

**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
COMMENTS ON ADMINISTRATIVE LAW JUDGE'S RULING
SEEKING COMMENTS ON ELECTRICITY RESOURCE PORTFOLIOS
FOR 2025-2026 TRANSMISSION PLANNING PROCESS**

Nancy Rader
Executive Director
California Wind Energy Association
1700 Shattuck Ave., #17
Berkeley, CA 94709
Telephone: 510-845-5077 x1
E-mail: nrader@calwea.org

***On behalf of the California Wind
Energy Association***

September 30, 2024

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I. INTRODUCTION AND SUMMARY

Pursuant to the *Ruling Seeking Comments on Electricity Resource Portfolios for 2025-2026 Transmission Planning Process* (“Ruling”) issued by Administrative Law Judge Julie Fitch on September 11, 2024, the California Wind Energy Association (“CalWEA”) provides these comments on the questions posed in the Ruling.

CalWEA summarizes its comments as follows:

- To realize the wind resources in the Commission’s portfolio, energy-only deliverability status onshore wind resources should be converted to full capacity deliverability status in the base case portfolio, and the Commission should request that CAISO reserve capacity that is planned for wind resources for those resources (and similarly for other location-constrained, diverse resources);
- The Commission should include in the base case 2025-2026 TPP portfolio the amounts of long-lead-time resources that it previously authorized for centralized procurement; however, these quantities should add to, not replace, lower-cost diverse resources in the proposed base case portfolio;
- Staff should share, and potentially re-evaluate, the winter capacity values being used for in state wind resource areas;

- Staff should evaluate resource-diversity benefits similarly to how it evaluated offshore wind resources in support of the Commission’s central procurement decision, but expanded to evaluate other diverse resources and combinations of these resources;
- Staff should consider and evaluate the *total* resource portfolio, not just additions to the portfolio, to gain a better understanding of the resource diversity (or lack thereof) of the entire portfolio;
- Staff should evaluate resources under the 24-hourly “slice-of-day” reliability framework to more fully capture the integration costs and benefits of all resources; and
- Sensitivity portfolios should add diverse resources to, not replace, lower-cost diverse resources contained in the proposed base case 2025-2026 TPP portfolio.

II. RESPONSES TO QUESTIONS POSED IN THE RULING

1. Please provide any comments or concerns about the updated modeling inputs and assumptions described in Section 2 of this ruling.

No comments at this time.

2. Do you recommend any changes to the proposed base case portfolio in Section 2 [actually Section 3] of this ruling? If so, provide rationale and justification for your recommended changes.

Yes, CalWEA has numerous recommendations.

First, CalWEA strongly recommends converting energy-only deliverability status (“EODS”) onshore wind resources to full capacity deliverability status (“FCDS”) wind resources in the base case portfolio, as discussed in response to Question 4.

Second, the Commission should plan for the amounts of long-lead-time resources that it authorized for centralized procurement in Decision (“D.”) 24-08-064 (August 22, 2024). For example, while the portfolio includes 4.5 GW of offshore wind by 2035, the balance of the 7.6 GW of authorized offshore wind procurement should be included no later than in the 2040 portfolio. However, as discussed in response to Question 3, below, these quantities should *add to, not replace, lower-cost diverse resources in the proposed base case 2025-2026 TPP portfolio.*

Third, CalWEA requests that staff share, and potentially re-evaluate, the winter capacity values being used for in-state wind resource areas. Staff's October 2023 Final Inputs and Assumptions document shows only overall, rather than seasonal, capacity factors, with 22% for Northern California. CalWEA believes that the overall capacity factor for Northern California wind should be in the range of 30-35% for potential projects using modern wind turbine generation technology. Winter values should be in the vicinity of 40%.

