

RESPONSES TO ALUC COMMENT LETTER

The Solano County Airport Land Use Commission (ALUC) submitted comments on SMUD’s “Proposed Decision and Findings that the Solano 4 Project Is Consistent with the State Aeronautics Act” (Findings). Pursuant to State Aeronautics Act (Act) Section 21676,¹ ALUC’s comments are only “advisory” and, regardless, are meritless. Among other things, ALUC’s interpretation of the relevant statutes is largely unsupported citations to legal authority. Although not necessary, further explanation is provided below and in the attached letter from Westslope Consulting (August 18, 2021): “Solano County Airport Land Use Commission’s Response to SMUD’s Proposed Overrule Findings.”

Support Development Over the Next 20 Years

ALUC asserts that the Act requires SMUD to address its support of Travis Air Force Base (Travis AFB) operations over the next 20 years. SMUD, however, does not have jurisdiction over third-party land uses surrounding Travis Air Force Base (AFB) or even in the Wind Resource Area as a whole, only over the projects SMUD itself chooses to develop in furtherance of its public purposes, which are limited to the production, transmission, and delivery of electrical energy. SMUD’s Findings are appropriately limited to those Act purposes related to SMUD’s specific plan for the Project.

Lost Runway

ALUC specifically commented that prior development in the Wind Resource Area led to the loss (actually relocation) of a runway approach: “there is no acknowledgement of the fact that Travis AFB has already lost an approach to development in the WRA.” The ALUC did not suggest, much less provide evidence to the effect that, the relocated runway imposed a limitation on the operation of Travis AFB or suggest the relocation was related to a SMUD project. The ALUC also did not suggest the Project would or even could impose a runway-related impact on Travis AFB operations, nor could it, since the Project is located 12 to 15 miles from the Base.

ALUC Speculation Regarding Training Space

ALUC was dismissive of SMUD’s response at the ALUC’s hearing on the Project to an ALUC commissioner’s speculation about possible future limitations on Travis AFB’s training space. SMUD’s response to the ALUC Commissioner’s speculation about impacts on Travis operations aptly noted that the Project site is up to 15 miles from Travis AFB and is already burdened by transmission towers that already preclude Travis’s use of the physical space that is to be occupied by the Project towers.

Protection of Runways

ALUC asserted that SMUD must consider how protective local use and zoning decisions are of Travis AFB’s runways. No one, including the ALUC, has suggested the Project would have an impact on Travis AFB’s runways. Travis AFB itself, far from suggesting such an impact, concluded the Project would have minimal negative impact and the Department of

¹ All Section references are to the Public Utilities Code unless otherwise designated.

Defense concluded the Project “will not present an adverse impact to military operations.” Again, the Project is 12 miles from Travis AFB at its closest.

Findings Regarding Noise

The ALUC also submitted comments that the Findings should include more detailed analysis related to the State Airport Noise Standards and should analyze the Project’s contribution to community noise generally. The comment reflects a fundamental misunderstanding of the Act and the noise standards. The Act is intended to protect sensitive receptors from airport noise. The noise standards, likewise, establish “a mandatory procedure which is applicable to all airports in California that are required to operate under a valid permit issued by the department [of Transportation].” (Cal. Code Regs., tit. 21, § 5105 [emphasis added].) The airport noise standard is “for the acceptable level of aircraft noise for persons living in the vicinity of airports [and] is established to be a community noise equivalent level of 65 decibels.” (*Id.* at 5012 [emphasis added].) The only incompatible uses are those which are especially vulnerable to airport noise, such as homes, schools, and churches. (*Id.* 5014.) There is nothing in the standards to hint at the idea of addressing sources of noise other than from airports. Wind turbines are not vulnerable to airport noise and nothing in the Act or the noise standards suggests the need for working to minimize noise by operations other than airports. The Finding on this issue was brief intentionally to reflect the fact that, under the Act, noise is not an issue that applies to the Project.

Findings Regarding Compatibility with the Travis Plan

The ALUC’s comment that the Findings should address compatibility with the Travis AFB Land Use Compatibility Plan (Travis Plan), by documenting any inconsistencies between the proposed project and safety compatibility criteria in the Travis Plan, also reflects a misunderstanding of the Act. The reason local agencies such as SMUD may override an ALUC’s finding of inconsistency is grounded not in whether the local agency finds its plan is consistent with an airport land use commission’s airport land use plan, but on whether the local agency’s plan is consistent with the purposes of the Act. The Findings discuss in detail why the Project is consistent with the Act’s purposes.

