May 27, 2025

California Energy Commission
715 P Street
Sacramento CA 95814

Submitted via e-commenting portal

Re: Docket 23-OPT-01 – Comments on Fountain Wind Project Staff Assessment and EIR

The California Wind Energy Association (CalWEA) is a 25-year-old trade association representing the interests of owners, operators, and developers of wind projects located in, and directly interconnected to, California. In these comments, we address the Fountain Wind Project Staff Assessment published by the California Energy Commission (CEC or Energy Commission) on March 25, 2025.[1]

I. INTRODUCTION

CalWEA finds the Staff Assessment improper and unfair to the Fountain Wind project. Further, Siting Division Staff fundamentally misunderstand wind energy's role in the energy portfolio and appear unaware of current reliability accreditation methods. If the same biased and flimsy analysis were applied to other wind or solar projects, meeting the state's SB 100 goals would be impossible.

Rejecting Fountain Wind based on staff's faulty CEQA analysis would chill already inadequate investment in California wind energy projects, first, because the CEC's Opt-In siting process was meant to be a check on local not-in-my-backyard concerns and, second, denying this well-sited project would encourage other local jurisdictions to adopt prohibitions on renewable energy projects that are unpopular in their communities.

California needs 9 gigawatts (GW) of wind energy within, or directly interconnected to, California to meet the 2025 resource plan adopted by the California Public Utilities Commission (CPUC) to meet the state's 2045 SB 100 goals – requiring another 44 wind projects the size of Fountain Wind. This is in addition to 4.5 GW of offshore wind, 15.7 GW of out-of-state wind, 62 GW of utility-scale solar projects and 37 GW of battery storage. These daunting amounts of solar and batteries will be made even more daunting without in-state wind in the portfolio.

[1] All page references are to the Staff Assessment unless otherwise noted.

For the reasons discussed below, the Commission should return the Staff Assessment for necessary corrections and approve the Fountain Wind project. In summary:

- The reasons CEC staff cites in proposing to reject Fountain Wind could kill any renewable energy generation project; the wildfire analysis is particularly egregious.
- Battery storage alone is not an acceptable alternative to Fountain Wind or any renewable generation project.

II. THE STAFF ASSESSMENT'S REASONING COULD KILL ANY RENEWABLE ENERGY GENERATION PROJECT

The following flaws in the Staff Assessment could kill any renewable energy generation project, and undoubtedly any wind project. Ironically, the Fountain Wind project was the first applicant in the new CEC "Opt-In" siting process under AB 205 (2022), which was intended to provide a statewide perspective on proposed solar, storage, and wind projects to ensure that local not-in-my-backyard (NIMBY) concerns won't thwart achievement of the state's climate goals. These purposes have not been served in the Staff Assessment.

Local conflicted officials, not the responsible state agency, should be relied on to determine fire risk. The Staff Assessment finds, without evidence, that Fountain Wind presents a significant, unavoidable catastrophic wildfire risk because CAL FIRE would be unable to mount an effective aerial response to wildfire in and around the project site, and that this would result in extensive and significant environmental impacts. (p. 5.2-1) The Staff Assessment relies on local officials who report to the county fighting the Fountain Wind project.

Credible fire experts and CAL FIRE have disavowed the finding regarding aerial firefighting. The experts attested that Fountain Wind would reduce fire risk by reducing fuel and adding local water storage. But, as described in the project applicant's response to the Staff Assessment, staff refuse to seek CAL FIRE's response to those local officials' opinions on which its assessment relies.

Staff's behavior is suspect, suggesting pursuit of a predetermined CEQA outcome. Staff's flawed conclusion would apply to any forested area in California, preventing any wind project from being sited on forestland, without evidence that any of the hundreds of operating wind projects on forested lands have contributed to catastrophic wildfires, including the 15-year-old Hatchet Ridge, right next door to Fountain Wind.

