BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION OF DEUEL HARVEST WIND ENERGY LLC FOR A PERMIT OF A WIND ENERGY FACILITY AND A 345-KV TRANSMISSION LINE IN DEUEL COUNTY	* * * * * * * *	**INTERVENOR GARRETT HOMAN'S POST-HEARING BRIEF** **EL18-053**

I, Garrett Homan, hereby submit this post-hearing brief requesting the Commission either deny Deuel Harvest Wind Energy, LLC's Permit of a Wind Energy Facility in Deuel County or approve the Permit with the conditions referenced below.

INTRODUCTION

Deuel Harvest Wind Energy LLC has applied for a permit to construct up to 112 wind turbines in Deuel County. As the applicant, Deuel Harvest has the burden of proof to establish its project as proposed satisfies all the provisions of SDCL 49-41B-22. If there remains a single question as to whether the Deuel Harvest Wind project complies with SDCL 49-4lB-22, the application must be denied. The intervenors have no burden of proof. As I will demonstrate below, Deuel Harvest has not satisfied its burden. Therefore, I respectfully request the Commission deny the permit to Deuel Harvest.

The Commission may approve permit applications with conditions. In that case, I respectfully request the Commission imposes the following conditions:

1. A restriction on constructing wind turbines within a distance equal to 10 rotor diameters from the runway or approach surfaces of any airport (public or private) and on the land under any traffic pattern used by operators of that airport. This can be simplified specifically for Homan Field airport, by placing a restriction on constructing wind turbines within a rectangular area described below:
    a. The western edge being at least 4,170 ft (10 rotor diameters) to the west of the Homan property line (western half of section 32 Glenwood township).
    b. The northern edge being at least 1.73 statute miles from the north end of Homan Field runway.

c. The southern edge being at least 1.73 statute miles from the south end of Homan Field runway.
d. And the eastern edge being at least 1.73 statute miles from the eastern edge of Homan Field runway.

The conditions specified above would affect turbine numbers 106, 107, 108, 117, 123, and 124 from the application layout maps, which are sited to the west of Homan Field airport.

ARGUMENT

Deuel Harvest had the burden of proof to establish that their project (1) will comply with all applicable laws and rules; (2) will not pose a threat of serious injury to the environment nor to the social and economic condition of inhabitants or expected inhabitants in the area; (3) will not substantially impair the health, safety or welfare of the inhabitants; and (4) will not unduly interfere with the orderly development of the region with due consideration having been given to the views of governing bodies of affected local units of government. SDCL 49-41B-22.

Deuel Harvest has failed to satisfy its burden that the proposed project will not substantially impair the health or safety of inhabitants. Deuel Harvest Has Failed to Prove that the Wake Effects of Nearby Wind Turbines Will Not Substantially Impair the Safety of Users of Homan Field Airport. And the South Dakota Public Utilities Commission has the Authority and Responsibility to Ensure the Proposed Project will not Impair the Safety of Users of Homan Field Airport

I. Deuel Harvest Has Failed to Prove that the Wake Effects of Nearby Wind Turbines Will Not Substantially Impair the Safety of Users of Homan Field Airport

The presence of wake effects downstream of wind turbines is known to Invenergy and Deuel Harvest, and wake effects are accounted for in how turbines are sited to optimize wind turbine performance and mitigate structural fatigue issues that can be caused by turbulence (Ex. G4, Ex. G26). Additionally, per Steven Gordon (Senior Staff Engineer, Invenergy), "The effects of downstream waking are accounted for during layout design by using appropriate turbine-to-turbine spacing and confirmed using energy modeling software to quantity performance effects" (Ex. G21 p. 5).