New Safety Problems

The ALUC comments go on to assert that the Project “would create new safety problems,” but doesn’t actually identify any new safety issues that might be caused by the Project. The Findings address all safety concerns with substantial evidence in the record, including modeling by SMUD’s consultants, Travis AFB, Department of Defense, and the FAA, none of which identified any safety issues posed by the Project other than a vectoring altitude issue that the FAA made a modification to accommodate, as described in the Findings and below.

The ALUC comments also make the argument that the Project is not consistent with the Act’s purpose of preventing new safety problems, not because it creates a new safety problem, but because it does not cure existing safety problems, providing the example of existing and approved transmission towers on and adjacent to the Project site that extend

to a height nearly equal to that of the Project's proposed turbines. The towers are not part of the Project; they are not owned or operated by SMUD; they are simply part of existing conditions. To the extent that the proposed turbines restrict the ability of planes to fly at a certain height across the property, the problem is not a new one, but an existing one, and is not connected with the Project. Moreover, the FAA, as well as SMUD's consultants, determined there are no safety issues posed by the turbines. The FAA not only has the expertise to analyze issues of aeronautical safety, but it particularly analyzed this Project and concluded that it will make one minor adjustment to the vectoring altitude in one sector of the Northern California TRACON to ensure safety. The making of a minor change to ensure safety is, by definition, not a new safety issue.

The ALUC also hints that there are existing safety issues within and around Travis AFB due to the presence of the Wind Resource Area. Apart from the fact that the Act's purposes do not include correcting existing safety problems, the assertion is incorrect, as explained in the attached letter from Westslope Consulting. Moreover, in August 2021, SMUD staff reviewed the National Transportation Safety Board Aviation Accident Database in California back to the year 1979, prior to the development of wind turbines in Solano County, and found no reported air collision events in the vicinity of Travis Air Force Base.

Addressing Clutter

The ALUC states that the concerns raised by its expert Regulus "regarding the proposed project resulting in false radar targets, radar screen clutter, and air traffic controller overload are treated in cursory fashion by SMUD. . . . the impact overall will be negative, which is not the same as zero impact and certainly not an improvement on existing conditions." The Findings document why the Project will not cause adverse operational impacts in the form of false radar targets, radar screen clutter, and air traffic controller workload, including reference to a lengthy letter from Westslope Consulting addressing all points in the Regulus letter, which is in turn supported from technical analysis and conclusion from the FAA, Travis AFB and the Department of Defense.

Addressing Radar

The ALUC finally asserts that the Findings do not address radar. To the contrary, the Findings include an extensive analysis of radar issues and determine that not only will the Project not further degrade Travis AFB's primary digital radar, it might even make a minor improvement, and in addition explains that the secondary surveillance radar is not affected by wind turbines at all. The absence of a safety issue is also explained carefully by the FAA, as excerpted in the Findings, and echoed by the conclusions of both Travis AFB and the Department of Defense. The attached letter from Westslope Consulting further addresses the ALUC's assertions about radar issues.

August 18, 2021

Buck Cutting
Sacramento Municipal Utility District
P.O. Box 15830, Sacramento, CA 95852-0830

Re: Solano County Airport Land Use Commission's Response to SMUD's Proposed Overrule Findings

Mr. Cutting,

This letter is in response to some of the assertions made in the "Solano County Airport Land Use Commission's Response to SMUD's Proposed Overrule Findings on the Solano 4 Wind Project" dated July 29, 2021.

The Airport Land Use Commission's (ALUC's) reference to the Sacramento Municipal Utility District (SMUD) statement that "published visual flight rules (VFR) operations will not be affected" has been misinterpreted and is incomplete as quoted. The complete statement from Westslope Consulting's memorandum dated March 30, 2021, states that "[t]he Solano 4 wind turbines are located outside of Travis AFB circling approach areas and will have no effect on the base's published visual flight rules (VFR) operations or on instrument flight rules (IFR) operations." This statement refers to the fact that, in accordance with Federal Aviation Administration (FAA) Order 8260.3D and FAA Order 8260.58A, the Solano 4 Wind Project (Project) will pose no issues for VFR and IFR aircraft from an obstruction standpoint in Travis Air Force Base's (AFB's) circling approach areas.

The ALUC goes on to state that "[t]here is no discussion regarding radar, and one can only guess that SMUD concludes there will be no negative effects because the planes will be picked up by the MSSR radar, as they will have transponders. While transponders are required for commercial aircraft, most private civilian planes are not required to, nor do they in fact have, transponders if they are flying under visual flight rules and below 10,000 feet in the airspace classified as D (within five miles of Travis AFB) or E. (14 CFR § 91.215.)" and "[t]he inability for Travis AFB air traffic controllers to see even a portion of them at any given time is a safety concern that appears to remain unmitigated."

