DOCKETED	
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	260646
Document Title:	County of Shasta's AB 205 Continuing Review and Additional Comments on Fountain Wind Project
Description:	County of Shasta's AB 205 Continuing Review and Additional Comments on Fountain Wind Project
Filer:	Kari Cameron
Organization:	County of Shasta
Submitter Role:	Public Agency
Submission Date:	12/13/2024 4:14:56 PM
Docketed Date:	12/13/2024

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December 13, 2024

Via Email and e-filing Docket 23-OPT-01

Leonidas Payne
Project Manager
California Energy Commission
715 P Street
Sacramento, CA 95814
Leonidas.payne@energy.ca.gov

Re: Docket 23-OPT-01: County of Shasta AB 205 Review and Comments on Fountain Wind Project (Migratory Bird Studies)

Dear Mr. Payne:

We are providing these comments on behalf of the County of Shasta ("County") in furtherance of its obligation under Assembly Bill ("AB") 205 and Public Resources Code section 25519(f) with respect to the Fountain Wind Project ("Project") application. The County has provided comment on various matters submitted as part of the Project application and applicant data request responses and other documents that have been submitted to the California Energy Commission ("Commission") by Fountain Wind, LLC. The County's comments include additional analysis on migratory bird studies. These comments are submitted within the scope of the County's cost reimbursement budgets, dated August 15 and November 14, 2023, and approved by Commission staff on November 29, 2023.[1]

Below are the County's comments followed by individual summaries of expert review of the application.

[1] 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," 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 to assist with its review of the Application. 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 area of biological resources, which team is well-versed in the Project and the proposed site and related area.

I. Additional Wildfire Impacts and Fire Safety Review (Exhibit A)

The County's continuing review of the application and responses to data requests on wildfire impacts shows aerial firefighting impacts that cannot be mitigated as well as mitigation cited in the proceeding record that is not validated. The Project could create a "no-fly" zone that would prevent aerial firefighting efforts in fire created and spreading after a certain time period. In addition, the application's current wildfire analysis is inadequate with an overemphasis on the effectiveness of fuel breaks and other mitigation, and thus, a full impact assessment cannot be reasonably completed. Expert findings include:

1. The Reax Engineering analysis provides additional modeling analysis and focuses on quantifying the effects of reduced air tanker access in the project area.
2. The wildfire analysis shows fire spread over 6-hour and 24-hour time periods.
3. In a 24-hour time period, the wildfire analysis shows a restricted ("no fly") flight zone over the project area due to surrounding structures.
4. The application documentation asserting that current Project mitigation will decrease wildfire risk is overemphasized and a full impact assessment of wildfire risk cannot be reasonably completed.

II. Adverse Economic Impact of Wildfire Damage and Associated Fire Insurance Increases in Shasta County (Exhibit B)

The County's review of whether there is an overall net positive economic benefit to the Project shows substantial wildfire costs attributable to direct damages and property-related costs, associated costs and penalties due to negligence and legal liability, and impacts to local and regional economics due to higher insurance premiums and loss of coverage. The County asserts that such costs and cost factors must be accounted for in any overall net positive economic benefit analysis under Public Resources Code section 25545.9 and related feasibility analyses under CEQA. In other words, the costs below are an "offset" against positive economic benefits that must be evaluated and quantified. Based on the County's review of the applicant's "gross" economic analysis against wildfire costs, the County believes that an overall "net" positive economic benefit cannot be demonstrated. To date, the applicant has not yet submitted a net analysis, thus, this item is incomplete.

1. Wildfire Costs and Damages
    a. The property costs associated with direct fire damage in Shasta County is extensive with approximately $87,392,000 due to the Zogg, Dixie, Salt and other wildfires.
    b. Damages caused by wildfires in the surrounding counties are extensive with approximately $194,800,000 in direct damages in Lassen, Tehama, Butte, Plumas, Trinity and Siskiyou Counties.
    c. PG&E costs and penalties for its culpability in various Shasta County and regional wildfires have totaled approximately $500,000,000, although this amount does not reflect economic damages.

   d. Economic costs also include replacement of lost or damaged structures, time delay, the discouragement of future investment, damage to wildland ecosystems, environmental recovery, and a decrease in tourism.
2. Wildfire Impacts on the Cost of Fire Insurance
   a. Shasta County is one of the highest risk areas of the state and nation for wildfires.
   b. Marginal increases in wildfire risk have not been priced into the Fountain Wind Project, including fire insurance premiums.
   c. Small increases in premiums of 1% or 5% can have significant impact on economic activity and across all economic sectors.
   d. Increase fire insurance premiums slow real estate markets, which compound reduced growth and costs over time.
   e. The overall result is that money effectively "leaves" the local economy.

III. Alternatives Analysis (Exhibit C)

The County's review of the project alternatives under CEQA shows that there are more environmentally, technically, and economically feasible alternatives at the project site and within Shasta County and the surrounding counties. Furthermore, the alternatives specifically meet Shasta County General Plan objectives, such as wildfire safety. Based on the energy resources and wildfire safety components of the Shasta County General Plan, the Fountain Wind Project appears to be inconsistent with the County's General Plan objectives. Therefore, there is strong evidence that more feasible alternatives exist.

1. CEQA requires the Commission to identify feasible alternatives or mitigation measures available that would substantially lessen the significant environmental effects of the project.
2. The County assumes that the Commission's environmental review will cite similar project objectives as to the objectives that were referenced by the County in the Fountain Wind Project Draft Environmental Impact Report for Use Permit No. UP 16-007 (SCH No. 2019012029) (Shasta County, 2020), and that such project objectives are not narrowly conceived.
3. The Shasta County General Plan encourages increased utilization of renewable and alternative energy resources through the development of biomass, waste-to-energy, and cogeneration, which have the added benefits of local job creation and economic benefits, energy efficiency, and improving forest and tree vigor and wildland fire safety.
4. The County's General Plan contains a number of both planned and operational projects with approximately 150 MW of cogeneration, biomass, and waste-to-energy resources and 700 MW of battery energy storage that meet and are consistent with General Plan requirements and have both environmental and operational advantages that meet regional needs and statewide RPS and GHG reduction goals.
5. The alternative site location for the Project in Tehama County proffered by the applicant was not adequately studied in the application nor the data request responses. The environmental concerns and other infeasibility of the alternative location was dismissed without any analysis.

