

DOCKETED	
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	259437
Document Title:	County of Shasta's AB 205 Review and Comments on Fountain Wind Project
Description:	County of Shasta's AB 205 Review and Comments
Filer:	Kari Cameron
Organization:	County of Shasta
Submitter Role:	Public Agency
Submission Date:	10/2/2024 6:46:37 PM
Docketed Date:	10/3/2024

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October 2, 2024

VIA E-FILING DOCKET 23-OPT-01

VIA E-MAIL

Leonidas Payne
Project Manager
California Energy Commission
715 P Street
Sacramento, CA 95814

Re: Docket 23-OPT-01: County of Shasta AB 205 Review and Comments re
Fountain Wind Project - Wildfire, Tribal Cultural Resources, and Water
Supply Impacts and Overall Net Positive Economic Benefits Analysis

Dear Mr. Payne:

In accordance with the County of Shasta's ("County") obligation under Assembly Bill ("AB") 205 to review and comment on the Fountain Wind Project ("Project") application ("Application"), the County hereby submits the following comments. The comments contained herein address Application issues related to wildfire, overall net positive economic benefits, and water supply. These comments are submitted within the scope of the County's cost reimbursement budgets, dated August 15 and November 14, 2023, and approved by California Energy Commission ("Commission") staff on November 29, 2023.

The County submits these comments as "the local government having land use and related jurisdiction in the areas of the proposed [Project] site and related facility,"¹ as contemplated by AB 205, and as the local agency that has discretionary authority over the Project and previously denied a use permit for it in 2021. The County submits these comments on Application areas within the scope of its subject matter expertise to provide further information to the Commission in assisting it with its review of the Application.

¹ AB 205, Legislative Counsel's Digest at ¶ (2).

The County has conducted an extensive analysis of the subjects summarized herein. In addition to its own internal review, the County has retained experts in the areas of, among other things, wildfire, aerial firefighting, fire resources, and fire safety; water supply resources and regulation; and economic research. All experts are well-versed in large wind energy systems and renewable energy projects as well as the Shasta County area including topography, land use, regional firefighting resources, regional water supply planning, and county budget and tax matters.

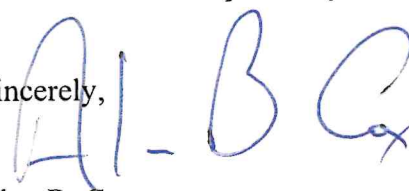
The following comments are a summary of the County's analysis of the Application and are not exhaustive. The County intends to provide additional comments and data on these areas as well as on other areas of the Application not addressed below.

The following is a summary of the attached expert comments:

1. **Application Wildfire Analysis and Project Impacts:** The Application technical report by Pyroanalysis, *Fountain Wind Impacts on Fire Behavior and Aerial Firefighting*, dated December 4, 2023 (TN 253505) ("Report"), is incomplete and only presents results from a fire modeling study for an area encompassing 12 wind turbines.
 - a. The Report shows an overrepresentation of proposed mitigation since fuel breaks would still have burnable fuel.
 - b. The County's fire modeling shows much greater flame lengths and potential for up to 10x the fire rate of spread in the Project area. The Report does not evaluate the potential of ember spotting.
 - c. The Report does not discuss Project ignition risk or the influence of climate change on wildfire risk.
 - d. The Report does not adequately evaluate the restrictions on fixed-wing aircraft in aerial firefighting operations and does not quantify the effects of reduced air tanker access to the Project area.
2. **Application's Economic Study:** The *Fountain Wind Project Economic and Public Revenue Impact Study* ("Study") submitted in the Application does not satisfy the requirements of Public Resources Code section 25545.9 in that, most notably, it is not a net economic impact analysis.
 - a. The economic impact model used in the Study, the National Renewable Energy Lab's Jobs and Economic Development Impact ("JEDI") is a gross impacts model and by design cannot provide a net impact analysis.
 - b. The JEDI model overestimates the impacts of the Project, particularly as to construction jobs. The Study further conflicts with the Shasta County Economic Forecast submitted in the Application and thus the Study overstates the gross economic impact of the construction phase of the Project.

