

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue
Oversight of Electric Integrated Resource
Planning and Procurement Processes.

Rulemaking 25-06-019

**CALIFORNIA WIND ENERGY ASSOCIATION REPLY COMMENTS
ON ALJ RULING ON 2026-27 TPP PORTFOLIOS
AND NEED FOR ADDITIONAL RELIABILITY PROCUREMENT**

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*On behalf of the California Wind Energy
Association*

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I. INTRODUCTION AND SUMMARY

Pursuant to the September 30, 2025, *Ruling Seeking Comments on Electricity Portfolios for 2026-2027 Transmission Planning Process and Need for Additional Reliability Procurement* issued by Administrative Law Judge Julie Fitch (“Ruling”), the California Wind Energy Association (“CalWEA”) provides these reply comments to various parties’ October 22, 2025, opening comments.¹ Comments are organized by topic area, noting the questions posed in the Ruling.

II. RESPONSES TO OPENING COMMENTS

A. Comments on Updated Framework for TPP Portfolio Selection (Question 1)

CalWEA supports CEJA and Sierra Club’s proposal that, when CAISO identifies that a transmission solution will not be possible, the Commission should incorporate that information into its resource planning and TPP scenarios.² CEJA and Sierra Club point to SCE’s apparent decision to drop its plans to develop a previously approved 500-kV transmission reinforcement project from Serrano-Del Amo-Mesa. It is crucial to incorporate these changes into IRP modeling,

¹ Due to time and resource constraints, CalWEA could not review all parties’ filings. We respond to the following parties’ opening comments: California Community Choice Association (“CalCCA”), California Energy Storage Alliance (“CESA”), California Independent System Operator Corp. (“CAISO”), California Environmental Justice Alliance and Sierra Club (“CEJA and Sierra Club”), Invenergy LLC (“Invenergy”), NextEra Energy Resources (“NEER”), Oceantic Network (“Oceantic”), Pacific Gas & Electric Company (“PG&E”), Solar Energy Industries Association and Large-Scale Solar Association (“Joint Solar Parties”), Southern California Edison Company (“SCE”), and Union of Concerned Scientists (“UCS”).

² CEJA and Sierra Club at p. 8.

as TPD allocations have been made to projects based on planned capacity, and alternative solutions are now necessary to maintain the viability of these projects.

B. Comments Relating to the Base Case Portfolio
(Question 3 and relating also to Questions 2, 6, and 7)

1. Parties’ comments underscore the need to include all feasible in-state wind in the 2036 portfolio.

Many parties, even if they generally support the Ruling’s Proposed Base Case, or Least-Cost Scenario as the base case, both of which include very little in-state wind in 2036, nevertheless make comments that underscore the need to plan for more in-state wind in the near-term and 2036 portfolio:

- CEJA and Sierra Club “generally support” the Proposed Base Case, but correctly point out that onshore wind energy, even without the tax credits, has been and continues to be one of the most affordable clean energy resources according to Lazard.³ CEJA and Sierra Club correctly “urge[] the Commission to address issues with wind deployment by removing obstacles to wind development rather than planning for its failure,” echoing CalWEA’s caution that the Ruling’s pessimism could be a self-fulfilling prophecy.⁴ These parties appropriately call for TPP scenarios that include planning for wind development, so that transmission development can support it.
- PG&E states that the current portfolio, requiring annual resource additions of more than 10 gigawatts (“GW”), “is much higher than historical averages and strains credulity,” “requir[ing] an infeasible amount of new solar buildout.”⁵ As the proposed solar additions are infeasible, the Commission must recognize the realistic potential for wind in the late 2020s to 2036 timeframe, as recommended by CalWEA,⁶ to increase the likelihood of meeting GHG targets.

³ CEJA and Sierra Club at pp. 14-15.

⁴ CalWEA opening comments at p. 8. CalWEA noted on p. 16 that the exclusion of wind energy in the 2021 mid-term reliability (“MTR”) order partially accounts for the limited amount of in-state wind development presently.

⁵ PG&E at pp. 3-4.