6. There are a considerable number of spatial and temporal considerations associated with the various project alternatives and alternative site locations that begin to demonstrate the environmental and technical feasibility and superiority of those alternatives that have less environmental impact and would achieve greater state and regional policy goals for renewable energy, GHG reduction, and reliability.

IV. Visual Simulations (Exhibit D)

The County's review of the application's visual simulations and other viewshed analysis shows that the key observation points are limited and do not include key stakeholder perspectives like the Pit River Tribe and the impacts to tribal cultural resources. A review of other large wind energy project environmental documentation demonstrates that the application analysis is inadequate and inconsistent with the visual simulation analysis of similar projects, such as those proposed in Humboldt County.

1. The Key Observation Points docketed in the record are limited in scope and omit potential views of the Project from other locations within the viewshed.
2. Key stakeholder perspectives are omitted and potential visual impacts to the cultural landscapes must be analyzed and coordinated with stakeholders, including, and most importantly, the Pit River Tribe. Analysis of the impacts on cultural landscapes and coordination with stakeholders is commonplace with other large wind energy projects, such as the previously proposed 155 MW, 160 wind turbine project along the Monument and Bear River Ridges in Humboldt County (*i.e.*, Humboldt Wind Energy Project)[2] and the ongoing California Offshore Wind Energy Call Areas.[3] Here, the applicant did not consult with Shasta County stakeholders or conduct visual simulations examining the impacts on the Pit River Tribe or other cultural landscape impact analysis.
3. Current photo-simulations fail to show Project visibility under different daily and seasonal conditions and do not contain or under-represent a typical worst-case visibility scenario. Basic data is missing, such as solar azimuth and altitude.
4. There is a significant omission of nighttime simulations and blade motion analysis.

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[2] The Humboldt Wind Energy Project proposed on Bear River Ridge had significant impact to tribal cultural resources of the Wiyot tribe, similar to the Fountain Wind Project, whereby the environmental analysis contained substantial visual simulations incorporating such impacts and coordination from the Wiyot tribe and other stakeholders. The complete EIR is found here: https://ceqanet.opr.ca.gov/2018072076/2. *See also* https://files.ceqanet.opr.ca.gov/213230-2/attachment/QVZKPHTPjUr7vgwzS2XZL9ot6QtCY6hvaGPHuIX9mKTOq3R1h74Nq6SnHAiY2Y1LOBj_pvpHrt6u29MQ0 https://www.yournec.org/terra-gen-wind-project/ (Aesthetics: Visual Resources Technical Report); https://www.wiyot.us/CivicAlerts.aspx?AID=22&ARC=27 (Wiyot opposition to the project); https://www.northcoastjournal.com/NewsBlog/archives/2019/12/17/why-the-supes-denied-terra-gens-wind-project-despite-a-series-of-11th-hour-concessions-from-the-company (Overview of the County's denial of the project).

[3] The Bureau of Ocean Energy Management ("BOEM") has conducted extensive visual simulations for the proposed California Wind Energy Offshore Call Areas in Humboldt, Morro Bay, and Diablo Canyon in specific response to stakeholder interest in visual impacts, particularly from the Native American tribal stakeholders. https://www.boem.gov/renewable-energy/state-activities/california-visual-simulation.

5. Project renderings have poor spatial accuracy and quality.
6. Key project features are omitted.

V. Peer Review of the Aquatic Survey Resources Report (Exhibit E)

The County's review of the application shows that there are a number of data and missing information issues regarding riparian habitat and resource agency review guidelines.

1. The report must be revised to evaluate and document the presence and extent of riffle and pool complexes.
2. The report does not map any occurrences of riparian habitat upslope of U.S. Army Corps of Engineers jurisdiction and does not quantify the extent of California Department of Fish & Wildlife ("CDFW") authority as required by its regulations.
3. The report contains a significant data gap as to how much riparian habitat is present in the Project area and how much vital riparian habitat will be eliminated as a result of the Project.
4. There are approximately 30 other additional errors in the report.

VI. Review of Rare Plant Surveys and Natural Vegetation Community Mapping (Exhibit F)

1. 2023 surveys were conducted as spot checks and there have been no re-surveys of what the applicant addressed in 2019 and 2021.
2. There are significant issues with botanical survey maps due to a lack of topography, landscaping features, scale, text, data, description, and other missing details.
3. Records searches focused on Shasta County are invalid and questionable.
4. Rare plant survey methods do not comply with CDFW standards.
5. There is a lack of information of whether sensitive natural communities are present at the Project site.
6. Invasive plant species mapping is incomplete and there is no indication of what areas were surveyed.
7. Numerous other information is incomplete.

The County intends to supplement the above comments and expert review as further analysis becomes available. The County is also including the curriculum vitae of its economic expert who prepared the economic benefit analysis. We welcome having meetings with Commission staff to review these comments in detail, answer any questions, or provide the underlying data and analysis.

Thank you for your consideration of these comments.

Sincerely,

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

Stafford Nichols

Stafford Nichols is a Research Manager at Beacon Economics, overseeing the firm's Economic Impact Analysis and Public Policy Analysis Practice Areas. His research focus spans housing, workforce development, sustainability, economic development, and spatial analytics. He conducts analyses for both public sector and private sector clients. Recent projects include Impact Analyses of highway construction, hospital operations, minimum wage laws, new housing ordinances, modifications to solar regulations, economic mobility programs, climate change policies, broadband internet expansion, homelessness efforts, and others.