The radar concern expressed by the ALUC was addressed separately in Westslope Consulting's memorandum dated March 30, 2021. First, when discussing the fact that "while there can be adverse effects on the DASR, the Monopulse Secondary Surveillance Radar (MSSR), which is the secondary surveillance radar co-located with the DASR and is the main radar used for air traffic control by the base, was shown to not be effected by wind turbines." It is also noted in Westslope Consulting's memorandum dated March 30, 2021, that "[t]he MSSR interrogates transponder equipment on board the vast majority of aircraft operating in and around the Travis AFB RAPCON's airspace." This last statement is based on my firsthand experience from supporting Travis Air Force Base (AFB) and its subject matter experts in setting up the Digital Airport Surveillance Radar (DASR) and MSSR, conducting and analyzing multiple flight tests, analyzing numerous months of data over the course of several years, and through recommending setting changes in these systems to improve radar performance over the Wind Resource Area. As such, the ALUC is inaccurate in stating that "most private civilian planes are not required to, nor do they in fact have, transponders." It is

also important to note that the Project as well as the entire Wind Resource Area is outside of Travis AFB's Class D airspace. See Figure 1, where the blue dashed line around Travis AFB represents the Class D airspace and the green dots represent the Project. Even though a transponder is not required within Class D airspace, aircraft operating in or transiting the Class D airspace must be in radio contact with Travis AFB in accordance with 14 CFR § 91.129. Aircraft operating over the Wind Resource Area below 10,000 feet above mean seal level, which is Class E airspace, are not required to use a transponder or to be in radio contact with Travis AFB Radar Approach Control (RAPCON) facility; however, pilots must "see and avoid" other aircraft per 14 CFR § 91.113. See and avoid is an inherent part of the United States National Airspace System and is analogous to drivers avoiding other vehicles on the roads. Further, despite the ALUC's unsupported assertion to the contrary, as stated above regarding my firsthand experience, the vast majority of aircraft operating in and around the Travis AFB RAPCON's airspace do, in fact, utilize a transponder. As recently as 2017, Travis AFB encouraged pilots flying in the RAPCON's airspace to use transponders as part of its Mid Air Collision Avoidance (MACA) outreach program.¹ It should also be noted that the caution box to the east of the Wind Resource Area in Figure 1 was added as a mitigation as part of the work conducted by the first Cooperative Research and Development working group. This caution notifies pilots that Travis AFB may not be able to issue traffic advisories for aircraft that are not operating a transponder.

Second, the simple fact is that the 60th Air Mobility Wing's subject matter experts following their evaluation determined that the Project "should have minimal negative impact on Travis AFB operations." This conclusion was provided in a memorandum from Col. Simmons, the Commander of the 60th Air Mobility Wing, dated January 11, 2021. In addition, in a letter dated February 9, 2021, from the DoD's Military Aviation and Installation Assurance Siting Clearinghouse, the Assistant Secretary of Defense's office that oversees the DoD's part of the FAA's review process, stated that the Project "will not present an adverse impact to military operations." Based on these conclusions and based on the FAA's own review of the Project for any concerns they initially identified, the FAA issued extensions to the determinations of no hazard for the Project, which states that the Project "would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities."

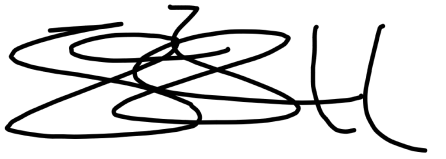
The FAA's determinations of no hazard acknowledge that the Project will be within line-of-sight of, that is, visible to the Travis AFB DASR; however, it is important to note that wind turbines being within line-of-sight does not necessarily translate into operational impacts. This fact is the fundamental reason that even though the Project will be within line-of-sight of and cause some level of interference with the Travis AFB DASR, studies show that such effects on the DASR will not result in a material difference to radar performance or air traffic operations. As noted in Westslope Consulting's letter dated March 11, 2021, "Extensive modeling of the Project was conducted to identify a number and specific locations of the wind turbines to ensure that there will be no material difference on the performance of the DASR and on Travis AFB's tracking and display system, the Standard Terminal Automation Replacement System (STARS)." This finding highlights that wind turbines within line-of-sight is a conservative standard and does not consider the actual resultant effects of wind turbines on operations, which is an evaluation that can only be made by local users and their national counterparts that are well verse in this subject matter.

¹ See <https://www.travis.af.mil/Portals/30/documents/MACA.pdf?ver=2017-04-17-160221-203>.