Fourth, CalWEA recommends further study to develop the proposed base case portfolio based on three additional analyses that should be conducted beyond simple RESOLVE modeling of resource cost-effectiveness:

- (a) Commission staff should evaluate resource-diversity benefits similarly to how it evaluated offshore wind resources in support of the Commission's central procurement D. 24-08-064,¹ but expanded to evaluate onshore wind, geothermal, long-duration energy storage ("LDES") resources, and combinations of these diverse resources.² Staff should evaluate how the need for capacity overall declines substantially with more diverse resource portfolios. For example, CalWEA ran RESOLVE with and without the 25.5 GW of wind energy (in-state, out-of-state, and offshore) included in the Preferred System Plan adopted in D. 24-08-064, finding that the portfolio would need to be 27 GW larger without wind energy. See figure depicting this result below. Staff should also *qualitatively* consider the risks associated with a portfolio that is heavily dependent on solar and batteries and the benefits of a more diverse resource portfolio.³ Such analysis is needed to respond to the statutory requirement to "[i]dentify a *diverse and balanced* portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy and resource diversity in a cost-

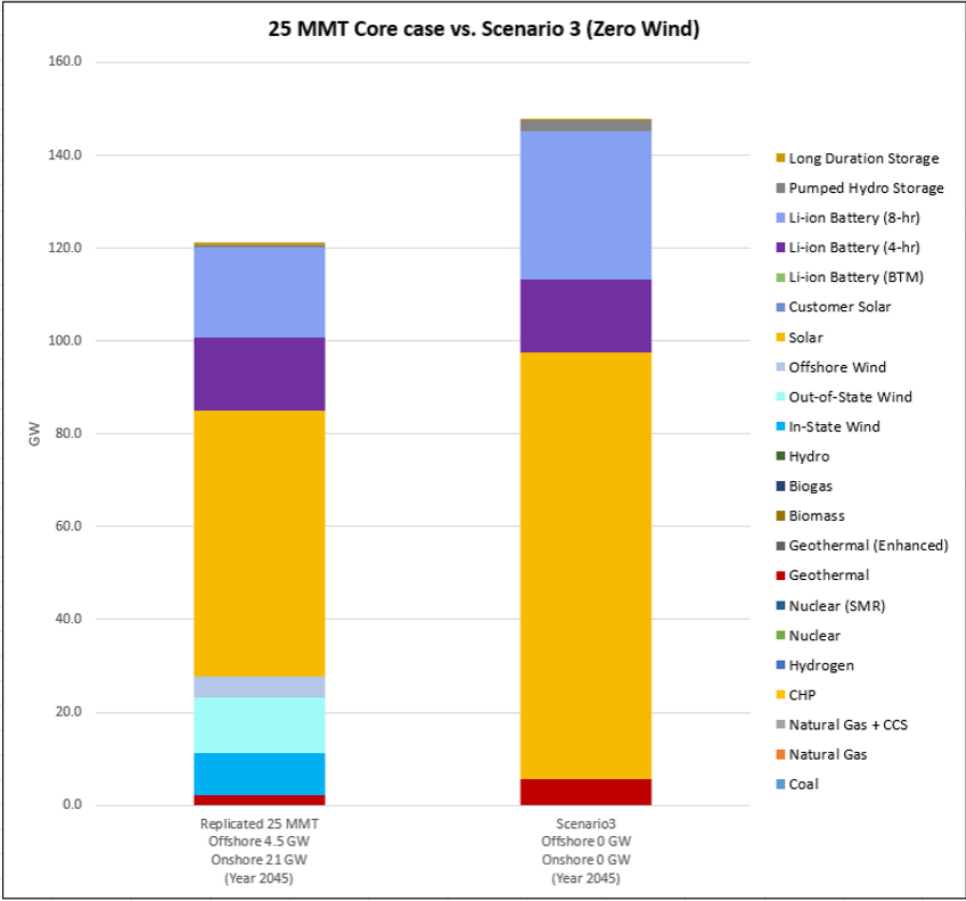
¹ See, in particular, the April 2024 slide deck linked on p. 17 of the April 26, 2024, ALJ Ruling that preceded D.24-08-064.

² For more discussion, see CalWEA's May 24, 2024, comments on the April 26, 2024, ALJ Ruling on central procurement at pp. 8-11.