Throughout this proceeding, there has not been any direct evidence or information provided that proves wind turbines close to an airport environment would be safe for users of that airport. Just the opposite in fact, evidence has been submitted showing that wind turbines in close proximity to private airports will create significant risks of catastrophic accidents for small general aviation airplanes and ultralight aircraft (Ex. G4), both of which may operate at Homan Field. Additionally, a Canadian Tribunal has previously found that wind turbines in close proximity to airports will "cause serious harm to human health" (Ex. G12). The turbines that Deuel Harvest proposes to construct near Homan Field will create a very real threat of serious injury or death to operators of that airport.

The Canadian Owners and Pilots Association (COPA) has expressed concern over the safety of wind turbines near airports. "Safety and usability issues are created in two ways by the location of wind turbines near an [airport]. Wind turbines present an obstruction hazard when located in the approach and departure paths of a runway. Also, wind turbine blades create wake vortex turbulence, which is hazardous to smaller aircraft that may pass behind an operating turbine during low level maneuvering for take off, landing and in the circuit at an [airport]. Therefore, it is important that approach and departure paths as well as the circuit pattern around [airports] be free from this hazard in order for these [airports] to continue to be safely used" (Ex. G14).

COPA contracted SMS Aviation Safety to conduct a safety-risk assessment of wind turbines' effects on general aviation aircraft. For such, they comprised a panel of experts consisting of aviation safety experts, civil aviation authorities, and wind turbine engineering consultants to review the research material available, assess the associated safety risks, and recommend appropriated siting constraints to mitigate those risks. The COPA/SMS panel determined wind turbines pose catastrophic risks to aircraft as obstacles and by creating dangerous wake effects that include blade tip vortices, wind shear, and wake turbulence (Ex. G4). The risks to aircraft from wind turbine generated turbulence include aircraft structural failure (break up) brought about by "extreme forces applied to aircraft frame or control surfaces" and uncontrolled flight into terrain due to "loss of control after encountering wake turbulence" (Ex. G4 p. 13). For general aviation airplanes, such as a Cessna 172, "the panel determined that turbulence would be a concern for pilots flying at a distance of up to approximately seven rotor diameters" (Ex. G4 p. 12). The panel also agreed that ultralight aircraft would be at "greater risk" of upsets from wind turbine induced turbulence and that wake turbulence may extend up to

ten rotor-diameters downstream of wind turbines (Ex. G4 pp. 11-12). Closer to the wind turbines, within three rotor diameters, the panel determined aircraft would be at risk of also being affected by blade tip vortices and wind shear (Ex. G4 p. 17).

To summarize, up to three rotor diameters downwind of wind turbines, pilots face increased risks from blade tip vortices, wind shear, and turbulence. From three to seven rotor diameters downwind, the primary risk is due to turbulence, and beyond ten rotor diameters downwind the wake effects have diminished to essentially match the ambient wind conditions.

The risk of wind turbine generated turbulence is highest when aircraft are flying slowly and downstream of the wind turbine rotor diameter, such as when aircraft are landing or taking off from airports with wind turbines in close proximity to the approach and departure paths. When departing, pilots flying under visual flight rules are not supposed to start a turn until at least 500 ft above the ground, which means the entire departure is at risk of being affected by turbines the size proposed by Deuel Harvest. Additionally, general aviation aircraft climb slowly and ultralight aircraft climb even slower which puts them at greater exposure to wind turbine turbulence. Aircraft on departure and approach are operated closer to their stall speed which limits their safe maneuverability, and also pilots "face their highest cognitive demands (task difficulty, time pressure, etc.) during take-off and landing, reducing their ability to adequately deal with additional challenges." And since "turbulence is not visible", a pilot cannot see and avoid the risk so may inadvertently enter the turbulence during a high workload phase of flight (Ex. G4 pp. 10-13).

Expert pilot Kevin Elwood corroborated the risks associated with encountering wake turbulence upon approach, a high workload and cognitively demanding phase of flight. "When a pilot is challenged to keep an aircraft safely under control such, as during an overshoot maneuver, the pilot will be distracted from the primary task of flying the aircraft if distracted by the need to navigate and avoid wind turbine obstacles. With the added high probability of wake turbulence from the wind turbine rotors during this already critical phase of slow flight and the pilot may very well lose control of the aircraft resulting in a fatal accident." (Ex. G10 p. 3).