To be clear, instead of relying on a simple radar line-of-sight analysis, Travis AFB, including its subject matter experts, and the FAA conducted technical studies of the Project that ultimately led to the FAA issuing extensions for the determinations of no hazard. The FAA also provided an opportunity for interested parties to comment on and petition the extensions before becoming final on March 9, 2021. Considering the technical studies conducted by Travis AFB and the FAA, Westslope disagrees with the ALUC's comment that "the inability for Travis AFB air traffic controllers to see even a portion of them at any given time is a safety concern that appears to remain unmitigated." Further, regarding the ALUC's statement that "the findings do not provide any evidence that the existing safety hazards, including the existing baseline interference with aerial navigation in the form of transmission towers onsite currently reaching almost 500 feet AGL, with planned increases by the tower owners at close to 600 feet, are not already excessive," Westslope respectively disagrees as well. The FAA, with feedback from the DoD, would not have issued extensions to the determinations of no hazard for the Project if there were existing safety hazards or if construction of the Project would create safety hazards.

Please direct any questions to Geoff Blackman of Westslope Consulting at gnblackman@westslopeconsulting.com.

Respectfully,



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Owner/Principal
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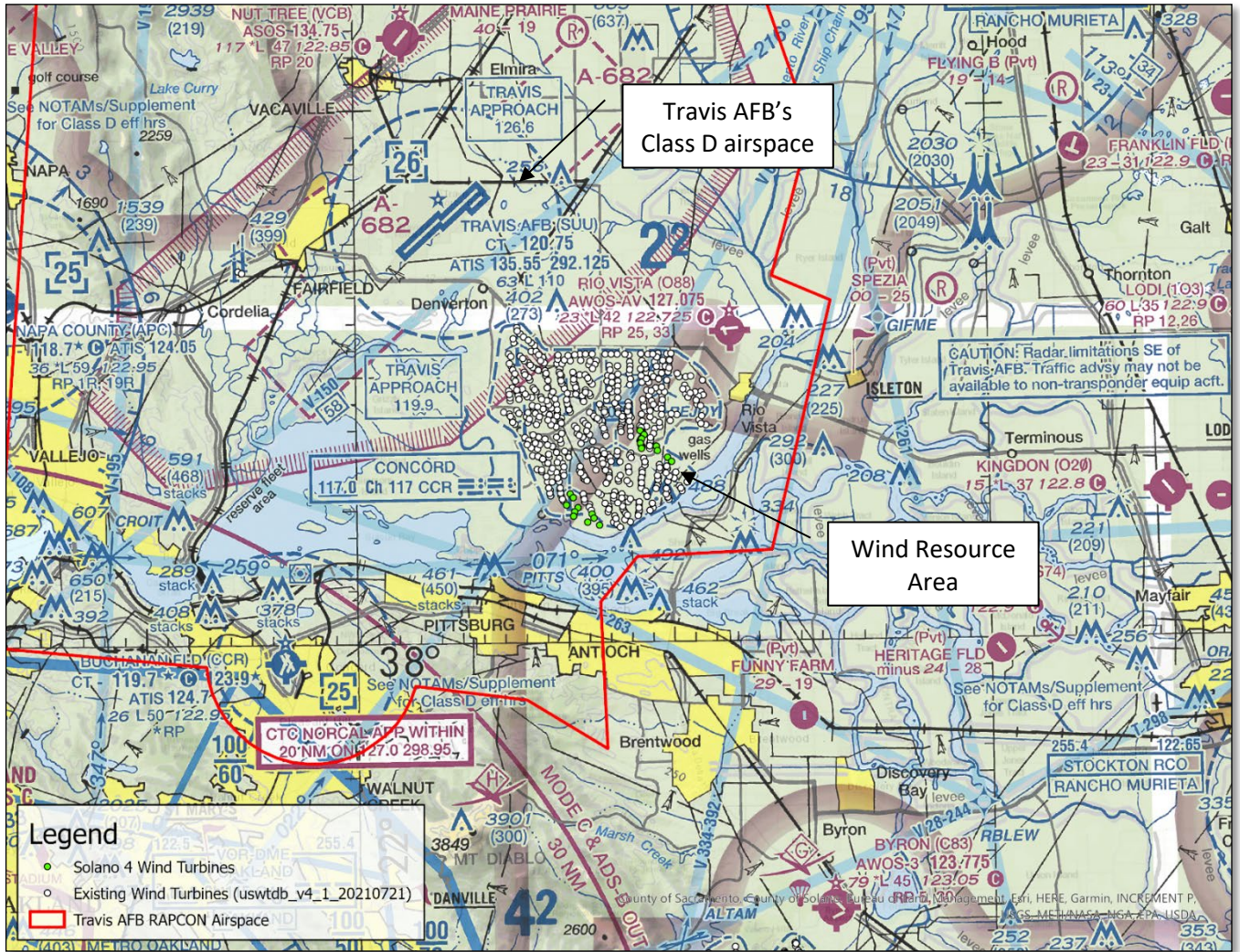


Figure 1