⁶ CalWEA opening comments at p. 7. CalWEA stated that staff underestimated near-term Baja wind resources by 560 MW and overlooked at least 300 MW of in-development resources within California that are expected to qualify for existing tax credits. These resources are likely to fulfill – by 2032 or earlier – the

- SCE, recognizing “unprecedented build rates for solar” and that “solar is at risk from federal actions” under the current administration, calls for “flexible compliance,”⁷ suggesting that the Commission’s 25 MMT GHG emissions target for 2035 cannot be met.
- PG&E,⁸ CalCCA⁹ and NEER¹⁰ point out the need, under CAISO’s new interconnection process, for new ways of forecasting commercial interest, particularly in the case of location-constrained generation resources. PG&E and CalCCA suggest that commercial interest in wind and other location-constrained technology types be solicited and be reflected in the busbar mapping to enable additional TPD to become available. CalWEA has, in fact, already provided the Commission with its educated assessment of the zones where there is (and isn’t) commercial interest in developing wind resources.¹¹
- CAISO “generally supports” the solar-dominated base case, yet, in requesting accurate marginal ELCC values for purposes of a near-term procurement order, which CalWEA

Base Case 2.6-GW planning goal for 2036; thus, the 2.6-GW wind goal is clearly too low.

⁷ SCE at pp. 8 and 10.

⁸ PG&E (at p. 9) states that “capturing commercial interest appears to be based on circular logic ... A potential outcome of this is that commercial interest is concentrated where there was previously TPD available versus where upgrades would enable the most cost-effective development. ... [R]esource planning efforts would benefit from finding new ways to forecast commercial interest, particularly in the case of location-constrained generator resources. ... It may be very difficult for [hydro, pumped storage hydro, geothermal, and wind] projects to make it through the current interconnection study selection criteria because there are so many locations with zero TPD available. To ensure these types of projects come online, commercial interest in these technology types must be solicited in some manner and be reflected in the busbar mapping to enable additional TPD to become available.”

⁹ CalCCA (at pp. 24-25) states that interactions under the CAISO’s new interconnection process “have the potential to create a circular feedback loop that results in excess interconnection requests and infrastructure build-out in areas with existing or planned TPD, and ignoring other areas, such as transmission-constrained local areas, where projects might be feasible, but no TPD exists. This could be especially problematic for location-constrained resources, like geothermal, wind, or other technologies that can only interconnect at specific POIs. Therefore, the Commission and CAISO should consider how to identify areas with commercial interest outside of what is already in the interconnection queues.”

¹⁰ NEER (at p. 10) agrees with PG&E (citing PG&E’s September 5, 2025 informal comments) that “a side effect of the [CAISO’s new interconnection] process, which encourages development where TPD exists, is that there could be an excess of commercial interest at those specific busbars” and that “if a POI has zero TPD available, the only way to add TPD is from new projects triggered in the TPP.” NEER argues that “TPP portfolios should signal necessary transmission investment.”

¹¹ CalWEA opening comments at Table, p. 6. This table highlights priority wind development areas: Baja California, Tehachapi-Antelope Valley, and Northeast California. Wind resources identified by Energy Division in the SCE Eastern and SCE EOP and PG&E GBA areas are far less promising.

addresses below, asks the Commission to ensure that marginal ELCC “reflect a portfolio that is balanced and provides sufficient energy for charging storage resources,” and to “guard against any single resource type dominating LSE procurement.”¹² Including more in-state wind energy, including energy-only wind resources, in the portfolio would address these concerns.

2. NEER’s attack on in-state wind is without merit.

Next Era Energy Resources’ (NEER) peculiar attack on in-state wind is uninformed and without merit.¹³ NEER’s request that the Commission reduce total wind potential should be rejected. Instead, the Commission should adjust these figures, as well as the selected wind builds for 2036, in accordance with CalWEA’s recommendations, which reflect priority development areas where commercial interest has been demonstrated.¹⁴

NEER states that the Ruling’s build limits are unsupported by historical procurement and greenfield developments. CalWEA has documented several wind developments currently underway, including projects that are fully contracted, demonstrating market viability.¹⁵ The new Slice-of-Day Resource Adequacy (“RA”) Program framework provides substantially more capacity value to wind resources than is recognized in IRP modeling, increasing wind’s market value. Finally, past need not be prologue, as stated by CEJA and Sierra Club, noted above.