Finally, the staff's "analysis" regarding wildfire risk in the Battery Energy Storage System (BESS) Alternative stands in conspicuous contrast to that of Fountain Wind. Despite the BESS Alternative potentially being located on the Fountain Wind or other forested site, and despite recent (unmentioned) fires at utility-scale battery plants, the risk of wildfire is dismissed because "impeding aerial firefighting would be avoided" (p. 8-51) and because "the BESS Alternative would have wildfire prevention plans that comply with local and State requirements." (p. 8-53) While California is considering strengthened safety regulations for battery storage systems, at least some risk will remain. Yet, the staff analysis does not entertain the possibility.

The size and quality of the wind resource in Shasta County are lower than in historically developed areas. Staff find that the benefits of the 200-megawatt Fountain Wind project do not outweigh its unavoidable environmental impacts, given its "relatively small contributions to the energy needs of the state" (p. 1-4). By this logic, no wind or solar project would be approved because each one is small relative to the state's energy needs due to the diffuse nature of those resources. In the case of wind, 45 projects the size of Fountain Wind will be required to meet the CPUC's 9-gigawatt wind energy goal by 2045. In solar's case, 300 projects of a typical 200-MW size will be required.

Staff state that Fountain Wind is "not within one of the previously identified and established wind resources areas and the project's expected capacity factor will be lower than other projects located in the state's traditional wind resources areas." (p. 11-9) This is not a surprise and should have no bearing on the analysis. As with most renewable resources, the highest quality, most concentrated resource areas were tapped first, and the historically developed areas are almost entirely built out. Maps 1 and 2 in the appendix show that the remaining wind resources needed to achieve California's goals are scattered and scarce. These resources are nevertheless the basis for the CPUC's wind resource goals.[2]

Staff do state that "the limited number of proposed onshore wind projects does increase the importance of each project's contribution" to the state's SB 100 wind generation targets (p. 11-9) and note the limited number of wind projects in the CAISO interconnection queue (p. 11-10).[3] However, in finding BESS an appropriate alternative, the staff nonsensically conclude that "accelerating battery energy storage system installations, now at over 8000 MW, is also needed to meet energy goals." Almost 37 GW of battery storage is needed to meet the CPUC's goals; this is no reason to kill the wind projects *that are also required*.

Speculative impacts should be considered and may not be mitigated. Staff rely on speculation, rather than evidence, to find substantial impacts, and then find those impacts unmitigable. For example, staff speculate that there is a remote possibility that sand hill cranes – wetland birds migrating over the project at 10,000 feet – could land on a waterless site and collide with the turbines. Even assuming the rare event of a collision with turbines, such impacts have been routinely mitigated in countless other clean energy projects. Finding such impacts to be unmitigable would doom most renewable energy projects.

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[2] See, e.g., CPUC *Inputs & Assumptions, 2022-2023 Integrated Resource Planning (IRP)*, Table 33 (October 2023).

[3] Even the minimal number of CAISO-queued wind projects cited in the Staff Assessment is no longer accurate, given the CAISO's recent culling of the queue. CalWEA's review finds that, of the 22 interconnection requests currently in the queue that specify "wind," only two (totaling 205 MW) appear to be in-state greenfield wind projects clearly moving forward. Ten are repowers that have been built or are under construction, one is stalled indefinitely, one has converted to batteries, and five are in Baja or Nevada. Three projects are multi-technology that may ultimately not include wind.

Visual impacts trump climate action. Fountain Wind is proposed on active, privately owned timberland. The developer has committed to avoiding any known or discovered cultural resources, and its certification can be conditioned on that. The key impact appears to be the project's visual impact on a tribal cultural landscape, because wind turbines will be seen from a nearby mountain where ceremonial activities occur. No one contests this impact, but a substantial portion of California has documented tribal cultural significance, and wind turbines, like fields of solar panels and battery banks, cannot be hidden. No one said that addressing climate change would be easy. Hard choices must be made if California is serious about leading the world in taking the necessary climate action to avert climate disaster.