Mr. Nichols' research often includes monetizing complex socioeconomic issues that can be challenging to quantify, and applying econometric analysis to measure critical social outcomes. He distills complex questions into clear answers, and offers insightful interpretations of his findings to provide clients with well-defined, actionable strategic recommendations.

An experienced public speaker, Mr. Nichols delivers presentations to small audiences, such as boards of directors, and large public groups. Offering more than just statistics, he ensures that his audiences understand the implications of his research, and how key findings will affect them moving forward.

Prior to joining Beacon Economics, Mr. Nichols was an Associate Principal at Gallup, where he spearheaded thought leadership studies for multinational corporations, the United Nations, and the World Bank. He directed research in over 32 countries, from Afghanistan, to Nigeria, to China, to India – where he lived and conducted field research.

Currently pursuing his Ph.D. in Public Policy at the University of Maastricht. Mr. Nichols holds an M.B.A. in International Finance and an M.P.P. in Econometrics from the College of William and Mary. He earned his B.A. in Economics and History from Franklin & Marshal College.

Stafford Doveton Nichols

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Education:
- Ph.D. candidate, Public Policy, University of Maastricht (spring 2025)
- M.B.A. International Finance, College of William and Mary
- M.P.P. Public Policy, College of William and Mary
- B.A. Economics and History, Franklin and Marshall College

Board Position:
- Board Member at the Reves Center for International Studies, at the College of William and Mary

Research Manager at Beacon Economics, *Los Angeles, 2022 - present*

- Directs Economic Impact policy studies for a wide array of clients, including large multinational corporations, city and county government entities, industry associations, and non-profits.
- Conduct predictive analysis on the impact of proposed legislation, regulatory changes, infrastructure initiatives, and shifting social dynamics. Helps governments and industries understand key decision making factors, and communicate results to the general public. Has studied policies related to wellbeing, environmental policy, equality, energy, climate change, housing, economic development, and others.
- Manages team – responsible for hiring, training, reviewing hours, promoting, and holding team members accountable.

Associate Principal at Gallup, *Washington DC, 2020-2022*

- Architected and directed sustainability research initiatives for multinational corporations, NGOs, and national governments.
  - Designed new research initiative, leading to the creation of a climate risk model for 160 countries for Citibank.
  - Conducted global survey to measure attitudes and behaviors towards climate change in 135 countries.
- Annually surveyed 140 countries (representing 98% of the world's adult population) to collect official statistics for the U.N.'s Sustainable Development Goals, including SDG 2:Zero Hunger, SDG 16:Peace, Justice and Strong Institutions, and SDG 8:Decent Work and Economic Growth

Regional Director at Gallup, *Washington DC, 2016-2019*

- Directed survey research in 22 countries in Asia – including Afghanistan, China, India, Japan, Indonesia, and Australia.
  - Directed the collection of the United Nations Food Insecurity Experience scale, to establish the metrics measuring world hunger for the first time

Senior Methodologist at Gallup, *Bangalore, India 2014-2015*

- Visited 21 countries to oversee surveys and ensure high-quality research methods. Observed fieldwork and conducted qualitative research in high-conflict, politically unstable regions
- Developed "Geospatial Sampling" - an innovative sampling methodology useful for accurately sampling difficult-to-reach populations

Research Consultant at Gallup, *Washington DC, 2011-2013*

- Analyzed client data and extrapolated key insights. Helped grow business divisions by 18%, by redesigning pricing models and reorganizing the proposal writing process

Select Publications

- Nichols, Dietricht, (2023) "More than a feeling: A global economic valuation of subjective well-being damages resulting from rising temperatures"
- Nichols, Dijkstra, Papadimitriou (2020) "The Degree of Urbanisation's Effect on Happiness"
- Nichols, Dijkstra, Papadimitriou (2020) "UN Approves New Way to Define Cities and Urban, Rural

Areas"

- Nichols, Reinhart (2019) "Wellbeing Inequality May Tell Us More about Life than Income"
- Nichols, Ritter, (2018) "U.S. Defense Promise Still Credible in Asia-Pacific"
- Nichols, (2017) "Many in Asia See Better Living Standards for Next Generation"
- Nichols, Smith, (2016) "Mixed Reaction in Asia on Whether US Would Defend Them"
- Nichols, (2016) "Confidence High in Myanmar After Historic Elections"
- Nichols, Singh, (2015) "India's New Leadership Faces High Expectations"
- Nichols, Richter, (2014) "Higher Fines Compel Uninsured Americans to Sign Up"
- Nichols, Moore, (2014) "Americans Still Favor Energy Conservation Over Production"
- Nichols, (2012) "Suffering in Iraq Highest Since 2008"

EMIL ALEXANDER SABÁN

easaban@yahoo.com

EDUCATION

The University of Kentucky	Master of Science in Economics Overall GPA: 3.45	January 2023
The University of Texas at Austin	Bachelor of Arts in Economics Bachelor of Arts in Plan II Honors Certificate in Applied Statistical Modeling Overall GPA: 3.79	May 2021

EXPERIENCE

Beacon Economics, LLC - *Senior Research Associate;* Los Angeles, California January 2023-present

Economic research consulting firm serving local governments, trade organizations, and public interest groups

- Conduct analyses on local economic conditions utilizing federal and state datasets, most often with STATA
- Compose strategic economic development plans for municipalities or projects, informed by data analyses
- Synthesize academic research and industry reports into developing models and projections for client publications
- Maintain and update company-wide databases, including compiling and cleaning published Census data
- Present research and engage with clients and general public as required for client projects

The Center for Business and Economics Research - *Graduate Research Assistant;* Lexington, Kentucky Aug 2021–Dec 2022

Applied economic research center based in the Gatton College of Business and Economics, University of Kentucky

- Compiled, prepared, and utilized datasets for economic analysis, utilizing federal, Census, and local databases
- Independently researched and drafted briefs on the rare earths industry and the potential for a domestic supply chain
- Developed models based on econometric theory and ran regressions utilizing STATA
- Worked as part of a team to complete client-sponsored projects, including working with university professors and third-party professionals