NEER waives away the current federal challenges to solar development – including the recent cancellation of the 6-GW Esmeralda-7 project, while using these same challenges to discount in-state wind potential and remaining silent on the greater challenges faced by out-of-state and offshore wind, which rely more heavily on federal actions.

NEER refers to local moratoria on wind energy projects but fails to mention the new state-level “opt-in” permitting option available at the California Energy Commission. This option allows the state to override local restrictions on clean energy and battery projects. It was established to address local opposition to clean-energy projects just as state permitting was developed for gas and nuclear projects in the 1970s.

NEER suggests that developers will not pursue projects within the condor range boundary.

¹² CAISO at p. 5.

¹³ NEER at pp. 23-27.

¹⁴ CalWEA at pp. 6-7.

¹⁵ *Id.* at footnote 18.

NEER is apparently unaware of the Wind Energy Condor Action Team (WECAT) program¹⁶ that allows wind projects to obtain incidental take permits for condor by following minimization and avoidance measures. Twenty-four projects are participating in the permit, which is also available for new projects.

NEER suggests that new transmission required for in-state wind be evaluated for wildfire threat. CalWEA has explained why and documented that properly mitigated wind projects, including overhead power lines, do not increase wildfire risk.¹⁷ Should the Commission review new transmission lines for wildfire risk, such review would apply to many more resources than in-state wind.

NEER points to airspace restrictions related to activities like Military Training Routes (“MTRs”) as limiting wind turbine siting. First, many wind projects have been carefully sited in MTRs, with approval by the Department of Defense. Second, CalWEA has recognized the limited potential for wind development in areas with substantial military conflicts and therefore recommended that Energy Division include minimal amounts of wind in the EOP, NOL, and SCE Eastern study areas.

NEER’s conflict map, as shown in the appendix, is overly broad. It includes, for example, a recently permitted project in Kern County along with other infill projects in earlier stages of development and future repowers that should increase the energy density in already developed areas due to larger turbines being used on land already zoned for wind energy use.

For all these reasons, NEER’s comments should be disregarded.

3. Regarding offshore wind, the Commission must decide whether to “go big or go home” – or postpone that decision for at least a year.

Offshore wind advocates have made it very clear that economies of scale are critical to the success of offshore wind development – that is, sufficient scale is necessary to attract the substantial investments required and to achieve cost competitiveness.¹⁸ The advocates also make

¹⁶ The WECAT is a consortium of 24 wind energy companies located in the Tehachapi Wind Resource Area. The WECAT members were issued an U.S. Fish and Wildlife Incidental Take Permit under the Endangered Species Act for the incidental take of the California condor. See <https://www.wecatllc.com/>.

¹⁷ CalWEA at pp. 12-13. Also see CalWEA Informal Comments on the Busbar Mapping Methodology (September 5, 2025), at pp. 2-3.

¹⁸ Oceantec at pp. 3-6. (At p. 6: “The state’s progress toward OSW “will only achieve its full promise if the state supports a market large enough—and early enough—to justify private investment and deliver cost efficiencies.”)

clear that the Proposed Base Case does not provide that necessary scale. Essentially, they are telling the Commission to “go big or go home.” For example, Oceantic calls for 7.6 GW of offshore wind buildout in the Base Case, including development at Humboldt in 2036,¹⁹ and Invenergy states that planning transmission for at least 6 to 7 GW at the Central Coast alone “is critical.”²⁰

At the same time, many parties express concern about including offshore wind in the 2036 portfolio. PG&E²¹ and CESA²² advise the Commission to select a realistic scenario for the TPP base case that recognizes the significant headwinds against offshore wind development and substantial overall system costs resulting from OSW. Along those lines, CalWEA explained that, for logistical reasons if nothing else, it will be difficult, if not impossible, to achieve 2.9 GW of offshore wind by 2036.²³