With respect to the traffic pattern for Homan Field, "aircraft would be exposed to wind turbine wake turbulence when turning from base to final for runway 36. The turn is also known in aviation as the "graveyard" turn as this is a critical slow phase of flight. If the added

complication of invisible rotor vortices is introduced it will present the unsuspecting pilot with an unrecoverable aircraft upset close to the ground." (Ex. G10 p. 3).

From the Canadian Tribunal findings an aircraft encountering wind turbine wake turbulence up to 5 rotor diameters downwind would be dangerous to fatal and from 5 to 10 rotor diameters recovery from an upset may be possible if the pilot had adequate upset recovery training (Elwood Cross Examination). "The evidence and expert testimony that has been accepted by the Courts in Canada, with respect to the negative effects and safety risks to aviation when locating wind turbines in close proximity to an aerodrome, is irrefutable. Those who choose to approve a wind project in similar proximity to an aerodrome are doing so with the explicit knowledge that they are accepting the safety risks and threat of irreversible harm to human life." (Ex. G10 p. 3, Ex. G12).

The COPA/SMS risk assessment panel concluded the risk to aircraft operating near wind turbines to be Moderate based on Catastrophic severities and Remote likelihood of occurrence (Ex. G4). However, that risk assessment was conducted looking at the overall risk to the entire General Aviation community across Canada. When considering the specifics of operations near Homan Field, however, the likelihood of Catastrophic accidents is higher. "Because of the runway layout relative to prevailing wind direction, when the wind is blowing hard enough for the turbines to spin there is a high likelihood of wakes impinging upon the approach areas and runway environment. I'd consider the risk to safety High, due to a high likelihood of occurrence and a potentially Catastrophic outcome" (Garrett Homan Direct Testimony, Ex. G27 p. 3).

Additionally, Kevin Elwood stated that he would be concerned for his safety if planning a flight into Homan Field with wind turbines situated to the west as proposed in the Deuel Harvest Project (Elwood Direct Testimony).

So how could the Commission mitigate the risks to safety of aircraft and pilots and passengers operating at airports in close proximity to wind turbines, such as Homan Field? "The panel determined that to reduce the risk of GA aircraft when operating from… [private airstrips] an adapted form of obstacle limitation surfaces should exist. This could be achieved through regulatory standard or policy. Based on the available information, the panel determined that the following criteria would be appropriate:

- An area extending 2.5 km from both ends and at least one side of the aerodrome's runway in which there are no obstacles higher than 45 m,
- A restriction on constructing wind turbines within 7-10 rotor diameters form the approach surfaces, and
- The area of land under the aerodrome traffic pattern (or circuit) is free of wind turbines. Non-standard circuits can be specified to minimize turbulence based on the prevailing wind direction, among other factors." (Ex. G4 p. 22).

These recommendations for safety have been incorporated into the permit conditions specified above. The wind turbines numbered 106, 107, 108, 117, 123, and 124 from the application layout maps do not meet the recommended setbacks above and therefore pose a substantial risk to serious injury or death for those flying into or out of Homan Field.

As an interesting item of note, the COPA/SMS report (Ex. G4) provides some notable observations of the typical wind energy project approval process, specific to Canada, but that also applies to the proceedings here.

> "The purpose of the multifaceted approval process is to ensure that the many (and sometimes conflicting) interests of the public… receive balanced consideration. At the same time, there is pressure from many groups, including wind developers and provincial governments, to ensure that wind energy projects proceed. This pressure escalates as each step in the review process is successfully completed, because each step requires significant investment of resources… The downside of this pressure is that it can encourage decision makers to ignore the concerns of potentially affected parties.
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> This situation establishes a potential system safety deficiency – conditions that permit hazards of a like nature to exists. …with the pressure to complete wind projects, aviation safety hazards have the potential to go unidentified, and therefore unmitigated" (Ex. G4 p. 24).