III. BATTERY STORAGE IS NOT A VIABLE ALTERNATIVE TO FOUNTAIN WIND

The Energy Commission cannot certify a project under the Opt-In siting process if it conflicts with local laws – the Shasta County Board of Supervisors adopted a moratorium on wind projects – unless it determines that "no more prudent and feasible alternative" exists to meet the "public convenience and necessity" for the project.

The BESS Alternative, which the Staff Assessment finds to be "a more prudent and feasible alternative" to Fountain Wind, does not meet the fundamental project objective of generating energy and is, therefore, not a viable alternative under CEQA.

Under CEQA, a feasible alternative must avoid or substantially lessen the significant environmental effects of a proposed project. (CEQA Guidelines § 15126.6) A BESS unpaired with renewable generation is neither a prudent nor a more feasible alternative to a wind generation project. A viable alternative would have been a zero-carbon solar project as a fuel source, together with a BESS project,[4] which could substitute for wind generation, albeit not optimally.

A viable alternative would have found far greater environmental impacts and higher consumer costs than Fountain Wind. Further, staff demonstrate a misunderstanding of wind energy's contribution to critical statewide energy needs, because the BESS Alternative is incompatible with the state's energy and climate plans for a diverse, least-cost, reliable portfolio.

A. A Viable Alternative Would Have Shown Similar or Greater Environmental Impacts Compared to Fountain Wind

Staff stacked the deck against Fountain Wind by ignoring the obvious fact that energy storage does not generate energy, as does Fountain Wind, and must be paired with renewable energy

[4] In an obscure manner, staff admit that "an energy storage system is not equivalent to new utility-scale generation" (p. 8-45), that the "energy stored by the BESS facility would need to be produced by a generating facility elsewhere" and that "[t]here is a fundamental difference between BESS and wind turbines." (p. 8-52).

generation to serve the same purposes as Fountain Wind. A fair alternative would have been a Northern California BESS project and a Northern California utility-scale solar project.[5]

One purpose of the alternatives analysis is to consider whether alternatives would avoid or lessen the significant effects of a project. Including a utility-scale solar project as part of the alternative, if determined to be feasible at all,[6] would have added considerable environmental impacts to the analysis. While there may have been fewer avian impacts, there would have been more substantial terrestrial impacts on biological resources, land use and agriculture, visual resources, and tribal cultural resources.

Indeed, as stated in the Staff Assessment (pp. 8-14 - 8-15), the staff rejected solar on the Fountain Wind site as an alternative to the wind project because the CEC had previously identified large portions of the proposed project site as being within its solar base exclusion layer due in part to biodiversity, habitat, and agricultural datasets. Further, these same land-use screens excluded solar in much of Northern California. (Figure 2, p. 20, CEC 2023g.[7]) Moreover, these screens did not account for tribal cultural resources, visual, and other impacts.

In Northern California, a 200-MW solar project would require approximately 1,600 acres (2.5 square miles) of land, while Fountain Wind would permanently physically disturb about 510 acres (about 0.80 square mile). Therefore, it can safely be assumed that a Northern California 200-MW solar project would have much more significant and unavoidable terrestrial impacts than Fountain Wind. However, these impacts were ignored in the Staff Assessment.

Further, without wind energy in the state's resource portfolio, much more solar and battery capacity would be required overall, as CalWEA explained in its December 4, 2023, comments in this docket and as shown in the Commission's own documents. A fair alternative comparison would be some multiple of the solar and BESS capacity needed to replace Fountain Wind. CalWEA explained in those 2023 comments that balancing wind and solar can reduce overall capacity needs (otherwise served by solar and batteries) by about 30 percent. This same phenomenon can be seen in the Energy Commission's 2018 "Deep Decarbonization" report, which showed that the resource diversity provided by wind energy would reduce overall capacity needs by about the same fraction, or 90 GW in 2050, compared to a portfolio dominated by solar and battery resources.[8]

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[5] As stated in the Staff Assessment (pp. 8-6 and 8-42), a project alternative must interconnect to the Northern California electrical grid with available capacity.

[6] Staff determined an alternative wind site in Tehama County to be infeasible (pp. 8-11 – 8-12).