CalWEA recommends that the Commission postpone the momentous decision to “go big or go home” for at least a year. In opening comments, CalWEA advised that transmission upgrades for Humboldt offshore wind be put on hold and that, instead, the Commission request that CAISO consider pragmatic, least-regrets upgrades such as the Vaca-Dixon to Tesla 500 kV upgrade to help with all resources in the NGBA study area. Capacity will still be available for Humboldt OSW once the upgrade from Fern Road to Humboldt to Vaca Dixon is built. The transmission upgrades

¹⁹ Oceantic at p. 3. (“A base-case assumption below 7.6 GW—or a northern buildout that slips beyond 2036—risks undermining the very efficiency these investments were designed to achieve.”) American Clean Power - California and Offshore Wind California did not emphasize this point in their comments on the Ruling. However, they made the point clearly in their August 8, 2024, Opening Comments on the Commission’s Proposed Decision Determining the Need for Centralized Procurement of Long-Lead-Time Resources that scale *in California* is essential. For example, ACP-CA stated (at p. 3) that the 7.6 GW of OSW need identified in the Proposed Decision “reflects the minimum necessary scale to address supporting infrastructure, launch a new industry, achieve market transformation effects, and protect affordability.” Similarly, Offshore Wind California stated that “[e]stablishing a mechanism to procure OSW at scale is essential to achieving the economies of scale needed to make floating OSW a key part of California’s clean-energy future.”

²⁰ Invenergy at pp. 4-5. (“[U]nder-sized transmission development will undermine the Commission’s market-transformation objective for central procurement and will jeopardize the state’s ability to meet its climate goals....ensuring that transmission capacity is available to bring at least 6–7 GW of Central Coast offshore wind to the grid is critical.”)

²¹ PG&E, at pp. 5-6, states, “For reasons mentioned in response to Question 1, and because the timeline for emerging resources, like offshore wind, does not take into account the incremental challenges around permitting, recent federal hostility to offshore wind, and cost increases, PG&E does not support the Base Case as currently proposed.”

²² CESA at pp. 3 and 8.

²³ CalWEA at pp. 18-19.

needed for Morro Bay OSW (primarily a 500-kV substation at Morro Bay), while not least-regrets, are far more modest and do not require 10 years' lead time. Thus, it is reasonable not to include OSW in the 2036 base case portfolio, which provides additional time to consider the complex issues surrounding this challenging resource in the current federal context.

4. The uncertainty of offshore wind, and challenges with out-of-state transmission, underscore the need to recognize the realistic potential of onshore, in-state wind.

Should the Commission decide to postpone offshore wind and not include it in the portfolio for 2036, or simply recognize that there is substantial risk that OSW won't materialize in 2036 or at all, it becomes even more important to maintain some meaningful level of resource diversity in the portfolio by including more in-state, onshore wind, particularly given the challenges articulated by CalCCA in building out-of-state ("OOS") transmission.²⁴ The advantage of planning transmission for wind resources in Northeast California is that it will access in-state wind resources while also providing the opportunity to interconnect with wind resources in the Pacific Northwest, Wyoming, and/or NV Energy at the same time or at a later time.

5. The Base Case portfolio should foster Path 15 and Path 26 upgrades, including increasing deliverability near Windhub.

CalWEA agrees with NEER that the Commission should work closely with CAISO to accelerate the transmission solutions for Path 15 and 26, incorporating advanced grid technologies as well as new transmission. CalWEA has long supported Path 26 upgrades, which will deliver reliability, economic, and policy benefits to the entire state.

CalWEA also supports Terra-Gen's call for more accurate assumptions in the busbar mapping process to recognize much lower-cost transmission solutions with shorter construction schedules, namely upgrading the Vincent-Windhub 230kV transmission line. This project would help solar and wind projects in the Tehachapi area secure tax credits, while also providing major additional benefits, including contributing to the expansion of Path 26.