- c. The Study does not recognize the gross impact limits of the JEDI model or supplement the Study with the Project's potential detrimental economic effects, such as firefighting, public safety and public works costs, yet only provides information on property tax revenue.
 - d. The Study does not attempt to quantify or monetize the Project's negative impacts on the broader Shasta County economy, such as job losses, local energy costs and property values.
 - e. The Study does not evaluate the economic damage associated with the heightened risk of wildfire or the difficulty of firefighting, particularly in an area prone to wildfire.
 - f. The Study does not evaluate the opportunity cost of the Project.
 - g. The Study does not properly discount the value of money throughout the 35-year analysis window.
3. **Application Water Supply Analysis:** The Application does not satisfy the water resources requirements of Appendix B and remains incomplete.
- a. There is no demonstration that the rights to beneficial use of other groundwater users in the basin will not be affected by the export of water from the Montgomery Creek area and ridge where the Project is proposed to be sited.
 - b. There is no indication that Hat Creek Construction and Materials, Inc., or any of its agents or contractors, meet California Health & Safety Code requirements.
 - c. There is no evidence that the wells from where the groundwater will be extracted are permitted to operate at levels contemplated by the application.

Sincerely,


Alan B. Cox
Senior Deputy County Counsel

ABC/als

Attachments



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19 September 2024

Paul Hellman, Director
Shasta County Department of Resource Management
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Subject: Fountain Wind Project – Discussion of fire behavior modeling results

Dear Mr. Hellman,

Our FlamMap fire modeling results show that there is no fire behavior potential in the specific locations where the fuels inputs were modified to represent nonburnable land cover along proposed roadways and around wind turbines. This is to be expected since FlamMap calculations are conducted on a cell-by-cell basis across each 100-ft pixel in the landscape, which is useful in assessing fire behavior potential under the user-specified environmental conditions. In other words, the fire behavior in one cell or one location does not have any impact on the fire behavior in a neighboring cell. The model outputs show the potential fire behavior for the given set of wind and weather conditions, and the only change between scenarios is the fuel layer modification. For both scenarios modeled, without the project and with the project, our fire modeling results indicate maximum flame lengths of up to 122 feet, maximum rate of surface fire spread up to 308 chains/hr (3.85 mph), and maximum ember spotting distance up to 1,929 feet for the landscape region and environmental conditions considered.

Our values diverge from the results of the Pyroanalysis study, which for conditions without the project, reports flame lengths exceeding 25 feet over nearly half the sample area and rates of spread of up to 50 chains/hr on representative slopes and ridges. Differences in our findings may be attributed to the nuanced wind field that is represented in our study, whereas the Pyroanalysis study uses a spatially static 12-mph wind speed. With the proposed project mitigations, the potential fire rate of spread in the project area is reported in the Pyroanalysis study to be reduced to 1 to 5 chains/hr. In addition, their results for flame lengths appear to be increased in some areas between current conditions and project conditions, as seen in the excerpts from their report in Figure 1. This is highlighted to show how the approach and subsequent results are unclear.

Critically, the Pyroanalysis study does not evaluate the potential of ember spotting in the project area. Embers can be lofted across fuel breaks and create spot fires, which can increase the potential for severe fire outcomes and pose challenges for fire suppression efforts. Furthermore, it is unclear why the Pyroanalysis report only presents a sample area and not the full project area in its results. The report also

does not discuss how the proposed fuel breaks and shaded fuel breaks were represented in their model. Furthermore, as there was no ignition location or hourly weather stream data provided in the report, we assume the IFTDSS module used for calculating fire behavior potential is the same as FlamMap. However, it is possible that an alternative IFTDSS module was used and not discussed in the Pyroanalysis report, which could also lead to differences in the results of each of our studies.