³ CalWEA discussed these risks and benefits at length in our Comments on Administrative Law Judge's Ruling Seeking Comments on Need and Process for Centralized Procurement of Specified Long Lead-Time Resources (May 24, 2024), at pp. 8-11.

effective manner. The portfolio shall be used by the commission to establish integrated resource planning-based procurement requirements....”⁴

Results of CalWEA RESOLVE Modeling Run Evaluating PSP Portfolio With and Without Wind Energy Resources of All Types



- (b) Staff should consider and evaluate the *total* resource portfolio, not just additions to the portfolio, to gain a better understanding of the resource diversity (or lack thereof) of the entire portfolio.
- (c) As the Commission promised to “explore in the future,”⁵ it should evaluate – beginning now – resources under the 24-hourly “slice-of-day” reliability framework being implemented in the Resource Adequacy program to more fully

⁴ P.U. Code Sec. 454.51 (a). Emphasis added.

⁵ *Id.* at p. 58.

capture the integration costs and benefits of all resources. As CalWEA stated earlier in this proceeding,⁶ the full capacity value of diverse resources is not captured with the ELCC analysis included in the RESOLVE analysis. RESOLVE is based on a single-hour planning reserve margin rather than considering both capacity and energy needs across all hours of a representative peak load day in a given month of the year.

3. Do you support the staff-recommended or alternate sensitivity portfolio in Section 3 [actually Section 4] of this ruling? Which one and why? If you recommend any changes to the sensitivity portfolio you support, or if you recommend a different portfolio altogether, provide a complete description, rationale, and justification for your recommendations.

CalWEA supports the more-diverse portfolio reflected in the recommended sensitivity portfolio with two changes that are particularly important for precedential purposes: the more-diverse portfolio should *add to, not replace, lower-cost diverse resources in the proposed base case 2025-2026 TPP portfolio*, as amended to include centrally procured resources per response to Question 2). The Commission should commit to the resource diversity contained resource portfolios that are being transmitted to the CAISO in the base case to provide transmission planning stability, rather than essentially undermining the base case portfolios with the sensitivity portfolios. As importantly, the Commission should send clear signals to the market that its planning goals for diverse resources are firm, not wavering.

The additional geothermal, LDES, and OSW resources that were placed manually into the adopted preferred system plan (PSP) portfolio for the sensitivity portfolios result in *reducing lower-cost diverse resources*. Namely, placing these other diverse resources reduces 2035 in-state wind by 1 GW and out-of-state Wind by 2 GW. Instead, these resources should be held constant as they exist in the 2025-2026 TPP portfolio base case (which should, in turn, be held constant from the previous 2024-25 PSP base case). This is particularly true for in-state wind since, as CalWEA has explained previously, the CPUC-Energy Commission assessment of wind resources systematically under-estimated California wind resources.⁷

⁶ See CalWEA's May 24, 2024, comments on the April 26, 2024, ALJ Ruling on central procurement at pp. 10-11.

⁷ See CalWEA Comments on Proposed 2023 Preferred System Plan and Transmission Planning Process Portfolios (Nov. 13, 2023) at pp. 20-21. For example, the NREL methodology used to

As noted in the Ruling, the staff-recommended and alternate sensitivity portfolios would increase costs by a net present value of approximately \$3.2-4.9 billion compared to the base case portfolio, due to the higher costs of the LLT resources, and, in the case of the alternate sensitivity portfolio, the overbuilding of resources by forcing in all LSE-planned resources in addition to the LLT resources.⁸ It makes no sense to replace lower-cost diverse resources with higher-cost diverse resources, at least absent any analysis that would warrant such replacement.

4. Do you recommend any changes to the busbar mapping methodology or process described in Section 5 of this ruling and in Attachment A? If so, provide rationale and justification for your recommended changes.

Yes, CalWEA has two recommendations.