University of Texas Economics Department - *Undergraduate Research Assistant;* Austin, Texas January–December 2020

Program matching undergraduate economics students with Ph.D. candidates, College of Liberal Arts, University of Texas

- Compiled, cleaned, and developed usable datasets for Ph.D. candidate projects, utilizing PSID, Census PUMA, and other data sources
- Used STATA to consolidate and perform statistical analysis on geographic and historical population data
- Systematically reviewed archival EPA and other federal agency publications for relevant data on pollution concentration and industry employment
- Manipulated and transcribed data in Microsoft Excel to convert archival publications into usable information

Annette Strauss Institute for Civic Life – *Research Intern;* Austin, Texas September 2018 – June 2019

Research institute based in the Moody College of Communications, University of Texas

- Analyzed national and state in-house polling data regarding civic life and elections
- Assisted postdoctoral fellows in conducting their research and analyzing data
- Conducted statistical analyses of data using R and STATA
- Utilized Tableau to create professional-quality presentations of data
- Attended 77th Annual Midwestern Political Science Association Conference, Chicago, Illinois April 4th-7th, 2019
    - Paper session "The effects of polling on congressional turnout in the 2018 midterms"

ADDITIONAL INFORMATION

Computer Skills: STATA, Tableau, LaTeX, MS Word, Excel, PowerPoint, experience with GIS

Languages: Native fluency in English and Russian, conversational in French

Work Eligibility: Eligible to work in the U.S. with no restrictions

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December 13, 2024

VIA E-MAIL

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Re: Comments on CPCN Determination and Alternatives

Dear Alan and Adam:

On December 16, 2022, Fountain Wind LLC ("Applicant") filed an application to the California Energy Commission ("CEC") for "opt-in" certification of the Fountain Wind Energy Project ("Fountain Wind" or "Project") pursuant to Public Resource Code section 25525. The Project had previously been considered by the Shasta County Planning Commission, which on June 22, 2021 declined to issue a use permit for the project. Following an appeal by the Applicant, the Shasta County Board of Supervisors issued a resolution on October 26, 2021 upholding the Planning Commission's denial of the Project. Furthermore, on July 12, 2022, the Shasta County Board of Supervisors adopted an ordinance to amend section 17.88.035 of the Zoning Plan, prohibiting the construction of utility-scale wind projects in the County. Given the previous denial of the Project and ordinance prohibiting large wind projects in Shasta County, CEC approval of the project would require overriding applicable state, regional, or local laws, ordinances, regulations, or standards (LORS). California Public Resources Code section 25525 states that the CEC shall not issue a LORS override unless it determines that the facility is "required for public convenience and necessity and that there are not more prudent and feasible means of achieving such public convenience and necessity."

The Applicant states that the underlying purpose of the Project, and the apparent basis for claiming the public convenience and necessity of the Project, is "… to develop a utility-scale wind energy facility capable of generating up to approximately 205 megawatts ("MW") of renewable wind energy and to assist California in meeting renewable energy generation targets

set forth in Senate Bill (SB) 100."[1] That legislation increased California's Renewable Portfolio Standard ("RPS") to 60% of retail sales by 2030 and set a 100% renewable and zero-carbon electricity supply target by 2045. Meeting those targets will require the addition of new renewable energy projects. The question is whether there are not more prudent and feasible sources of renewable energy than the Fountain Wind project. A finding that there are more prudent and feasible sources of renewable energy would require that the CEC not override LORS and issue a denial of the opt-in application for certification. Thus, the CEC must be diligent in its review of project alternatives.

Shasta County is a region rich in renewable energy resources and already provides a significant contribution to the State's supply of renewable and zero-carbon energy that is well in excess of electricity consumption in the county (*i.e.*, 2-5X).

Utility-Scale Renewable Energy Projects Operating in Shasta County[2]

Resource	**Capacity (MW)**
Biomass	144
Hydroelectric	2,005
Solar	8
Wind	101
Total	**2,258**

Shasta County Electricity Generation and Consumption (MWh)[3]

Year	**2023**	**2022**	**2021**	**2020**	**2019**
Net Generation	5,648,808	3,387,866	4,418,812	5,778,596	7,422,827
Electricity Consumption	1,617,461*	1,617,461	1,653,540	1,574,355	1,529,621
Difference	4,031,347	1,770,405	2,765,272	4,204,241	5,893,206
Percent	349%	209%	267%	367%	485%

Shasta County has issued use permits for an additional 8 MW of biomass projects, including the 3 MW TLT Enterprises biomass gasification project and 5 MW Bar Over Heart bioenergy facility. Shasta County is also in the process of reviewing a use permit application for the 300 MW Crossroads Battery Energy Storage Project. Although stand-alone battery energy storage systems ("BESS") do not directly contribute to California's renewable energy supply, they can store renewable energy that otherwise would have been curtailed during periods of oversupply, thereby increasing the total supply of renewable energy delivered to meet customer

[1] ALT-02 Data Response (TN250551).

[2] CEC QFER-1304 Power Plant Owner Reporting Database (https://data.ca.gov/dataset/california-power-plants).

[3] Generation Data from EIA Form 923 with Shasta County plants identified in EIA Form 860. Consumption data for Shasta County from CEC Energy Reports (https://ecdms.energy.ca.gov/elecbycounty.aspx). *Note that 2023 county consumption data have not been published so 2022 data are used as a proxy.

loads. BESS projects provide additional benefits by supplying flexible, dispatchable capacity needed to integrate high levels of variable renewable generation and enable reliable operation of the power grid. It would not be unreasonable for the CEC to consider BESS as an alternative use of the proposed Project site, especially if, as discussed further below, there is an influx of new renewable energy from other sources being delivered to the surrounding transmission network.