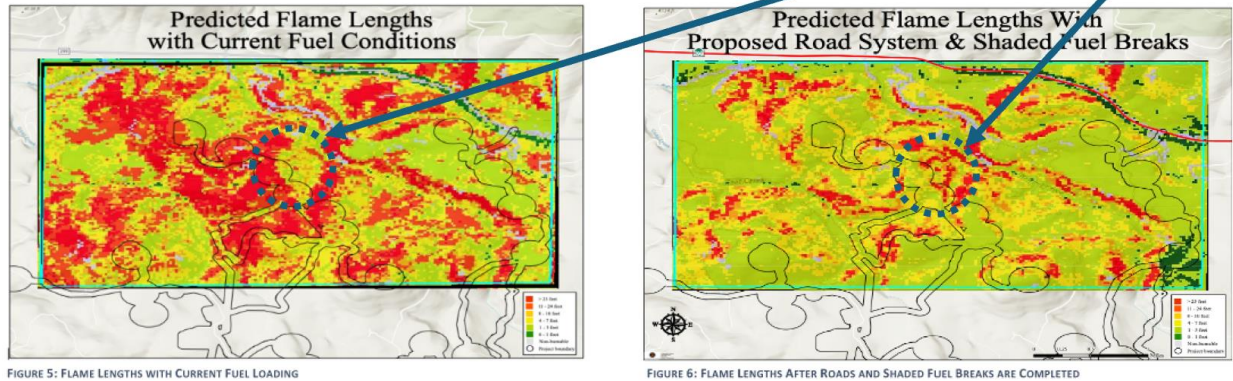


Figure 1. Excerpts from the Pyroanalysis report showing flame lengths modeled under current conditions (left) and project conditions with mitigations (right). The blue circle shows an area where flame length increases instead of decreases, as might be expected with fuel reduction.

Additional comments on the Pyroanalysis report

- Ignition risk posed by the project is not discussed. The presence of humans inherently increases ignition risk, and thus the importance of disclosure and analysis of this risk is highlighted in the Attorney General's "Best Practices for Analyzing & Mitigating Wildfire Impacts of Development Projects Under CEQA". Furthermore, wind turbines alone pose nonnegative additional ignition risk.
- Wildfire risk is projected to increase due to climate change in many regions across the state. There is no discussion of wildfire risk under future project conditions considering the influence of climate change in the Pyroanalysis report.
- The report claims that the proposed project will have a net beneficial impact on fire protection, even with restrictions posed by the project on fixed-wing aircraft in aerial firefighting operations. Considering the importance of fixed-wing aircraft in the successful initial attack of a fire, this statement requires further evaluation to be justified.

Quantifying Effects of Reduced Air Tanker Access

We are in the process of modeling fire spread for severe fire weather conditions and ignitions which occur in or near the Fountain Wind footprint using much of the approach quantified above. Fire perimeters are presented at discrete intervals vs. time from ignition out to approximately 6 hours. The simulated data can be used to evaluate the severity of a fire at the earliest time after fire detection that very large air tankers (VLAT's) would likely be above the fire line dropping retardant. This time would be based on an assumption that no flight restrictions are present in the area. Later times could be visualized to evaluate the fire perimeter after it has emerged from the restricted flight zone. Presumably, the later would be a larger and more challenging fire to control without having been subject to VLAT suppression activities at shorter times after ignition. The model assumes a circle around the project site that represents the restricted flight zone and that ignitions would occur near the upwind side of this area. The figure below shows the Fountain Wind area in the green rectangle, the Hatchet Ridge site on the ridge to the Northeast and the yellow is an area where we understand that retardant drops would be restricted due to watershed concerns.