²⁴ CalCCA (at pp. 20-21) referenced CAISO's statement that there are "no known transmission projects that can integrate these [OOS] resources apart from SWIP- North (Idaho), TWE (Wyoming), and Sunzia (New Mexico)." CalCCA stated that, "Unlike in-state transmission build, OOS transmission requires mutual agreement and close coordination with other states, further complicating the ability to access OOS resources. Therefore, the Commission should limit OOS wind in the base case to the amount in the sensitivity portfolio that reflects [quoting the Ruling] 'the amount available to be delivered on existing transmission where the CAISO has rights.'"

6. Busbar mapping results should identify in-front-of-the-meter distributed energy storage.

CalWEA agrees with CESA that the busbar mapping results should clearly identify the quantities of all in-front-of-the-meter distributed energy storage included at the various substations.²⁵ Busbar mapping results currently prevent distributed storage from receiving deliverability through CAISO’s Distributed Generation Deliverability process, artificially creating a need for additional utility-scale capacity resources and needlessly raising the cost of achieving GHG goals.

7. The Base Case portfolio should include significant reductions in gas plant generation.

CalWEA agrees with CEJA and Sierra Club that the Commission should ensure its Base Case portfolio includes significant reductions in gas plant generation.²⁶ This is necessary to plan the transmission needed to reduce reliance on gas plants in local capacity areas, as required by SB 887.

C. Comments on Limited Wind Sensitivity (Question 4)

PG&E does not support the proposed Limited Wind Sensitivity because the increased solar build rates it contains “are even less feasible than the current Base Case and therefore should not be studied.”²⁷ SCE finds that the 1-GW out-of-state wind figure in the Limited Wind Sensitivity is not a plausible contingency scenario, which SCE contends should be the purpose of sensitivity studies.²⁸ CalWEA agrees that sensitivity analyses should be plausible, and asserts that including just 2.5 GW of in-state wind in the Limited Wind Sensitivity is also not plausible, particularly while, at the same time, presuming that 83 GW of solar is plausible.²⁹

More generally, CalWEA recommends studying a variety of possible futures to develop “least regrets” resource portfolios, similar to the sensitivity studies conducted for offshore wind leading up to the Commission’s decision on AB 1373 central procurement (D.24-08-064).

²⁵ CESA at p. 8.

²⁶ CEJA and Sierra Club at pp. 13-14.

²⁷ PG&E at p. 6.

²⁸ SCE at p. 7.

²⁹ CalWEA at pp. 10-11.

D. Comments on a Potential Procurement Order

1. The Commission should recognize the rapidly declining capacity value of 4-hour batteries and the lag in clean energy procurement, and direct the procurement of energy resources. (Questions 10, 14, 15, 22)

The Commission should heed CAISO’s recommendation to “ensure marginal ELCC values are accurate and reflect a portfolio that is balanced and provides sufficient energy for charging storage resources.”³⁰ Ordering clean-energy procurement is also necessary to ensure that LSEs meet their RPS and GHG-reduction goals, as shown by the Union of Concerned Scientists’ analysis.

SCE stated that the amount of resources that LSEs must effectively procure can “differ drastically depending on which set of ELCC values are adopted.” SCE estimates that extending the existing 2028 MTR ELCC values from 2029-2032 would require approximately 7,800 MW of 4-hour batteries to meet a 6,000 MW ELCC target, while using the RCPMP Staff Proposal ELCC values would require ~16,200 MW of 4-hour batteries -- *more than double the capacity*.³¹ This is far more than the “lost precision” that would arise from using MTR ELCC values, as noted in the Ruling.³²

To ensure that any procurement order is feasible, SCE calls for using the higher MTR 4-hour-battery ELCC values through 2032. The Commission should reject this argument. While procuring ~16,200 MW of batteries by 2032 may not be feasible, the Commission should not use ELCC values that it knows are inaccurate. Doing so would discourage procurement of capacity from sources other than 4-hour batteries and fail to “guard against any single resource type dominating LSE procurement,” as CAISO advised.^{33,34} To increase the feasibility of procuring more battery capacity, the Commission should encourage CAISO to use available FCDS capacity more judiciously by allocating TPD capacity based on corrected ELCC values (rather than the arbitrarily high values currently being used), which will allow more batteries to obtain FCDS status. As discussed below, the Commission should also adopt SCE’s recommendation that EO

³⁰ CAISO at p. 5.