[7] Land-Use Screens for Electric System Planning: Using Geographic Information Systems to Model Opportunities and Constraints for Renewable Resource Technical Potential in California. California Energy Commission. Publication Number: CEC-700-2022-006-F-REV.

[8] Mahone, Amber, Zachary Subin, Jenya Kahn-Lang, Douglas Allen, Vivian Li, Gerrit De Moor, Nancy Ryan, Snuller Price. 2018. *Deep Decarbonization in a High Renewables Future: Updated Results from the California PATHWAYS Model*. California Energy Commission. Publication Number: CEC-500-2018-012. (See Figure 16.)

Regarding greenhouse gases, the Staff Assessment credits BESS with "offset[ting] the need for generation from fossil fuel power plants" (p. 8-46) – but such offsets only occur if BESS is charged with solar (or other renewable) generation.

For all these reasons, a solar project must be part of the alternative. Comparing Fountain Wind to BESS alone is grossly inaccurate and unfair.

B. Fountain Wind's Profile Matches the State's Critical Energy Needs

In finding a BESS preferable to a wind generation project, the Staff Assessment errs in stating that, based on data from the neighboring Hatchet Ridge wind project, Fountain Wind's "generation is at its lowest level when statewide energy needs are at their greatest, and is not able to target the critical period of between 4:00 p.m. and 9:00 p.m. in the summer months" (p. 8-45).

This statement reveals the staff's unfamiliarity with the CPUC's assessment of the Hatchet Ridge project's reliability contribution to CAISO's critical energy needs. The Staff Assessment states that Hatchet Ridge's July, August, and September capacity factor averages from 2014 to 2022 are 21.7%, 21.3%, and 26.1%, respectively. However, monthly average capacity factors do not reflect production during the most critical hours for system reliability.

In 2022, the CPUC began implementing a new 24-hour framework for its Resource Adequacy (RA) program, which took effect this year. This new reliability program adopted new project-specific hourly RA values for wind (and other) resources *to reflect their production during each hour, including the most critical hours*. The 2025 values published by the CPUC for Hatchet Ridge directly contradict staff's assertions, showing that the project's highest production months are June, July, and August, with reliable capacity during the time of highest system need (around 7 p.m.) equal to 44% of nameplate capacity in June, 50% in July, 37% in August, and 36% in September -- far higher than the monthly average capacity factors noted by staff.[9]

The Staff Assessment further states that, unlike BESS, Fountain Wind "is not intended to … address the net peak time when thousands of megawatts of solar come off the system, and other sources are needed especially in the summer between 4 p.m. and 9 p.m." (p. 8-58). Staff write, "wind is an intermittent resource, and in contrast to solar and BESS resources, does not fill any specific reliability need locally or to the grid."

These ludicrous statements are not worthy of the Energy Commission. They reveal that Siting Division staff are ignorant about CPUC programs and misunderstand the fundamental role of wind energy in the energy portfolio, which is to produce energy during the state's critical summer evening-peak period when solar is unavailable. Unlike BESS, wind directly reduces gas production during this crucial period and avoids the significant energy losses inherent in

[9] CPUC 2025 Master Resource Database (VER Exceedance Profile tab, hourly wind values for NorCal) (May 2025).

storage. This is why 9 GW of in-state (CAISO-interconnected) wind energy is included in the CPUC's most recently adopted portfolio.[10]

C. Staff Ignore the Importance of Resource Diversity in Reducing Consumer Costs

In identifying BESS as a feasible alternative to a wind project, staff selectively interpret the 2021 SB 100 Joint Agency Report. While Staff characterize the report as having "determined that a key factor in reaching the SB 100 renewable energy targets is to prioritize load flexibility within the transmission system through a diverse energy portfolio combined with battery storage" (p. 8-42), the Assessment focused on battery storage and never discussed the importance of the "diverse energy portfolio."