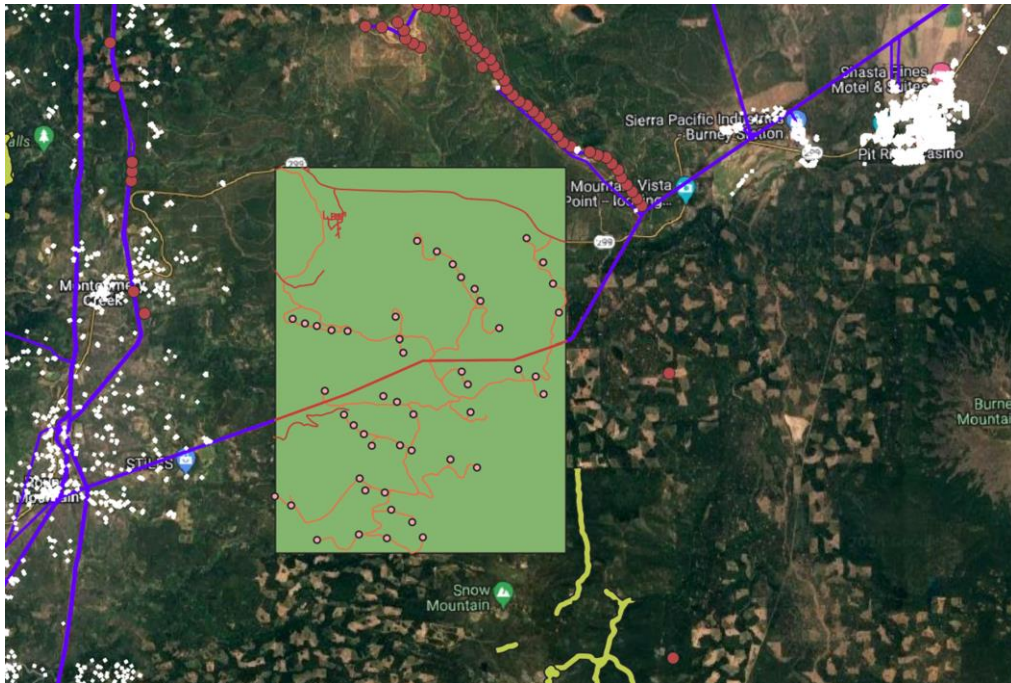
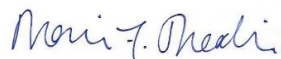


Figure 2. The Fountain Wind area is in the green rectangle, the Hatchet Ridge site on the ridge to the Northeast and the yellow is an area where we understand that retardant drops would be restricted due to watershed concerns.

References

- [1] US Department of the Interior & US Department of Agriculture. 2024. *Comparison of Fire Behavior Modeling Methods in IFTDSS*. Interagency Fuel Treatment Decision Support System. Retrieved August 29, 2024, from <https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/20-models/fbmodelcompare.htm>
- [2] Finney, M.A., Brittain, S., Seli, R. C., McHugh, C.W., and Gangi, L. 2023. FlamMap: Fire Mapping and Analysis System (Version 6.2) [Software]. Available from <https://www.firelab.org/project/flammap>
- [3] <https://www.landfire.gov/>
- [4] Bradshaw, Larry; McCormick, Erin 2000. FireFamily Plus user's guide, Version 2.0. Gen. Tech. Rep. RMRS-GTR-67WWW. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- [5] <https://www.firelab.org/project/windninja>
- [6] Zhang, J., Webster, J., Powers, R. F., & Mills, J. (2008). Reforestation after the Fountain Fire in Northern California: An untold success story. *Journal of Forestry*, Volume 106, Issue 8, December 2008, Pages 425–430, <https://doi.org/10.1093/jof/106.8.425>
- [7] Scott, Joe H.; Burgan, Robert E. 2005. *Standard fire behavior fuel models: a comprehensive set for use with Rothermel's surface fire spread model*. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Maria Theodori, M.S., PE



Fire Protection Engineer
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Beacon Economics

July 31, 2024

Fountain Wind Project: Completeness Evaluation of the Net Economic Impact Study

As required per section 25545.9 of the Public Resources Code, a project must demonstrate an overall *net* economic benefit to the permitting local government authority as a condition of California Energy Commission certification. The *Fountain Wind Project Economic and Public Revenue Impact Study* (herein referred to as the *Study*) was submitted to ostensibly demonstrate a net economic benefit of the Fountain Wind Project to the County of Shasta. However, there are several conspicuous issues that demonstrably prevent the *Study* from fulfilling the requirements set out in the Public Resources Code, section 25545.9. Most notably, it is not a *net* economic impact analysis.

A net economic impact analysis, by definition, sums up *both* beneficial and adverse impacts stemming from a project. These impacts can be direct, such as the construction or destruction of infrastructure, or secondary, such as changes in the behavior of firms and individuals, spending “multiplier” effects, and other impacts and externalities that emerge from the change in the local economy. Several of the documents provided in support of the Fountain Wind project strengthen the arguments presented in this memo. Notably, they underscore the outstanding deficiencies in the net aspect of the Fountain Wind economic analysis. Furthermore, some of the analyses in the documents cut against the gross economic analysis conducted in the Fountain Wind report. The following document outlines seven clear deficiencies omitted from the *Study*, demonstrating the fact that it is a **gross** economic impact analysis and not a **net** economic impact analysis.