First, in determining commercial development interest for long lead-time resources, staff should include in-state resources in the NV Energy queue that could, with planned transmission, connect to the CAISO instead. Such resources exist in Northeast California.

Second, the Commission should plan for FCDS wind resources if it wishes for the in-state wind resources in its planned portfolio to materialize. The initial busbar mapping results contained in the September 12, 2024, slide deck linked on p. 14 of the Ruling indicate a steep decline in FCDS in-state wind resources compared to the busbar mapping results for the PSP base case portfolio adopted earlier this year and used by CAISO in its 2024-25 TPP.⁹ While in-state wind resources increased by 1,354 MW overall, FCDS resources declined by over 2 GW and EODS resources increased by almost 3 GW. This change may be due to RESOLVE selecting more FCDS battery storage in certain areas.

The planned amount of EODS wind resources is unlikely to materialize because load-serving entities will be interested in wind energy largely due to its Resource Adequacy value, which, by definition, does not accompany EO resources. FCDS wind projects would quickly “use up” the capacity planned for EODS resources, since transmission that is planned to

estimate in-state wind resource potential was too coarse to capture potentially developable resources and thus prone to missing ridge-based resources and complex terrain, which characterize much of California’s wind resources.

⁸ Ruling at p. 12.

⁹ See slide 65 of the “2025-2026 TPP RESOLVE Modeling Results” slide deck. CalWEA compared the in-state wind busbar figures to the same figures in the PSP base case portfolio adopted earlier this year.

accommodate EO resources will be insufficient to accommodate FCDS wind resources. For example, in a new resource area, the planned amount of EODS resources could be carried on double-circuit 115kv lines, while FCDS resources would require 500kv lines. Therefore, FCDS wind projects would quickly “use up” the capacity on lower-voltage lines, and the amount of wind energy in the planned portfolio for that area will not materialize.

If the Commission wishes to realize the wind energy in its planned portfolio, it must ask the CAISO to plan for FCDS wind resources. Moreover, as CalWEA has noted previously, it is also essential that the Commission request that CAISO reserve capacity that is planned for wind resources for those resources (and similarly for other location-constrained, diverse resources) if it values a diverse (and therefore less-risky) resource portfolio as the best way to ensure that California will achieve its GHG-reduction goals.¹⁰

- 5. Do you recommend any changes specifically to the selection criteria within the busbar mapping methodology related to “gas capacity not retained” in Attachment A? If so, provide rationale and justification for your recommended changes.**

No comments at this time.

- 6. Do you recommend any additional criteria or processes for improving the busbar mapping for future iterations, specifically in the potential improvement areas listed below? If so, provide rationale and justification, as well as pertinent data sources, for your recommended changes:**
- a. **Assessing commercial development interest beyond interconnection queues and other sources currently used in the methodology;**
 - b. **Application of existing or additional land-use and environmental impact criteria to mapping stand-alone battery storage resources;**
 - c. **Mapping battery storage to existing renewable generators and utilizing their existing interconnections;**
 - d. **Mapping additional storage energy to existing storage to increase its duration, but not exceeding its existing maximum interconnection ability; or**
 - e. **Other potential improvements not specifically covered above in this question, to improve efficient use of existing and already-planned transmission.**

¹⁰ See, in this docket, CalWEA Comments on Proposed Decision Determining Need for Centralized Procurement of Long Lead-Time Resources (August 8, 2024) at section II.C.

No comments at this time, beyond related comments in response to questions 2-4.

7. Include any comments in response to this ruling that are not covered in the other questions above.

As noted in Footnote 7, the methodology used to estimate the wind resources that underlie the busbar mapping process was flawed and CalWEA believes that it significantly underestimated, and potentially mis-located, the most promising wind resource areas in the state. An update should be prepared in time for the next IRP-TPP portfolios.

Respectfully submitted,

/s/ Nancy Rader

Nancy Rader Executive Director
California Wind Energy Association
1700 Shattuck Ave., #17
Berkeley CA 94709
Telephone: (510) 845-5077 x1
Email: nrader@calwea.org

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