One of the "key takeaways" of the SB 100 report is that "increased resource diversity lowers overall costs." (SB 100 Report at p. 16.) Staff seem unaware that the amount of in-state wind energy capacity in the CPUC's adopted resource plans has grown threefold since the SB 100 report was issued in 2021. (Both efforts rely on the RESOLVE model.) The CPUC's 2025 plan represents the "least-cost" portfolio, and its most recent plan includes 29 GW of wind overall, of which 9 GW is in-state wind.[11] Replacing onshore wind in the portfolio, which optimizes for cost and grid reliability, with other resources would necessarily increase costs.

This well-recognized point should not be lost on the state's Energy Commission, particularly as its own 2018 "Deep Decarbonization" report, noted above, made the same point.[12] In addition to finding that the resource diversity provided by wind energy would reduce overall capacity needs by about 90 GW in 2050, compared to a portfolio dominated by solar and battery resources, it found that overall costs would be reduced by about $19 billion.[13]

CalWEA used the CPUC's RESOLVE model to analyze the additional capacity and cost required if all 25.5 GW of wind energy (in-state, out-of-state, and offshore) were removed from the CPUC's Preferred System Plan adopted in D. 24-08-064. We found that the 2045 portfolio would need to be 27 GW (23 percent) larger without wind energy and that total costs would increase by $1.1 billion annually.[14]

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[10] CPUC Decision 25-02-026 at Table 1 (February 20, 2025).

[11] *Ibid.*

[12] Staff state that "[n]o substantial evidence exists in the record of general consumer benefits from the project such as broader electricity price reduction or improved reliability" (p. 8-27) but note at the outset that its Assessment is based in part on "independent research and other sources available." (p. 1-1). Staff should be aware of the Commission's own reports.

[13] Note 8 *supra.*

[14] See CPUC R. 20-05-003, "CalWEA Comments on Administrative Law Judge's Ruling Seeking Comments on Electricity Resource Portfolios for 2025-2026 Transmission Planning Process" (September 30, 2024) at pp. 4-5. RESOLVE modeling results, including cost savings, are available upon request.

It is also worth considering that the CPUC has ruled that, to approve any DWR contracts for offshore wind, it must find them to be attractive from a ratepayer perspective,[15] which is not assured.[16] With less offshore wind in the portfolio, which comes at roughly double the cost of onshore wind,[17] the model would likely select more onshore wind capacity.

D. BESS Projects Are Abundant; Wind Projects Are Scarce

The reasoning staff applied in rejecting utility-scale solar as an alternative – that solar "would be pursued by the State to meet the SB 100 renewable energy goals independent of any decision by the CEC on the proposed project" (p. 8-15, Sections 8.6.2 and 8.6.3) – is *even more applicable to battery storage*, and *does not apply to wind*.

The CPUC's 2025 resource plan includes about 37 GW of battery storage and 62 GW of utility-scale solar in 2045, compared to 29 GW of all types of wind, including 9 GW of CAISO-interconnected wind. In 2023, the CAISO queue had interconnection requests for about 300 GW of battery storage and 150 GW of solar, compared to just 30 GW of wind.[18] Clearly, there is no shortage of project sites for battery storage or solar. However, commercial-grade wind resources are extremely limited in the state, as reflected in the dearth of interconnection applications.[19] The shortage of sites can also be seen in two maps of California wind resources prepared by CalWEA. In the appendix, Map 1 shows commercial-grade resources remaining after removing areas where wind is legally prohibited or technically infeasible. Map 2 shows the same resources after applying the Energy Commission's discretionary land-use screens for wind energy; the CPUC uses these screens to plan its resource portfolio and for transmission planning purposes. As is abundantly clear in either map, wind resources are highly constrained, underscoring the importance of approving Fountain Wind.

The Energy Commission's decision on Fountain Wind will dramatically affect the state's ability to pursue wind energy to meet the state's SB 100 renewable energy goals. This is true because Fountain Wind is one of a mere handful of in-state greenfield wind projects under development, and denial of Fountain Wind will signal to investors that attempting to permit a wind project in California is too risky to risk investment capital, undermining further investment in California wind energy projects.