First, the economic impact model used in the *Study* is not suitable on its own for net analyses, nor does it claim to be. The *Study* utilized the National Renewable Energy Lab’s (NREL) Jobs and Economic Development Impact (JEDI)

model. Originally, the JEDI model was created to quantify the economic impacts of wind farms but has since been expanded to be able to model the impacts of various renewable energy facilities. The NREL's own website¹ states that the JEDI model "reports only the gross impacts from the project described. The JEDI results do not reflect many other economic impacts that could affect real-world impacts on jobs from the project." Similarly, technical reports^{2,3} published by the NREL and academic literature⁴ note this distinction. Even disregarding other critiques and limitations of the JEDI model, it is by design unable to provide a net impact analysis.

Second, there are issues with the estimation of gross economic impacts in the JEDI model. While the *Study* does refine the JEDI model with data specific to the County of Shasta, the model itself may still be overestimating the impact of the project. For example, the *Study* states that jobs are "created" as a result of the project – this is a misinterpretation of the results of the JEDI model. The NREL's own website, on a page titled "Interpreting JEDI Results"⁵, instead uses the language that jobs are "supported" by, or "associated" with a project and its impacts. This is a key distinction in economic impact studies, especially regarding construction jobs. Workers in the construction industry typically find work for a period on a specific project; they may have periods where they are employed by a construction or contracting firm but do not have work to be done. Similarly, there may be times when firms and workers must reject additional work because they are already occupied. To count them among benefits that are localized to the County, the assumptions necessary for the *Study* to claim that jobs are "created" become unrealistically strong.

The JEDI model, and the *Study*, assumes that there is a pool of well-qualified, long-term unemployed workers in the county who would be hired because of this project, and that none of the workers hired by this project are already employed⁶. The *Study* cannot claim these jobs are "created" unless they demonstrate these criteria. the Shasta

¹ <https://www.nrel.gov/analysis/jedi/limitations.html>

² Stefek, J. C., Kaelin, A., Tegen, S., Roberts, J. O., & Keyser, D. J. (2019). *Economic impacts from wind energy in Colorado case study: Rush creek wind farm* (No. NREL/TP-5000-73659). National Renewable Energy Lab.(NREL), Golden, CO (United States).

³ Lantz, E., Barter, G., Gilman, P., Keyser, D., Mai, T., Marquis, M., ... & Stefek, J. (2021). *Power sector, supply chain, jobs, and emissions implications of 30 gigawatts of offshore wind power by 2030* (No. NREL/TP-5000-80031). National Renewable Energy Lab.(NREL), Golden, CO (United States).

⁴ Brown, J. P., Pender, J., Wiser, R., Lantz, E., & Hoen, B. (2012). Ex post analysis of economic impacts from wind power development in US counties. *Energy Economics*, 34(6), 1743-1754.

⁵ <https://www.nrel.gov/analysis/jedi/results.html>

⁶ Supplemental testimony of Robert J. Michaels, PhD: Hearing before the U. S. House Committee on Science and Technology, Energy and Environment Subcommittee, 111th Cong. (2010). <https://www.windaction.org/posts/35557-a-critique-of-nrel-s-jedi-modeling>

County Economic Forecast (the “County Forecast” hereon) provides evidence diminishing the potential for job “creation” stemming from the Fountain Wind project. The Fountain Wind economic impact report claims that 72 full-time equivalent construction jobs are created for the two-year period of construction, and further claims that, because Shasta County does not have a tight labor market, JEDI model assumptions hold. The County Forecast, on page 1, describes the local construction workforce as “fully employed”, citing high demand for reconstruction projects brought about by wildfires. It furthers that “employment will remain at elevated levels [through 2027], but construction firms will struggle to hire and grow.” The *Study*, directly contradicting the County Forecast, attempts to quantify unemployed workers in the construction industry labor force by applying the county unemployment rate to the construction labor force. This is a strong yet baseless assumption, as different industries have different structural unemployment rates. It fails to meet the criteria of genuine job “creation”, as workers in the construction industry are, as mentioned previously, likely to experience frictional, rather than long-term, unemployment. It also, rather than “creating” jobs, would place additional demand on an already full-employed labor market, which may increase costs and delays for other construction projects. By the *Study*’s own concession, the assumptions behind the JEDI model employed may not hold in an area with a tight labor market, which the County Forecast states explicitly. Therefore, the gross economic impact of the construction phase of the Fountain Wind project is likely to be overstated, and there exist additional negative externalities on local demands of construction services.

