS PORTFOLIOS

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On behalf of the California Wind Energy Association

December 1, 2023

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I. INTRODUCTION

Pursuant to Administrative Law Judge ("ALJ") Julie Fitch's Ruling Seeking Comment on Proposed 2023 Preferred System Plan and Transmission Planning Process Portfolios ("Ruling") issued on October 5, 2023, the California Wind Energy Association ("CalWEA") submits these reply comments in response to certain parties' November 13, 2023, opening comments.[1]

As directed in the Ruling, CalWEA organizes its reply comments by the order in which topics appeared in the Ruling; however, CalWEA does not reply to comments on all topics.

II. REPLY COMMENTS ON TOPICS ADDRESSED IN THE RULING

A. Topic 2.1 – Recommended Preferred System Plan Portfolio

Flexibility must not undermine necessary investments in resource diversity.

The California Community Choice Association ("CalCCA") asserts that, given evolving conditions, the individual portfolios of load-serving entities ("LSEs") "cannot be binding on LSEs in any way" five to ten years out.[2] CalCCA notes that individual LSE portfolios that included offshore wind were based on earlier, lower-cost estimates. CalWEA appreciates the uncertainties involved in long-range planning, especially for individual LSEs. However, the appropriate Commission response is not to undermine offshore wind development with a wobbly foundation that will discourage or prevent

[1] All page references are to parties' opening comments unless otherwise noted.

[2] CalCCA at p. 4.

necessary investments in transmission, ports, and supply chain, but to make a firm commitment to offshore wind now and to establish that these diverse resources (and resource diversity more generally) will be an obligation shared by all LSEs because of the critically important systemwide and policy benefits that resource diversity will bring, as many parties recognize.[3]

These diversity benefits are barely discussed in the Commission's IRP process, even though the IRP analysis happened to produce a far more diverse portfolio than the past two portfolios adopted by the Commission.[4] Diversity benefits, which will increase the state's ability to meet its policy goals by mitigating various risks and reducing overall capacity requirements,[5] must be thoughtfully considered by the Commission and balanced against cost concerns.[6] Further, resource diversity should be a planned outcome of the Commission's Reliable and Clean Power Procurement Program.

Planning for a diverse resource portfolio

As SCE stated, "it is critical to adopt ambitious electric sector [greenhouse gas ("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" and to "plan for and construct a diverse set of resources with complementary production profiles and delivery locations."[7]

NRDC and UCS urge the CPUC to harmonize the Preferred System Plan ("PSP") with the Energy Commission's AB 525 planning efforts and the Air Resources Board's scoping plan, which

[3] As CalWEA also explained at pp. 5-6, ACP-California elaborated on the "intrinsic value (of portfolio diversity) not captured by RESOLVE." ACP-California at pp. 11-12. The Natural Resources Defense Council ("NRDC") and the Union of Concerned Scientists ("UCS") ("NRDC and UCS"), as well as Pacific Gas & Electric Company (PG&E) (at p. 4) and Southern California Edison Company ("SCE') (at p. 6), support the proposed 25 MMT PSP in part due to its greater resource diversity compared to the least-cost portfolio produced by RESOLVE.

[4] The Large-scale Solar and Solar Energy Industry Associations ("LSA and SEIA") point to the Ruling's observation that the Least-Cost portfolio contains a greater proportions of diverse resources (in-state wind, long-duration storage, and demand response resources) than the Core portfolio (LSA and SEIA at p. 5). However, both the Core and the Least-Cost portfolios are far more diverse than either the 2021 PSP or the 2023-24 TPP base case, and, as the Ruling notes, the Least-Cost portfolio does not include offshore wind.

[5] ACP-California at pp. 12; CalWEA at pp. 6.

[6] CalWEA notes that SEIA's concern for costs did not extend to the excessively high compensation rates paid for rooftop solar under the Commission's net metering policy despite plummeting solar installation costs. In significant part due to resistance from SEIA and other rooftop solar advocates, net metering persisted for 10 years after the passage of AB 327, which directed the Commission to adopt a reformed successor tariff. The comments of LSA and SEIA state (p. 5) that the least-cost portfolio is less expensive than the PSP by an average of $1.5 billion per year. By comparison, the net metering cost shift was estimated by the Commission's Public Advocates Office to be $3.37 billion in 2021. (*See* D. 22-12-056 at p. 44, December 15, 2022.)

[7] SCE at pp. 5-6.

includes 20 GW of offshore wind by 2045.[8] As CalWEA explained in opening comments, this harmonization can be achieved by firmly committing to at least 28.6 GW of wind energy capacity in the PSP (in-state, out-of-state, and offshore)[9] and focusing on backbone transmission upgrades that will facilitate many resource futures and enable resource adjustments to be made as necessary among resources within the "wind" category, while committing to a substantially diverse resource portfolio.