Although project developers have not yet submitted permitting applications to Shasta County, CAISO interconnection queue reports indicate that two additional utility-scale energy projects are under development in Shasta County. The Anderson River BESS would be a 200 MW battery project with a point of interconnection at the Cottonwood substation. The second project is a hybrid solar photovoltaic and BESS project proposed for interconnection to the 230 kV Pit #1 – Cottonwood and Round Mountain – Cottonwood #3 transmission lines. The Meadow Ridge project would consist of 179.50 MW solar PV and 47.40 MW BESS, with a net capacity at the point of interconnection of 175 MW.

The Meadow Ridge project's use of solar PV technology is consistent with local ordinances concerning the permitting of utility-scale energy projects. Given its interconnection to the same transmission line as Fountain Wind and comparable size, the Meadow Ridge PV/BESS appears to be an ideal candidate for consideration as an alternative when evaluating whether there are not more prudent and feasible means of achieving the underlying purpose of the Fountain Wind project.

Another set of projects slated to deliver significant quantities of wind energy to that portion of CAISO's transmission system in Shasta County into which Fountain Wind proposes to interconnect would include the offshore wind under development in the Humboldt call area. In its 2023-2024 Transmission Plan,[4] the CAISO approved transmission projects to deliver 1,600 MW of North Coast offshore wind. These projects would include a 500 kV transmission line from a new Humboldt substation to the Fern Road 500 kV substation under construction in Shasta County. The Fern Road substation will connect to the 230 kV system at Round Mountain, which is also linked to the Cottonwood 230 kV substation.

Given the CAISO-approved transmission projects, the Humboldt offshore wind projects will be functionally equivalent to a project located in Shasta County. The CEC's evaluation of the public convenience and necessity of the Fountain Wind project, and whether there are not more prudent and feasible means of meeting that need, should consider the offshore wind projects as a suitable alternative to Fountain Wind.

The CEC's consideration of alternatives need not be limited to projects that deliver their energy within Shasta County, however. As the Applicant admits: "Project sites for renewable energy are not selected due to 'generation need within the proposed area of the transmission system.' Electricity, such as would be generated from this project, can be used throughout the state and not just within this area of the transmission system."[5]

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4 Https://www.caiso.com/documents/iso-board-approved-2023-2024-transmission-plan.pdf.
5 ALT-01 Data Response (TN251462).

Potential alternatives could therefore include any renewable energy project that connects to the CAISO system.[6] In December 2023, the CAISO examined its interconnection queue to identify resources available for near-term interconnection that would either require no additional transmission to interconnect or for which entering into a remedial action scheme would enable interconnection, or based on transmission already under development. It studied projects in its queue through Cluster 13, for which Phase 2 studies have been completed, and did not include projects queued in Clusters 14 and 15 for which such studies have not been completed.

Based on the CAISO's review, there are almost 33,000 MW of renewable resources that can be interconnected to the transmission system without requiring additional transmission upgrades. Thus, the 200 MW Fountain Wind project is not unique with respect to its interconnection requiring no more than minor substation upgrades and agreeing to a remedial action scheme. There are almost 4,600 MW of wind projects that meet the CAISO's criteria for enabling near-term interconnection. The CAISO also identified 9,000 MW of storage projects that would not require additional transmission to interconnect.

CAISO Assessment of Projects Not Requiring Network Upgrades for Interconnection[7] (MW)

Transmission Entity	Solar PV	Solar & Storage	Wind	Wind & Storage	Hydro	Total Renewable	Storage
PG&E	986	5,917	1,787	368	5	9,063	4,161
SCE, SDG&E & GLW	341	20,939	2,417	0	0	23,697	4,844
Total	1,327	26,856	4,204	368	5	32,760	9,005

The CEC will need to evaluate the Fountain Wind project in the context of these alternatives to determine if, given the need to override LORS for the approval of Fountain Wind, there are not more prudent and feasible alternatives.

If you require any additional information, please don't hesitate to contact me.

Sincerely,

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

[6] As mentioned above, viable alternatives could also include storage facilities to the extent that they capture and deliver renewable energy that would otherwise be curtailed.

[7] Briefing on Resources Available for Near Term Interconnection, December 5, 2023 (https://www.caiso.com/documents/briefing-resourcesavailable-nearterminterconnection.pdf).

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File No. 55398.00043

December 12, 2024

Leonidas Payne
Project Manager
California Energy Commission
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") 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 submitted comments on October 2, 2024.[1] On November 8, 2024, Stantec Consulting Services, Inc. submitted a response ("Stantec Letter") to the County's comments.[2] The County hereby provides the following technical and legal comments on the Application and a response to Stantec's Letter.

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.[3] On May 15, 2024, the Applicant submitted a response pointing to the well

[1] TN259437, *County of Shasta's AB 205 Review and Comments on Fountain Wind Project* (Oct. 2, 2024).
[2] TN259953, *fwp_response_to_county_comments_on_water_supply* (Nov. 8, 2024).
[3] TN255722, *data requests associated with recent applicant filings* (Apr. 16, 2024) (citing compliance issues with 20 C.C.R. §§ 1701, Appendix B, (g)(14)(C)(v) and (g)(14)(C)(vi)).

construction and Hat Creek Construction and Materials, Inc. (with "will serve" letter) and updated its water supply report.[4] On June 12, 2024, the Commission staff followed up again asking for documentation on the well location.[5] The Applicant submitted the follow-up on June 27, 2024.[6]

On October 2, 2024, the County proffered that the Applicant has not met Appendix B requirements and has failed to address the questions submitted by Commission staff.

On November 8, 2024, Stantec submitted a one page memorandum to the Commission purporting to address the County's concerns.[7] The Stantec Letter fails, however, to address the questions raised by the Commission and the concerns brought forth by the County. Indeed, there are in fact still several material questions that the Applicant has not addressed regarding water resources and supply for the Project. As set forth herein, there are still 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 and the comments of the County.

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 apparently 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 the Commission's Appendix B regulation: water rights supply issues, water quality regulations and local well requirements.