Because of these labor constraints, a more appropriate model to be employed would have been a mixed endogenous-exogenous model, or contribution analysis, which would allow for realistic limits to be placed upon the local construction employment effects. These limits would be more appropriate because they could be constructed using conditions set forth in the County Forecast.

Third, the *Study* does not attempt to rectify the limitation of the JEDI model’s gross impact analysis by supplementing it with the project’s potential detrimental economic effects in the County. In fact, the *Study* supplements the results of the JEDI model with additional information on property tax revenue. However, this once again equate gross and net impacts. It is implied there are no costs to the County associated with the Fountain Wind Project at any point of its construction and operational life – an unrealistic assumption for a major infrastructural project. Several costs to the County could emerge as a result, namely additional road maintenance, law enforcement, and firefighting costs. These impacts are left unmentioned in the *Study* but ought to be considered in any rigorous net economic analysis, especially one that aggregates tax revenue among its fiscal benefits.

Fourth, the *Study* makes no attempt at quantifying or monetizing a negative impact the project could have on the broader County economy. For example, there is no discussion of potential County-wide job losses sustained as a result of the project. Studies have found that job loss is possible because of the high capital costs associated with renewable energy projects⁷. There are effects on local energy costs that could similarly lead to job losses. More broadly, the wind farm itself could have deleterious effects on tourism to the County, resulting in job losses and lost economic output. The effect on viewsheds in the County may decrease tourist satisfaction and desire to visit the region. The viewshed effect can also make an impact on property values, which may limit future property tax revenue as well as harm the financial well-being of property owners; the Santec Local Economics Memo, in Point #6, beginning on page 3, cites multiple studies which concede there is such an effect, even if it is not large. The Santec Local Economics Memo cites Hoen et al. (2013) and quotes the study as saying “the property-value effect of wind turbines is likely to be small, on average.” Furthermore, it cites Heintzelmen and Tuttle (2012), which they quote as having “found declines in sales prices ranging from 9-16 % for homes within 0.5 mile of a turbine” in northern New York State, and the study further finds more modest declines at distances beyond that. These cited studies concede there may be a negative effect on property values associated with wind energy projects, which demonstrates the necessity of an evaluation of such an effect in order to fulfill the requirements of a net economic impact analysis.

Fifth, the *Study* does not evaluate the economic damage associated with an increase in the risk of wildfire or in the difficulty of firefighting. Given the high risk of wildfire in the County relative to the country, the potential economic damage resulting from a turbine-caused fire could be devastating.⁸ Even if the individual risk of a turbine causing a fire is low, it must be evaluated over all turbines associated with the project for the entire operational lifetime. Furthermore, given the potential consequences, even a marginal risk of a catastrophic event would have significant economic impact. Similarly, an increased difficulty or decreased effectiveness of firefighting capabilities can turn a minor fire into a major one, multiplying the negative economic impacts caused by the destruction. Even if these are

⁷ Ibid.

⁸ Westerling, A. L. (2018). Wildfire simulations for California's Fourth Climate Change Assessment: Projecting changes in extreme wildfire events with a warming climate. California's Fourth Climate Change Assessment, California Energy Commission. Publication Number: CCCA4-CEC-2018-014.

tail-end scenarios, with low likelihood, their magnitude would contribute significantly to the net economic impact of the project.

Sixth, the *Study* does not evaluate the opportunity cost of the project. Capital and land are both limited resources, and by proceeding with the Fountain Wind project, the County by necessity foregoes other opportunities for development. These foregone opportunities may be presenting a greater economic impact than the Fountain Wind project, and spending the capital planned for the project on other endeavors may result in impacts more beneficial to the County. The CEC Deficiency Letter indicated the initial *Study* was insufficient in addressing regulation Appendix B (f) (1) and Appendix B (f) (2), which mandates a discussion of alternative locations and projects, as well as an economic analysis of such alternatives, among other analyses. The updated *Study* still fails to discuss these alternatives, as well as fails to evaluate them in the context of a net economic impact analysis.