The airspace- and obstacle-related evidence and expert testimony that Deuel Harvest presented does not address the safety effects of wind turbine induced turbulence.

Deuel Harvest has failed to submit evidence or testimony proving that the safety of operations at Homan Field will not be significantly affected by wind turbines as obstacles or as producers of wake effects such as turbulence, wind shear, or blade tip vortices.

Mr. Doyle of Capitol Airspace stated "I do not intend to introduce evidence or testimony regarding wake turbulence, wind shear or blade tip vortices created by wind turbines. Nor will I address the waking effects on aircraft operations. I do not claim to be an expert in the science of aerodynamics nor do I claim to be an authority on wake turbulence, wind shear or vortices" (Ex. G24 p. 14). During cross examination, Mr. Doyle clarified that the aviation regulations established by the FAA do "absolutely not" capture every concern about aviation safety and that accidents do occur and will continue to occur even if all the FAA regulations are complied with. He emphatically stated that accidents do happen. He also clarified that if the FAA regulations do not address something (such as wind turbine wake turbulence) that does not mean it is safe (Doyle Cross Examination). Therefore, abiding by all FAA regulations does not guarantee safety in all cases, especially those situations where the FAA does not apply protections to private airstrips, and therefore meeting all applicable laws and rules does not adequately address the concern of safety for wind turbines in close proximity to airports.

Kevin Elwood stated the Capitol Airspace analysis Deuel Harvest provided as Exhibit A21-2 does not adequately address the safety of Homan Field as a private airport. The report only addresses air navigation regulations and does not address the safety of the private-use airport environment (Elwood Direct Testimony).

During cross examination by Ms. Kilby, Mr. Doyle did clarify that nothing in the FAA regulations gives a project developer the right to cause turbulence over Homan Field. He also answered that the process used for making Determinations of No Hazard for a given structure does not take into consideration any turbulence that may be produced by that structure (Doyle Cross Examination).

The wake encounter evidence and expert pilot testimony that Deuel Harvest presented does not address the safety effects of the proposed wind turbines near Homan Field.

Deuel Harvest submitted a research paper regarding a Wind Turbine Wake Encounter Study conducted by the University of Liverpool in 2015 (Ex. A45) in an attempt to provide evidence that pilots that encounter wake turbulence downstream of wind turbines report the encounter as a minor event. Deuel Harvest wants to extend that study to the Project's proposed wind turbine layout around Homan Field and claim that there would be no safety concern for operators of Homan Field. This was supported by the testimony of Mr. Rice, also, who read that

paper into evidence and based his opinion as a pilot on it. However, those conclusions are not supported by the Liverpool research paper itself.

The Liverpool report clearly states "The current results show that for the small-size WTN250 wind turbine the wake is not strong to cause any significant upset to the aircraft at distances of 5 wind turbine diameters and longer. However, the validation of the models, currently, allows for no extrapolation to larger wind turbines." (Ex. A45 p. 60). Therefore, the Liverpool study cannot be used for determining the effects of flying through larger diameter wind turbine wakes.

How does the small-size WTN250 wind turbine used in the Liverpool study compare to those proposed in the Deuel Harvest Project? The study used a much, much smaller wind turbine than those proposed for the Deuel Harvest Project. The wind turbine used in the wake encounter simulation had a rotor diameter of 30 meters, or approximately 98 feet (Ex. A45, p. 28). The GE models proposed for the Deuel Harvest Project have a rotor diameter of 127 meters or 417 feet, which is about 4.3 times larger in diameter than the those in the Liverpool study. For a general aviation airplane, like a Cessna 172, at approach airspeeds, an encounter with a WTN250 wake would only last about 0.7 seconds, whereas an encounter with the wake from a model in the Deuel Harvest Project could last over 3.1 seconds. Also, the Liverpool study only considered an encounter with a single wind turbine wake, and it did not consider the effects of flying through many parallel or coalescing wakes which could occur with the proposed Deuel Harvest Project layout near Homan Field.