CAISO notes that "[s]tability in resource portfolios over successive years is … critical to support certainty in impacted planning processes and decisions, including transmission planning, procurement, and interconnection."[10] This sentiment supports CalWEA's call for the Commission to commit to a diverse resource plan, and to retain the 1.6 GW of offshore wind at the North Coast that was included in the portfolio that the Commission sent to CAISO to inform its current transmission planning cycle, now underway.[11]

As American Clean Power-California ("ACP-California") reminds us, the California Legislature recently added portfolio diversity as an explicit objective of the Commission's Integrated Resource Planning and provided additional procurement tools to enable that diversity.[12] ACP-California notes also that "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," that this active approach has resulted in driving down costs, and that an active approach is also required for offshore wind.[13]

The Commission should explain portfolio changes.

The CAISO notes that the resource portfolios in the Ruling show significantly less planned and expected capacity than the resource portfolios that the Commission has adopted previously and asks the Commission to clearly explain the reasons for the change.[14] CalWEA identified the greater resource diversity in the Ruling's portfolio as an important driver of the reduction in needed capacity, and agrees with CAISO that the Commission should explain why the portfolio has changed in this, and subsequent, PSPs.

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[8] NRDC and UCS at p. 5.

[9] CalWEA at pp. 3, 9-13 and 19-20.

[10] CAISO at p. 1.

[11] CalWEA opening comments at p. 3.

[12] ACP-California at pp. 11-12. Similarly, NRDC and UCS and point out that the legislature has affirmed that "offshore wind energy generation is an important component of California's renewable energy portfolio," and has adopted legislation aimed at significant development of offshore wind.

[13] ACP-California at p. 12.

[14] CAISO at p. 2.

CAISO interconnection study reforms will ease the market for mid-term resources.

PG&E asks the Commission to strongly consider providing procurement flexibility as part of future procurement orders and any penalty assessments, noting "a resource scarce competitive market environment due to the lingering effects of the COVID-19 pandemic, global supply chain constraints, and interconnection queue delays" that have made it challenging to meet the mid-term reliability ("MTR") procurement orders.[15] CalWEA notes that CAISO is proposing significant reforms to the deliverability assessment portion of its interconnection studies that it expects to apply to its allocation of transmission planning deliverability ("TPD") capacity to active/candidate resources early next year.[16] These reforms are expected to immediately provide projects that are currently awaiting transmission upgrades with full capacity deliverability service ("FCDS") and to enable TPD capacity allocations for additional projects. CalWEA expects these reforms to immediately add at least several thousand megawatts of additional capacity to the RA market. CalWEA believes that further reforms could double that capacity.[17]

B. Topic 3.3. - Busbar Mapping

NextEra mischaracterizes in-state resource potential.

NextEra and CalWEA agree that, as NextEra stated, "it is critical to maintain a diverse resource portfolio in the PSP that includes wind as a significant source of clean, renewable energy.[18] NextEra and CalWEA also agree that the preliminary busbar mapping "vastly overestimates the developable wind capacity and land in the Southern Nevada region."[19] CalWEA disagrees with NextEra, however, that in-state wind potential has been overestimated. To the contrary, CalWEA explained in opening comments that staff underestimated wind potential in the Central Valley.[20]

CalWEA's views are informed by its membership's long history of developing in-state resources, its near-exclusive current focus on CAISO-interconnected development, and its very recent history with California repowers and greenfield projects in relevant areas. By contrast, NextEra's development interests appear to have been focused outside of CAISO-interconnected areas for several

[15] PG&E at p. 4.

[16] *See* CAISO, Deliverability Assessment Methodology Assumptions - Draft Final Proposal (Nov. 6, 2023) at pp. 4 and 15. Available at: https://stakeholdercenter.caiso.com/StakeholderInitiatives/Generator-deliverability-methodology-review.

[17] *See* CalWEA's Comments on CAISO's Straw Proposal (Sept. 12, 2023), response to question 5.

[18] Next Era Energy Resources comments at p. 3; CalWEA's comments at pp. 15-17.

[19] *Id.* at pp. 7-8.

[20] CalWEA's opening comments at pp. 17-22.

years. CalWEA responds to NextEra's specific arguments as follows.

Tehachapi – The current development context has changed significantly in recent years. New wind turbine generator technologies have made feasible some peripheral areas with lower wind speeds that were previously considered commercially unviable. In addition, many repower opportunities remain, including "overpower" projects where new turbines on tall towers are added over legacy wind turbines, where those turbines remain viable.[21]

Regarding "waking" (wind turbines negatively affecting output from nearby turbines), this phenomenon has been well-studied in this region, including at the decade-old Alta wind projects where waking was indeed underestimated. Based on extensive operational assessments that have been conducted, wake is no longer considered to be a significant factor with current estimating tools, and the unique unidirectional wind direction enables turbines to be more closely spaced.