Seventh, the *Study* equates the value of money as constant throughout the 35-year analysis window. One of the most fundamental economic principles is that an equivalent amount of money is presently valued more today than at a later point. To account for this, projections often include a discount factor for time, with 3% per annum being a reasonable standard, to give a net present value of the total economic impact of a project. The *Study* does not discount, and the lifetime economic impacts are merely annual values multiplied by 35. This hampers a net impact evaluation as it conflates economic benefits and detriments occurring today and in 2050, for example. To more accurately compare values occurring over long periods of time, it is more appropriate to time discount such values.

In conclusion, the *Study* presented in support of the Fountain Wind project patently fails to demonstrate a *net* economic benefit to the County of Shasta. In fact, it makes no attempt to quantify anything except gross impacts, ignores the limitations of the model used, and the omits any potential negative economic impacts. Several of those impacts are left unaddressed, while strong and often unrealistic assumptions are made in order to determine gross benefits. There is undoubtedly a large economic impact resulting from a major spending project such as Fountain Wind, however there are similarly major changes occurring in the County's economy that require evaluation to determine the true *net* impact of such a project. The *Study* unquestionable fails to do so.



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File No. 55398.00043

October 2, 2024

Leonidas Payne
Project Manager
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715 P Street
Sacramento, CA 95814

Re: County of Shasta Comments on Fountain Wind Project Water Supply

Dear Mr. Payne:

The County of Shasta (“County”) has reviewed the Fountain Wind Project application (“Application”) water supply documents, including those responses to California Energy Commission (“Commission”) data requests (“DR”) submitted by Fountain Wind LLC (“Applicant”), and hereby provides the following technical and legal comments on the Application.

The Fountain Wind project is proposed to be sited on a ridge where no potable water, or any other type of water, is available. The Applicant is thus required to find a source of water both for purposes of construction and potable use.

The public water district servicing the area where the project is proposed to be sited is the Burney Water District (the “District”), headquartered at 20222 Hudson Street, Burney CA. The Applicant submitted a request to the District to “Consider Possible Request for the Purchase of Water from the Burney Water District for Construction of the Proposed Fountain Wind Energy Project in the Montgomery Creek Area” on or about September 21, 2023. The Board of Directors for the District considered the request and denied it.

Thereafter, in considering the Application, Commission staff requested information from the Applicant regarding the project’s water resources. Indeed, on pages 3-5 of the initial DR, Commission staff asked, among other things, about the water purveyor stating that the Applicant did not comply with Commission water supply regulations Appendix B application requirements.¹ On May 15, 2024, the Applicant submitted a response pointing to the well construction and Hat Creek Construction and Materials, Inc. (with “will serve” letter) and updated its water supply report. On June 12, 2024, the Commission staff followed up again asking for documentation on the well location. The Applicant submitted the follow-up on June 27, 2024.

¹ 20 C.C.R. §§ 1701, Appendix B, (g)(14)(C)(v) and (g)(14)(C)(vi).

The County and Pit River Tribe proffer that the Applicant has not met Appendix B requirements and has failed to address the questions submitted by Commission staff. There are in fact several material questions that the Applicant has not addressed regarding water resources and supply for the Project. As set forth below, among others, there are questions regarding water rights, well permits, transportation permits, certifications and practical issues that have not been addressed in the Applicant's response to Commission staff questions.

At the outset, Appendix B provides, in pertinent part:

(g) Environmental Information

(1) General Information: For each technical area listed below, provide a discussion of the existing site conditions, the expected direct, indirect, and cumulative impacts due to the construction, operation, and maintenance of the project, the measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation. Additional requirements specific to each technical area are listed below.

(14) Water Resources

(C) A description of the water to be used and discharged by the project. This information shall include:

(v) For all water supplies intended for industrial uses to be provided from public or private water purveyors, a letter of intent or will-serve letter indicating that the purveyor is willing to serve the project, has adequate supplies available for the life of the project, and any conditions or restrictions under which water will be provided. In the event that a will-serve letter or letter of intent cannot be provided, identify the most likely water purveyor and discuss the necessary assurances from the water purveyor to serve the project.