Additionally, there are many other details of the Liverpool study that raise questions about its validity.

First, as is typical with research involving complex physical phenomena, a number of approximations and simplifications were made in order to allow analyses to be computationally possible. As such, the Liverpool study is not a direct indication of the real world, instantaneous physics that would affect an airplane actually flying through the wake of a wind turbine. For example, the experimental LIDAR data was time averaged to ten minutes and therefore is only appropriate for an assessment of long term average velocity deficit (how much the average windspeed has been reduced over a 10 minute period) and not appropriate for an assessment of the instantaneous turbulence (chaotic mixing of air motion) or instantaneous velocity fluctuations

in a wake that an airplane would be exposed to and affected by. To clarify, the 10-minute averaged data would not indicate if conditions existed that could cause more or less lift on one wing or the other (or both in opposite directions) that could cause a pilot to lose control of an airplane as it was traversing the wind turbine wake.

Additionally, the wake encounter simulation was very simplified, in fact, during the wake encounter simulation only "the disturbances caused by wake velocity deficits were taken into account" (Ex. A45 Abstract). The conclusion to the report clarifies that the Kocurek wake model methodology employed, and the LIDAR measurements only account for velocity deficits and not wake turbulence and wake turbulence could "cause unsteady upsets on the encountering aircraft" that were not addressed by this study (Ex. A45 p. 60).

Finally, the study described the flight simulator used as a HELIFLIGHT simulator, but absolutely no details on the accuracy or qualification of this simulator to replicate real-world physics was given (Ex. A45 p. 30). The report also doesn't state the type of aircraft being simulated or the speed at which the pilot simulations were conducted, both of which would affect the aircraft upset during the simulated encounter.

As stated by the report authors themselves and for the reasons presented above, it is not appropriate to use the results of the Liverpool wake encounter simulation study when making a determination of whether or not the Deuel Harvest Project will affect the safety of users of Homan Field airport.

Mr. Rice's testimony, largely, is not applicable to the question of whether or not the Deuel Harvest Project will affect the safety of users of Homan Field airport. Furthermore, the trustworthiness of this witness is suspect, also suspect is whether or not he maintained his oath to tell the "whole truth."

During his direct testimony he led the Commission to believe that he had analyzed the performance of a Cirrus SR20 with respect to Homan Field runway length and quoted numbers regarding taking off from turf runways. However, under cross examination he admitted that he hadn't verified those numbers himself but was relying on a conversation with a coworker. At best, this is hearsay, and at worst this was intended to mislead the Commission.

Mr. Rice spoke about Exhibit A42 the Central Region Airports Division, AIP Sponsor Guide, in an air of authority on the matter. However when questioned, he was not intimately familiar with the use or purpose of the document, did not even know what the acronym AIP stood for, and did not know that the document only pertained to airport sponsors in the Airport Improvement Program which provides grant money to "the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS)." Additionally, the cited document is not relevant to Homan Field airport, which will be a private airport, not a public-use airport in the National Plan of Integrated Airport Systems, and which has not received grant money from the FAA's Airport Improvement Program.

Mr. Rice spoke to Exhibit A44, Runway Surface Areas for Homan Field Airport, and other airspace related topics with an air of authority on the matter. However, he later described himself as being new to Capitol Airspace and a "trainee" in airspace matters. Therefore, the accuracy and validity of any of his statements regarding airspace or airport matters is questionable and those statements should not be taken as fact.

Mr. Rice also spoke at length about the waking behind wind turbines and compares that to what pilots learn about wake turbulence behind aircraft. He later states he is not an expert on wind turbines and by voir dire it was made clear his experience is limited to piloting only and he has no scientific or engineering-based knowledge or experience of fluid dynamics, aerodynamics, computational analysis, testing, or validating the numerical accuracy of simulations that would allow him to render a technical opinion on any research or data related to wind turbine wake turbulence.