In terms of water rights, the Stantec Letter completely misses the mark. California water rights make no difference whether a basin is a low priority basin under the Sustainable Groundwater Management Act ("SGMA"). In 2014, Governor Edmond G. Brown Jr. signed SGMA into law. SGMA consisted of three legislative bills, AB 1739, SB 1168 and SB 1319. Two amendments, SB 13 and AB 617 were authorized in 2015. A central feature of SGMA is the recognition that groundwater in California needs to be managed and that such management is best accomplished locally. SGMA requires the implementation of one or more Groundwater Sustainability Plans ("GSP") or "alternative" plans in high and medium priority groundwater basins. (*Id.*) As to low priority basins, SGMA has no specific requirements regarding groundwater management plans, but SGMA leaves untouched the traditional groundwater rights law set forth in California. Furthermore, SGMA specifically provides that it does not apply to Native American Tribes among others. Consequently, whether the Basin is low priority is irrelevant to the water rights analysis.

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4 TN256385, *fwp_water_responses* (May 15, 2024).
5 TN256818, *Water Resources data requests* (June 12, 2024).
6 TN257471, *fwp_well_location_memo* (June 27, 2024).
7 TN259953.

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.[8] This is known as the doctrine of reasonable use or the American rule, which was first codified in *Katz v. Walkinshaw*.[9] 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 regardless of whether a basin is subject to an adjudication and supervisions by a Court.

In the case of the Applicant, other than the bare statement made by Stantec with no supporting evidence, 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 County and the Tribe are not required to show that there is an impact. It is the Applicant that must answer and demonstrate that there will be no impact with evidence much more specific than a one paragraph allegation. Indeed, export of groundwater from one basin to another is an important issue which has prompted many counties in California, including Tehama, Yolo, Mono, Butte, and others, to enact ordinances that prohibit the export of water from one basin to another or out of the county.[10] Consequently, any groundwater right holder can rightfully challenge the Applicant's scheme to obtain water from another basin for the Project, and even the County can prohibit such export through an ordinance.

The Stantec Letter also fails to address the issue of whether the wells are permitted to pump water for export. It simply states that the wells have been pumping for many years and have the capacity to do so, but it does not identify the wells by number, does not provide any information from well records to show that, and, as set forth above, provides no legal or factual background to address the issue of correlative groundwater rights in California. In short, the Stantec Letter does not answer the concerns raised by the County.

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 proper placement of the annular seal around the well casing. Annular seals are usually placed around the

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

[9] (1903) 141 Cal. 116 ("*Katz*").

[10] *See*, Gregory S. Weber, *Groundwater Export Legislation in California, Lessons from a Patchwork Quilt*, National Agricultural Law Center, 34 Nat. Resources J. 657 (1994), available at https://nationalaglawcenter.org/wp-content/uploads/assets/bibarticles/weber_twenty1.pdf.

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 still 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, and the Stantec Letter does not provide any new information to that effect.

The issue of supply is not the only one at stake here. The Applicant did not identify that the use of water would be just for industrial purposes only. To the extent that any of that water will be used as drinking water, the requirements of California Health and Safety Code section 111120 for water haulers operating in California still apply: 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. 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, Hat Creek Construction does not operate a public water system at the multi-purpose facility located at 24339 State Highway 89 near Burney, CA. The letter of intent to serve the project with potable water and construction is not based on the source meeting all regulations to serve Fountain Wind. Besides the California Health and Safety Code (H&SC) requirements mentioned above, section 111120 to transport water for drinking or other purposes involves water being ingested by humans. In addition, Shasta County section 17.02.430 requires that the arrangement set forth in the Letter of Intent provided by Hat Creek Construction requires that the existing use permit by Hat Creek Construction at the multipurpose facility be amended, and that permit has not been amended.

The Commission has given the Applicant many opportunities to provide the Commission's staff with necessary documentation and information to satisfy the water resources requirements of Appendix B, but 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

ENPLAN

374-011
November 27, 2024

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SUBJECT: Fountain Wind Energy Project: Peer Review of the Migratory Bird Studies

In response to your request, ENPLAN has completed a peer review of the migratory bird studies submitted to the California Energy Commission (CEC) in support of the Fountain Wind Energy Project. The project entails the construction and operation of up to 48 wind turbines. Associated development would include construction of underground and overhead collection lines, access roads, maintenance facilities, evaluation towers, batch plants, substations, and a relay microwave tower. The project area is generally located between the communities of Montgomery Creek and Burney, about 30 miles northeast of Redding, and immediately north and south of State Route 299.

This peer review was completed by Tiana Honigman and Donald Burk. Tiana has a Bachelor of Science degree in Animal Biology from UC Davis. She has considerable experience in conducting avian surveys and is particularly well-acquainted with special-status bird species in Northern California. Don has a Master of Science degree in botany and over 40 years of experience in designing, conducting, and reporting on scientific studies. He has prepared and reviewed hundreds of biological studies and has particular expertise in the development of unbiased, accurate, and defensible scientific reports.

Primary documents reviewed for this assessment are listed below:

> *Nocturnal Migrant Risk Summary, Fountain Wind Project, Shasta County, CA*. Technical memorandum prepared by Quentin Hays, Andrea Chatfield, and Joel Thompson, WEST, Inc., October 10, 2018.
>
> *Year 1 Avian Use Study Report and Risk Assessment for the Fountain Wind Project.* Prepared by Joel Thompson, Andrea Chatfield, and Quentin Hays, Western EcoSystems Technology, Inc., November 5, 2018.
>
> *Results of the Year 2 Avian Use Study at the Fountain Wind Project – Addendum to the Year 1 Avian Use Study Report and Risk Assessment*. Prepared by Joel Thompson and Andrea Chatfield, Western EcoSystems Technology, Inc., September 5, 2019.