³¹ SCE at pp. 11-12.

³² Ruling at p. 38, as noted by SCE on p. 13.

³³ CAISO at p. 5.

³⁴ CalWEA pointed out in opening comments, at p. 7, almost 2 GW of in-state wind resources are under development, at least some of which will have TPD capacity.

resources with battery storage resources be provided with ELCC value, however, this should not be limited to co-located resources, and it should extend only to non-peak hours.

Declining battery capacity values also underscore the need for the Commission to order energy procurement. The significantly greater amount of 4-hour battery capacity required to meet reliability targets, once lower ELCC values are recognized, must be charged, and lower-cost energy-only (“EO”) resources will be necessary to accomplish this cost-effectively. Furthermore, as the Joint Solar Parties point out, battery storage ELCCs decline if the portfolio does not include sufficient charging capacity³⁵ – whether solar or other energy resources – and the need for EO resources in excess of the capacity required to achieve reliability goals is becoming clearer.³⁶ To foster more EO resources, the Commission should encourage CAISO to allow interconnection customers that fail to obtain deliverability to convert to EO status rather than being eliminated from the queue, as recommended by the Joint Solar Parties.³⁷

Equally importantly, the Union of Concerned Scientists (“UCS”) demonstrated that ordering clean-energy procurement is also necessary because LSEs are not procuring enough to meet their RPS and GHG-reduction requirements. UCS stated that, “as the Commission has remained vigilant on the grid reliability front, the Commission has paid virtually no attention at all to progress on clean energy.”³⁸ UCS found that LSEs are collectively building far too few wind resources to meet IRP goals, and that, while solar procurement rates have kept pace with solar IRP goals so far, they fall far short of the much higher build rate in the TPP Base Case. UCS recommended that the Commission increase the Renewable Portfolio Standard (“RPS”) requirements from 60% to 80% in 2030 “to ensure LSEs do not fall too far behind on IRP goals and to address this issue as simply as possible.”³⁹

The Joint Solar Parties also support the demand for additional clean energy resources, as they are needed to meet increasing load forecasts with clean energy and to charge energy storage resources.⁴⁰ CEJA and Sierra Club likewise support including an energy component in the

³⁵ Joint Solar Parties at p. 11.

³⁶ *Ibid.*

³⁷ *Id. at pp. 11-12.* CalWEA has also advocated this policy change in CAISO’s IPE-5 process.

³⁸ UCS at p. 2.

³⁹ *Ibid.*

⁴⁰ Joint Solar Parties at p. 9.

procurement requirement, in part to help California meet its climate requirements and ensure that energy storage can be charged by clean energy.⁴¹

2. The Commission should adopt an amended version of SCE’s proposal that energy-only resources co-located with battery storage resources be provided with an ELCC value. (Question 18)

CalWEA generally supports SCE’s recommendation that the Commission update the 2028 MTR ELCC counting rules so that EO resources co-located with battery storage resources are provided with an ELCC value, consistent with the Slice-of-Day (“SOD”) RA framework that correctly recognizes that a co-located EO resource capable of directly charging its paired battery, whether contracted with the same off-taker or not, provides sufficient charging capability.⁴² However, two amendments to this proposal are in order: (1) ELCC values should be granted to EO resources only during non-peak hours⁴³; EO ELCC values should not extend to the few hours during summer months when TPD capacity is constrained (these resources can still be used for charging during these hours); and (2) the policy should not be limited to co-located resources because all EO resources provide capacity outside of those hours.

Respectfully submitted,

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On behalf of the California Wind Energy Association

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⁴¹ CEJA and Sierra Club at p. 27.

⁴² SCE at p. 21.

⁴³ Peak hours can be determined using the SOD framework to identify the ~12 slices (~12 hours) where the LSEs’ capacity shortfall (projected LSE hourly MW load plus PRM minus contracted MW supply) is greatest. See CalWEA’s July 15, 2025, comments on the RCPFP Framework in this docket.