Mr. Rice has not experienced flying general aviation aircraft at low altitudes and slow airspeeds (typical of approach and takeoff phases of flight) through the wakes of wind turbines. His experience flying near wind turbines is limited to flying high-powered, military aircraft at high speeds and staying more than 2,000 ft away from wind turbines (military safety rule). That is a significantly different scenario than a less experienced pilot flying a low-power, general aviation airplane or ultralight at slow speeds on approach to a runway. He stated he has never experienced that when questioned about it. Also, we don't know the rotor size of the turbines he has experience flying by, which makes a big difference with respect to wake intensity at 2,000 ft.

Overall, it would appear that Mr. Rice, and Deuel Harvest by calling him as a witness, was attempting to mislead the Commission with his testimony and statements of fact and evidence. Even so, nothing Mr. Rice said or presented would prove that the Deuel Harvest Project will not affect the safety of users of Homan Field airport nor does it supersede or negate the COPA/SMS expert panel's recommendations for wind turbine setbacks from private airstrips to maintain safety.

During Mr. Rice's testimony and cross examination, much time was spent discussing the 2,000 ft minimum separation distance the military required their pilots to maintain away from obstacles, including wind turbines. It is important to understand that Exhibit A46 doesn't address anything other than the distance of nearby turbines to the runway surface of Homan Field. However, as noted above, the expert panel's recommendations for safe setbacks were from a traffic pattern airspace and approach surfaces being applied to a private airstrip. Exhibits G31 and G32, however, depict setbacks in terms of rotor diameters from a traffic pattern airspace and approach surfaces applied to Homan Field as a private airstrip. From those exhibits, it is clear that turbines 106, 107, 108, 117, 123, and 124 do not meet the expert panel's recommendations for safety and therefore would adversely affect the safety of users of Homan Field Airport.

II. The Public Utilities Commission has the Authority and Responsibility to Ensure the Proposed Project will not Impair the Safety of Users of Homan Field Airport

The Commission has the authority to prevent the construction of structures near private airports. Per the Notice of Airport Airspace Analysis Determination the FAA provided for Homan Field airport, the FAA does not have jurisdiction to prevent the construction of structures near private airports. Instead, that is delegated to the state and local governments. "The airport environment can only be protected through such means as local zoning ordinances, acquisitions of property in fee title or aviation easements, letters of agreements, or other means. This determination in no way preempts or waives any ordinances, laws, or regulations of any government body or agency" (Ex. JH30 p. 2).

Additionally, the Commission has the responsibility to protect the safety of users of private airports that will be affected by the proposed Deuel Harvest project. The Commission must ensure projects comply with SDCL 49-41B-22 (3) and "will not substantially impair the

health, safety or welfare of the inhabitants." This requirement is separate and distinct from and in addition to from ensuring the project meets all applicable laws and rules. Put another way, even if the proposed Project meets all applicable laws and rules, the Commission must ensure the burden of proof regarding impairing safety is also met.

The Letter of Assurance that was required of Mr. John Homan as a condition on himself in order to acquire the Deuel County Special Exception Permit to construct Homan Field on his property does not 1) remove the Commission's authority to be able to protect his airport nor 2) remove the Commission's obligation to ensure the project will not substantially impair safety.

South Dakota Codified Law protects private airstrips from the creation of airport hazards.

SDCL title 50, specifically 50-10 requires that the creation of airport hazards must be prevented and by definition this applies to private airstrips. The SD DOT letter (Ex. S2) clarifies that this authority and responsibility is delegated to the respective municipality, county, or other political subdivision that has an airport layout plan. Deuel County does not have an airport layout plan (Ex. G30). Therefore, since it is a state regulation, South Dakota retains the responsibility to ensure the creation of airport hazards is prevented for private airstrips and the responsibility to comply with this regulation cannot be forced upon the FAA, a federal agency.