Nocturnal Migrant Risk Summary

- Page 1 states that data was collected from 30 wind energy facilities across the U.S. (obtained from Kerlinger *et al*., 2010), and reports on the fatality rates of nocturnal migrants at turbines ranging in height from 54 to 125 meters.
    - The reader is not advised as to how many of the 30 wind facilities have turbines in the 54- to125-meter range. Do all 30 of the facilities have turbines in the stated height range or only a handful? How many turbines are included in the actual data set used by WEST? Without knowing the sample size for the baseline data, we cannot address its adequacy.
    - Likewise, no data is provided other than the heights of the turbines used for comparison. We do not know if these are monopole turbines, lattice turbines, or other design, and no information on blade-sweep or other critical factors is provided. We are not provided any data on night-lighting, which can significantly affect nocturnal-migrant mortality rates.
    - The report omits discussion of a huge number of variables that may affect the reported mortality rates in the baseline study. For example, no mention is made of the efficacy of carcass counts. However, results of carcass counts can vary substantially based on search frequency, search intensity, and search methods (e.g., visual search vs. use of scent detection dogs). Although the WEST report is titled as a "Summary," the lack of qualifications and thorough descriptions greatly undermines the credibility of the report and its findings. A more robust characterization of baseline data on which the report relies is clearly needed.
    - To substantiate the results of a comparative analysis, supporting data must be provided in the WEST report.
- The current Fountain Wind project proposal calls for turbines with a maximum blade altitude of 208 meters. The WEST report addresses turbines in the 54- to125-meter range.
    - The WEST report needs to be substantially revised to address the currently proposed turbine height.
- Dozens of additional studies of turbine-related bird mortality have been published since the 2010 Kerlinger *et al*. study (the baseline avian collision fatality data source utilized in the WEST report), and over 50 new studies were available at the time the WEST report was prepared in 2018. These newer studies need to be incorporated into the baseline data used for the current project evaluations. Use of current data is extremely important. Even WEST (page 2) notes that "modern" wind energy facilities have different bird-fatality characteristics than older facilities.
- Page 2 states that "Nearly all multi-bird nocturnal avian migrant fatality events are detected at tall structures with non-flashing lights…" and cites Johnson *et al*. (2016) as one of several sources for this conclusion. We find no such conclusion in Johnson's paper; the single mention of lights in Johnson's paper is a reference to another author's study. This loose use of reference materials by WEST is unsettling (we did not check the validity of any other data cited by WEST).

- The report notes that the 2010 Kerlinger *et al*. study found nocturnal migrant fatality rates ranging from 1 to 7 birds per turbine per year. Hatchet Ridge data is then reviewed, and annual "small bird" fatality rates were found to range from 0.31 to 2.03 fatalities/MW/year, with large bird fatalities ranging from 0.47 to 0.52 fatalities/MW/year.
    - For clarity of information, a single metric should be used to report bird fatalities throughout the report; if needed, results in a second metric could be provided in parentheses.
- WEST repeatedly states that avian mortality at Hatchet Ridge (and therefore expected mortality at Fountain Wind) is "low" with no definition of the term. Although the conclusion may be correct, supporting data needs to be provided to substantiate the conclusion
    - Baseline information for Hatchet Ridge must be included in the current report, i.e., number of turbines, turbine capacity, conversion of fatalities/MW/year to fatalities/turbine/year. Similar information for the proposed project must also be provided. Without this data, the validity of WEST's conclusions cannot be determined.
    - Is nocturnal migrant fatality at Fountain Wind expected to be "low" compared to similar turbine projects or "low" compared to other events cited in the WEST report, such as "single-night, single-tower casualty events of hundreds to thousands of individuals"?
- With respect to nocturnal radar studies, WEST notes that the Fall 2007 radar study at Hatchet Ridge recorded an average passage rate of 290 ± 26 targets/kilometer/hour, an average altitude of targets of 468 ± 3 m above ground level (AGL), and that only 8% of targets flew below the proposed turbine height (i.e., 125 m AGL).
    - "Targets" need to be defined (are these "small" birds, "large" birds or all birds?).
    - The data need to be re-evaluated to address the turbine heights for the Fountain Wind project as currently proposed.
    - Other data cited in this discussion address <u>average</u> flight altitudes. To be more meaningful, the report needs to focus on the percentage of birds flying below the maximum turbine height.
- The report suffers from an ambiguous use of terms and data. While the report is titled "<u>Nocturnal Migrant</u> Risk Summary" [emphasis added], the first sentence of the report focuses on passerines. By the third sentence, the report returns to a focus on nocturnal migrants. Although most of the baseline data subsequently presented encompasses all nocturnal migrants, the concluding paragraph regarding fatality rates addresses "migrant passerines" and "passerines and other small birds" and only casually mentions "large bird" fatalities.
    - The report needs to be refined to provide more clarity on objectives and findings.

Avian Use Study Report and Risk Assessment (Year 1 Report and Year 2 Addendum)

- As noted on Page 1 of the Year 1 report, "The primary objectives of the study were to: 1) assess the relative abundance and spatial and temporal distribution of birds throughout

the Project area and 2) evaluate the potential for adverse impacts to avian species, particularly eagles, other diurnal raptors, and species of regulatory or management concern."

  - Overall, the two-year study resulted in collection of a substantial body of data that meets Objective 1. However, as further noted below, the assessment of potential impacts (Objective 2) is woefully lacking. The reports must be rewritten to provide a clear and quantified evaluation of potential impacts; likewise, recommended mitigation strategies to avoid, minimize, and offset impacts must be provided.

- Page 11 of the Year 1 report (risk assessment methods) states that "The intent of the risk assessment is not to predict the number of fatalities, but rather to provide a contextual risk assessment based on the pre-construction avian use data collected at the Project to date."

  - The most meaningful result that this risk assessment could produce would be in terms of predicted bird fatalities. Instead, the authors choose to focus on a "contextual assessment" that obfuscates the actual impacts of the project. We find this to be inappropriate.