For the same reasons, due to repower/overpower opportunities, CalWEA disagrees with NextEra that there is no land available for new projects around the Windhub Substation. Moreover, while there are transmission capacity limits at the Windhub substation, CAISO and SCE are working on finding solutions to those limits.

Regarding revenue loss from curtailments and environmental compliance costs related to condor and eagle, these are also now well-understood and can confidently be factored into energy production assessments.

Solano – CalWEA agrees with NextEra that challenges exist around the busbar location where the resources have been located in Solano County. However, these challenges largely pertain to Travis Air Force Base ("AFB") and may be resolved technologically. Five federal agencies are now working on mitigating wind turbine radar interference by 2025.[22] Moreover, technological fixes to radar issues in this particular area already exist or are in the offing, including triangulating radar from McClellan AFB and satellite radar. In any case, the RESOLVE "Solano Wind" resource zone extends to the North, East and South of Solano County, well into the Central Valley,[23] where tremendous commercially viable wind resources exist. The fact that staff has mapped resources only to Solano County busbars underscores CalWEA's point that the Commission and CAISO should plan for needed backbone transmission upgrades, leaving it to developers and permitting processes to locate projects in suitable locations, and to CAISO to plan collector substations in the generation interconnection process.[24]

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[21] For example, overpower projects were recently added to the Voyager 1 & 2 projects. Like old cars, some types of vintage turbines can be continually maintained, remaining operable indefinitely.)

[22] *See* Turbine Radar Interference Mitigation (WTRIM) Working Group.

[23] Inputs & Assumptions 2022-2023 IRP (October 2023) at Figure 5.

[24] CalWEA's opening comments at p. 20.

North of Sacramento – NextEra argues that substantial local opposition and wildfire concerns limit wind project potential in this large region, noting that the Fountain Wind Project, now undergoing permitting review by the CEC, continues to face local opposition after a permitting denial at the county level. NextEra must know that it is a rare energy project that does not face some local opposition, and it is unfortunate that NextEra presumes that an important new state siting process will not be able to fairly judge well-sited proposed projects in the context of the state's ambitious GHG-reduction goals. It is also surprising that NextEra cites a local political decision, rather than the county planning department's recommended approval of the project based on the facts of the case, where wildfire mitigations were judged to enhance fire safety by creating firebreaks and access roads, supplying water tanks, and other measures.

The Commission must ensure proactive transmission planning.

As noted above, numerous parties support planning for a resource-diverse portfolio including offshore wind, which will require more proactive transmission planning than the busbar mapping results will enable. CalWEA supports Cal Advocates' call for another comment opportunity on the busbar mapping results following another Energy Division workshop, as has now been planned,[25] and before the Commission issues a Proposed Decision on the PSP.[26]

To plan transmission assets in Northern California, the Commission must correct for the faulty transmission upgrade assumptions embedded in the RESOLVE model and the busbar mapping process more generally.[27] Sonoma Clean Power ("SCP") underscored the problem with this faulty process when it noted that "[t]he scale of transmission upgrades triggered in RESOLVE for the 25 MMT Core study is surprisingly small … [adding] only 18.5 GW [by] 2035." (CalWEA noted that these upgrades are mostly in Southern California.) SCP notes that "these upgrades represent only 0.3% of total system costs by 2045 and could be increased by an order of magnitude without having a measurable impact on affordability."[28] CalWEA strongly agrees with SCP that "an aggressive build-out of transmission capacity" that provides a "buffer of transmission capacity similar to how a Planning Reserve Margin … is applied for generation capacity needs could prove an invaluable insurance policy" given uncertainties associated with permitting, relative technology costs, emerging resource alternatives, and load growth."[29]

[25] See 11/27/23 email from Jared Ferguson announcing a December 8, 2023, webinar on busbar mapping.
[26] Public Advocates Office at the California Public Utilities Commission ("Cal Advocates") at pp. 11-12.
[27] CalWEA at pp. 17-18.
[28] SCP at p. 8.
[29] SCP at p. 8.

The comments of Golden State Clean Energy ("GSCE") echo SCP's concerns and those raised in CalWEA's opening comments that the RESOLVE model, informed by the CAISO's whitepaper on transmission capability estimates, selects very few in-state resources in PG&E's territory due to the lack of substantial transmission upgrade options embedded in the model, such as the upgrades reflected in CAISO's 20-Year Transmission Outlook.[30] This situation likely reflects a lack of interest by PG&E in meaningful transmission upgrades, which should not carry through to Commission policy. As GSCE states, left uncorrected, "this will heavily favor resource buildout in Southern California and out-of-state" and "leav[e] northern California reliant on carbon-emitting gas-fired power plants and driv[e] investment outside of California."[31]