(vi) For all water supplied which necessitates transfers and/or exchanges at any point, identify all parties and contracts/agreements involved, the primary source for the transfer and/or exchange water (e.g., surface water, groundwater), and provide the status of all appropriate agencies' approvals for the proposed use, environmental impact analysis on the specific transfers and/or exchanges required to obtain the proposed supplies, a copy of any agency regulations that govern the use of the water, and an explanation of how the project complies with the agency regulation(s).

The Applicant fails to meet many of these requirements.

The first issue is whether a private party may extract water from another basin and supply the project with groundwater hauled in trucks, some of it for purposes of human consumption. To begin, the Applicant has not addressed practical issues associated with impacts on the roads, traffic and air quality arising out of heavy water trucks being driven on a mountainous area. There are also issues of reliability of supply if the roads are not available in the winter due to weather conditions, which can be harsh in the area. Equally important, there are three areas highly relevant to Appendix B: water rights supply issues, water quality regulations and local well requirements.

In California, the reasonable and beneficial use of groundwater by property owners above (or overlying) a common aquifer takes precedence over all non-overlying uses.² This is known as the doctrine of reasonable use or the American rule, which was first codified in *Katz v. Walkinshaw*.³ Subsequent cases found that exports of groundwater cannot affect the use by other overlying users. Some of these principles were later codified in Water Code section 1216. Section 1216 provides that a protected area shall not be deprived directly or indirectly of the prior right to all the water reasonably required to adequately supply the beneficial needs of the protected area, or any of the inhabitants or property owners therein, by a water supplier exporting or intending to export water for use outside a protected area pursuant to applications to appropriate surface water filed, or groundwater appropriations initiated, after January 1, 1985. The common law set in motion by the *Katz* case still remains the principal source of legal principles for groundwater exports. In the case of the Applicant, there has been no demonstration that the rights to beneficial use of other groundwater users in the basin, including any federally reserved water rights the Pit River Tribe may have, will not be affected by the export of water to the Montgomery Creek area and ridge where the project is proposed to be sited.

The issue of supply is not the only one at stake here. California Health and Safety Code section 111120 requires water haulers operating in California to obtain a Water Hauler's License. The California Department of Public Health-Food and Drug Branch ("CDPH") oversees licensing of drinking water haulers. To ensure the water is safe to drink, the CDPH requires not only that the hauler be licensed, but also to report the source of the water and ensure that delivery meets the best practices standards and the regulations, including water quality standards. The supplier of water to the proposed project must meet all these requirements. Of course, the Safe Drinking Water standards also apply to hauled water as they do to municipal and other private suppliers. There is no indication here that Hat Creek Construction and Materials, Inc., or any of its agents or subcontractors, meet all these requirements and certifications.

In addition, there is no indication that the wells from where the groundwater will be extracted are permitted to operate at the levels that the Applicant contemplates. For instance, and without limitation, Shasta County requires a valid permit to drill, destroy, deepen, or recondition a water well. Permits are obtained from the Environmental Health Division ("EHD") after submission of a completed application, plot plan, and fees. EHD staff must be present to verify

² *City of Barstow v. Mojave Water Agency* (2000) 23 Cal. 4th 1224.

³ (1903) 141 Cal. 116 ("*Katz*").

proper placement of the annular seal around the well casing. Annular seals are usually placed around the top 20 feet of casing but may on occasion be placed just a few feet or as much as several hundred feet deep when required by local conditions. Moreover, Water Code section 13750.5 requires that any person digging, boring, drilling, deepening, reconditioning, or destroying a water well, cathodic protection well or monitoring well possess a C-57 Water Well Contractors License. A well permit must clearly identify the driller and C-57 contractor's license number. Well permits also can have limitations, based on engineering standards and supply restrictions, on the volume of groundwater that can be extracted. There is no evidence from the documentation submitted by the Applicant that the well or wells that Hat Creek Construction and Materials, Inc. plans to use to supply the proposed project satisfy these requirements.

In sum, despite being given many opportunities to provide Commission staff with necessary documentation and information to satisfy the water resources requirements of Appendix B, the Applicant has still failed to meet its burden and the Project application remains incomplete.

Sincerely,



Ryan M. F. Baron
of BEST BEST & KRIEGER LLP

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