- Although the report summarizes reams of data for the project site as well as for wind power projects throughout the United States, most of this data is dismissed, and the report focuses on the Hatchet Ridge project results.

  - Although no data for other wind energy projects in forested habitats may have been available at the time WEST's initial report was prepared, we expect that facilities have now been constructed in forested habitats and that additional pre-construction and post-construction data is now available. We strongly recommend that a current review of wind energy projects be conducted and that data for comparable facilities in forested habitats be added to this evaluation.

- The Discussion and Risk Assessment (page 24 of the Year 1 report) identifies Point 30 as being in ideal habitat for soaring birds. This important finding must be brought forward to the Conclusions section, and recommendations to minimize potential impacts of the proposed turbines in the immediate vicinity must be made. Recommendations could include moving or eliminating the turbines, or establishing specific management/turbine use practices to minimize impacts.

  - The Discussion and Risk Assessment should include a visual/spatial display of the site-specific bird use data collected for the project, particularly for bird use in the rotor-swept zone. This would allow identification of principal areas of bird use and areas of low bird use. The turbine siting analysis should then include this information as a key factor in determining where turbines can be constructed to meet project objectives and minimize bird fatalities.

- Page 24 of the Year 1 report addresses direct impacts to bird populations, which are identified as loss of habitat and fatalities resulting from collisions with turbines. However, no data is provided in the report on the anticipated extent of habitat loss.

  - The extent of habitat loss must be quantified, and appropriate mitigation measures must be provided. Particular attention should be given to habitat that could support special-status bird species.

  - Other direct impacts such as increased potential for fatalities due to collisions with overhead electrical lines must be identified and evaluated.

- Page 24 of the Year 1 report notes that the highest risk of direct mortality to birds during construction is the potential for destruction of nests during initial site clearing. However, instead of quantifying the extent of site clearing proposed or providing guidance for nest avoidance, the report makes the weak conclusion that loss of nests can be minimized by using existing roads and previously cleared lands.
  - The anticipated extent of clearing must be provided, by habitat type.
  - Mitigation measures must be provided to offset the loss of important habitats for avian use.
  - Recommendations to avoid loss of nesting birds must be provided. These could include scheduling vegetation clearing outside of the nesting season, or conducting pre-construction nesting surveys in advance of any construction during the nesting season, with recommendations of steps to be taken when nesting birds are encountered.
- Page 33 of the Year 1 report provides a two-paragraph discussion of potential indirect effects of the project on birds. Loss of habitat, habitat fragmentation and behavioral avoidance are briefly mentioned as potential effects. However, no site-specific information on potential effects is provided. Instead of providing a good-faith evaluation of potential effects, the report simply concludes (with no supporting data) that the effects of the project will be similar to existing timber harvest operations.
  - The evaluation needs to be revised to quantify potential impacts to the greatest extent feasible. At a bare minimum, the acreage of habitat loss needs to be provided.
  - The evaluation needs to identify similarities and differences between permanent impacts of wind power development vs. the (more or less) temporary impacts of timber operations.
  - The report needs to provide an evaluation of anticipated habitat fragmentation and behavioral avoidance impacts to address potential effects on bird populations.
  - The potential loss of prey species due to habitat modification needs to be addressed as a potential indirect impact.
  - The effects of night-lighting on bird nesting and other bird behaviors need to be addressed as a potential indirect impact.
  - The report needs to provide a robust analysis of cumulative impacts, including the effects of nearby wind power projects as well as timber harvest operations.
- The two reports seem designed to obfuscate information. One would expect that the “Conclusions” section would provide a concise, quantified description of avian use and anticipated mortality due to the proposed wind project. No such information is provided.
  - The Year 1 report provides a numerical range of fatality rates for birds at wind energy facilities in California and the Pacific Northwest, but then dismisses this data and concludes that “it is reasonable to expect that fatality rates and the

species composition of fatalities at the Project will be similar to that documented at Hatchet Ridge." Absolutely no quantifiable information is provided in the Conclusions section regarding Hatchet Ridge.

    - Post-construction monitoring at Hatchet Ridge shows that fatalities of two special-status bird species have been documented. Although similar fatalities must be expected at Fountain Wind, this essential finding is not reflected in the Year 1 report conclusions.

  - The Year 1 Conclusions paragraph states that "The results of pre-construction avian use surveys conducted at Hatchet Ridge were largely consistent with those documented at the Project during this study."

    - No pre-construction avian use data for Hatchet Ridge is provided in the current report; therefore, this conclusion is entirely unsupported.

  - The Year 2 Conclusions section consists of two sentences that merely affirm the (vague) findings of Year 1.

- The Year 1 report Introduction states that one of the primary purposes of the study is to "evaluate the potential for adverse impacts to avian species, particularly eagles, other diurnal raptors, and species of regulatory or management concern."

  - As noted above, no information is provided in the Conclusions with respect to this primary study objective.

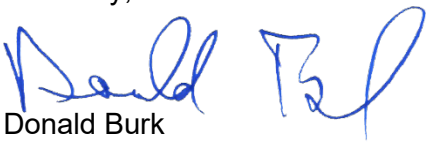
  - The Discussion section notes that the "risk of collision" for special-status species is "low to moderate." We disagree. If two fatalities of special-status species were observed at Hatchet Ridge in three years of post-construction monitoring and similar results are expected at Fountain Wind, the potential for fatalities of special-status species over the 40-year life of the Fountain Wind facility must be high or very high.

    - Instead of discussing expected fatalities to special-status species, the report quickly pivots to statements on nesting habitat and habitat fragmentation, with the paragraph concluding that "the Project will not cause displacement of sensitive small bird species beyond what has occurred and will continue to occur from ongoing timber harvest operation."

    - Measures to avoid, minimize, or offset the loss of special-status species must be provided.

Please contact me if you have any questions regarding our findings.

Sincerely,



Donald Burk
Environmental Services Manager

c: Ryan Baron, Best Best &Krieger