This problem should be remedied, as GSCE recommends, by the Commission requesting that CAISO "approve transmission upgrades that are right sized to the solutions identified in the [proposed 25 MMT High Gas Retirement] sensitivity," which will also result in "more meaningful steps" towards gas retirement.[32] As CAISO noted, the High Gas Retirement Sensitivity closely aligns with the volume of gas retirements studied in the CAISO's 2022 20-Year Transmission Outlook and its forthcoming 20-Year Outlook update.[33]

Similarly, the California Environmental Justice Alliance ("CEJA") and Sierra Club urge the Commission to "work with CAISO in an iterative process to coordinate transmission with procurement to most efficiently reduce the need for gas plants," analyzing both resources and transmission, and to model "scenarios in which transmission upgrades or new transmission, such as the proposed Pacific Transmission Expansion Project subsea cable, can lead to retirements in DACs, for example in the LA basin."[34] CEJA and Sierra Club call for the "Commission [to] start developing a gameplan to move beyond the reliance on gas plants, especially in local areas, as soon as possible."[35] This aligns with CalWEA's recommendation that the Commission ask CAISO to draw upon its 20-Year Transmission Outlook to plan Path 26 upgrades into the L.A. Basin, as Path 26 is not addressed by RESOLVE.[36]

As ACP-California notes, the 20-Year Transmission Outlook also plans for 10 GW of offshore wind by 2039,[37] and thus "right-sizing" transmission based on the Outlook will also support long-term

[30] GSCE at p. 5.

[31] *Id*. at p. 4.

[32] *Id*. at 3 at pp. 2 and 8-9.

[33] CAISO at p. 4.

[34] CEJA and Sierra Club at pp. 22-23.

[35] *Id.* at pp. 15-16.

[36] CalWEA at pp. 14-15.

[37] ACP-California at p. 16.

planning for OSW. This is consistent with CalWEA's recommendation that the Commission should request that CAISO use the 20-Year Transmission Outlook to "right size" Northern California transmission solutions by planning to accommodate at least 3 GW of wind resources, onshore and offshore, in Northern California.

C. Topic 6 - Proposed Reliability Framework for IRP

In its opening comments, CalWEA indicated its support for SCE's capacity expansion model that considers capacity and energy needs across all hours of the peak load day in a given month or year.[38] The 24-hourly framework provides a much fuller picture of what our resource needs will be as we transition away from fossil fuels – and each resource's contribution to those needs. This type of analysis will better demonstrate the value of a more diverse resource portfolio, as SCE's *Countdown to 2045* study has shown. We strongly agree with SCE that this framework – already approved by the Commission for its Resource Adequacy ("RA") program – should be adopted as the reliability framework in IRP.[39] Moreover, SCE and CEERT noted significant discrepancies in GHG emissions outputs between the SERVM and RESOLVE models,[40] and other limitations with the RESOLVE model,[41] which further support the need for a new, more accurate capacity expansion model.

It would be illogical for the Commission to adopt inconsistent reliability approaches for the IRP and RA processes. As SCE explained, inconsistent approaches will likely result in the IRP plans developed by LSEs failing to satisfy their annual RA obligations. Moreover, adopting a 24-hourly reliability framework for the IRP program makes sense for all the reasons that the Commission adopted it for its RA framework.[42] As the Commission stated, the 24-hourly framework "represents a durable framework that can evolve as the state's energy and environmental policy goals, which include widespread electrification, transform the generation supply portfolio and demand requirements."[43] With regard to durability, for example, a 24-hourly IRP reliability framework will automatically account for the saturation effect of variable energy resources.

While making the transition to a 24-hourly IRP reliability framework may require a significant effort, ultimately, a consistent approach will bring substantial value – producing more granular and accurate modeling results, reducing the workload for both staff and LSEs and, at least as importantly,

[38] CalWEA opening comments at p. 11.

[39] SCE at section II.D.

[40] SCE at p. 8; CEERT at p. 10.

[41] CEERT at section IV.

[42] D. 22-06-050 at pp. 74-76 (June 23, 2022).

[43] *Id.* at p. 75.

providing more planning stability between IRP cycles (as compared to the significant swings seen between the previous and the proposed PSP). At a minimum, as an interim first step as SCE proposed,[44] the 24-hourly reliability framework should be used for LSEs' planning use cases such that LSEs' IRPs demonstrate that their planned resources are sufficient to meet their load requirements (plus reserve margin) over a 24-hour period over the IRP planning horizon.

Respectfully submitted,

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On behalf of the California Wind Energy Association

December 1, 2023

[44] SCE at p. 16.

VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of "California Wind Energy Association Reply Comments on Proposed 2023 Preferred System Plan and Transmission Planning Process Portfolios" are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct. Executed on December 1, 2023, at Berkeley, California.

/s/ *Nancy Rader*
Nancy Rader
Executive Director
California Wind Energy Association