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[15] CPUC Decision 24-08-064 (August 22, 2024) at p. 35.

[16] The 4.5 GW of higher-cost offshore wind included in the CPUC's 2025 portfolio was included for policy reasons, not selected by the model as a least-cost resource.

[17] See CPUC *Inputs & Assumptions, 2024-2026 Integrated Resource Planning (IRP)* (February 2025), Tables 51 and 52.

[18] Lawrence Berkeley National Laboratory, "Queued Up: 2024 Edition Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2023" (April 2024).

[19] See also Note 3, *supra.*

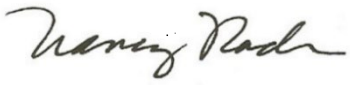
IV. CONCLUSION

The Staff Assessment is deeply flawed. The Commission must not kill the Fountain Wind project on that basis. Otherwise, the Commission's ability to objectively review proposed renewable energy projects will be broadly questioned, as will the state's commitment to climate action. This will further heighten the already high risk of investing in California renewable energy projects, deterring needed investment capital and raising the cost of that capital.

Most assuredly, killing the Fountain Wind project will prevent the achievement of the CPUC's adopted wind energy goals, given the dearth of existing investment.

CalWEA appreciates this opportunity to comment.

Sincerely,



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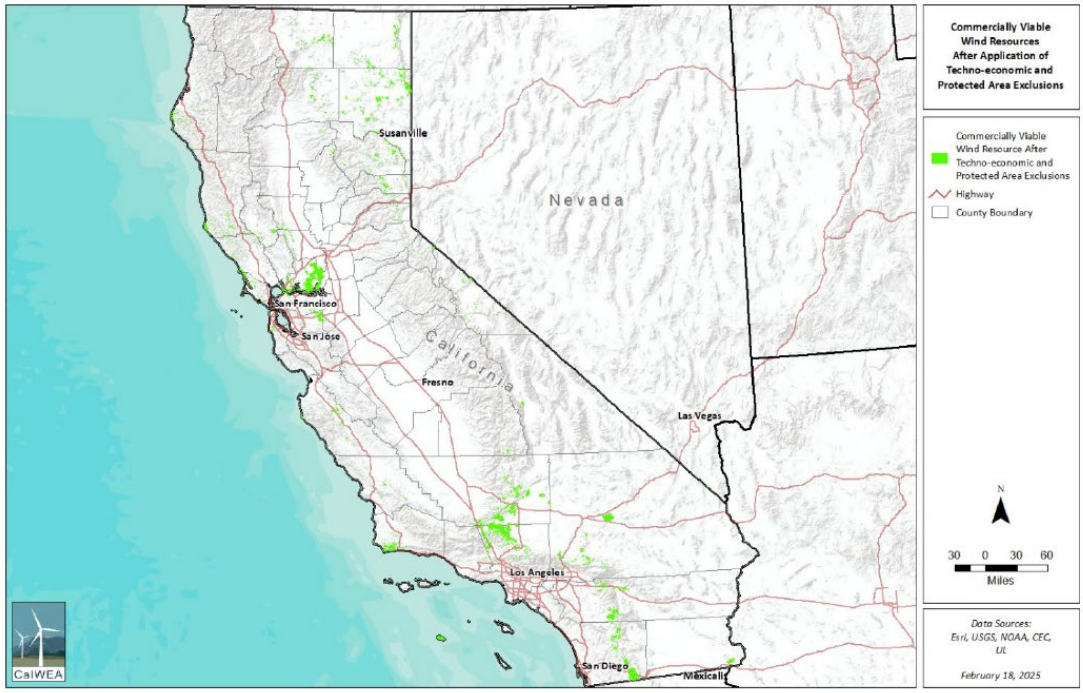
Map 1. CalWEA Assessment of Commercially Viable Resources,* CPUC Techno-Econ Screen Applied



* 6.5 m/s wind resource at 120m hub height, UL data. Protected areas removed.

Map 2. CalWEA Assessment of Commercially Viable Resources After CEC Discretionary Land-Use Screens