Airport layout plan (ALP) is a general term. Per Title 14 Code of Federal Regulations Part 152 Section 152.3 Definitions, "Airport layout plan means a plan for the layout of an airport, showing existing and proposed airport facilities." ALPs are drawings used to graphically depict current and future airport facilities and standards for ALPs can be found in Advisory Circular 150/5070-6B, Airport Master Plans. The term Airport Layout Plan typically refers to a single document or drawing covering the entire airport.

Deuel Harvest has presented Exhibit A42, "Central Region Airports Division, AIP Sponsor Guide – 500" and had Mr. Rice read this into evidence. Above, it was made clear that Mr. Rice was not qualified to assess this relevancy of this document or its contents. Upon questioning Mr. Rice, it was clear that he had no experience or detailed knowledge of the document and he considers himself a "trainee" in airspace and airport matters. When investigating the AIP sponsor guide, it is clear that the entire Airport Improvement Program does not apply to private airstrips such as Homan Field. This document does not establish universal FAA standards, rather it is limited in scope and only provides guidance specific for sponsors of

airports in the Airport Improvement Program. It would appear that Deuel Harvest is attempting to mislead the Commission with respect to the applicability of this document and its contents.

Per the FAA website https://www.faa.gov/airports/aip/overview/

> "What Is the Airport Improvement Program?
>
> The Airport Improvement Program (AIP) provides grants to public agencies — and, in some cases, to private owners and entities — for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS). See the AIP Glossary for a description of AIP-related terms.
>
> …
>
> What Airports are Eligible?
>
> AIP grants for planning, development, or noise compatibility projects are at or associated with individual public-use airports (including heliports and seaplane bases). A public-use airport is an airport open to the public that also meets the following criteria:
>
> - Publicly owned, or
> - Privately owned but designated by FAA as a reliever, or
> - Privately owned but having scheduled service and at least 2,500 annual enplanements.
>
> Further, to be eligible for a grant, an airport must be included in the NPIAS. The NPIAS, which is prepared and published every 2 years, identifies public-use airports that are important to public transportation and contribute to the needs of civil aviation, national defense, and the Postal service.
>
> Recipients of grants are referred to as "sponsors." The description of eligible grant activities is described in the authorizing legislation and relates to capital items serving to develop and improve the airport in areas of safety, capacity, and noise compatibility. In addition to these basic principles, a sponsor must be legally, financially, and otherwise able to carry out the assurances and obligations contained in the project application and grant agreement." (https://www.faa.gov/airports/aip/overview/)

CONCLUSION

Deuel Harvest has failed to meet their burden of proof. Therefore, I respectfully ask the Commission to deny their permit. As I stated during the Evidentiary Hearing, Invenergy and Deuel Harvest has been aware of the Homan Field airstrip for quite some time and I have personally raised the associated concerns of safety since the county permit hearing in January 2018. Deuel Harvest has largely ignored these concerns, and instead they have taken the position that John Homan does not have a right to the safe use of his permitted airstrip. That alone is an abuse of property rights. Additionally, Deuel Harvest has taken the stance that they have the right to contaminate the airspace above a non-participating property with wake turbulence that would affect the safety of flight operations. Deuel Harvest does not fundamentally have that right and has not secured the ability to do so. Again, that is an abuse of property rights and could be considered an illegal taking of airspace rights. Combined with the examples above of Deuel Harvest acting in a manner so as to mislead the Commission, I respectfully ask the Commission to deny the permit.

If the Commission decides to approve the permit with conditions, I respectfully ask conditions specified in the Introduction section of this brief be applied to the permit to ensure the safety of flight operations is not impaired in and around private airstrips, including Homan Field, by the project.

Imposing these conditions on the project will greatly minimize any risk that the project will substantially impair the health or safety of users of private airports in or near the project area. Also, if Deuel Harvest chose to, the wind turbines affected by these conditions could be moved to another part of the project area.

Respectfully,

Date 5/7/19

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