

**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**

* **APPLICANT'S SECOND SET OF DATA**
* **REQUESTS TO GARRETT HOMAN**
* **EL18-053**
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Below, please find Deuel Harvest Wind Energy LLC's ("Applicant") Second Set of Data Requests to Garrett Homan. Please submit responses within 10 business days or promptly contact the undersigned to discuss an alternative arrangement.

- 2-1) With respect to your request for a setback from "Homan Field," describe any efforts you have undertaken to acquire avigational rights from your neighbors to establish the requested setbacks on neighboring properties.
- 2-2) With respect to your request for a setback from "Homan Field," describe any communications, whether written or oral, with the landowner(s) who would be impacted by your requested setback.
- 2-3) Do you agree that the Special Exception Permit issued for "Homan Field" stated "that the only way to be guaranteed unrestricted access to the airspace over his neighbor's property is to secure those rights from the adjacent property owners?" If not, please explain why not.
- 2-4) Provide any and all correspondence to or from the Federal Aviation Administration ("FAA") concerning "Homan Field."

- 2-5) Describe your education, training, and experience concerning wind turbine operations.
- 2-6) With respect to your statement on page 12 of your direct testimony that “[w]ind turbines fires are not uncommon in wind farms,” provide the basis for this statement and related documentation not already provided in your direct testimony.
- 2-7) With respect to the turbine pictures in Exhibit H to your testimony:
- a) Identify the wind farm to which you are referring;
 - b) Identify the turbine model;
 - c) Identify the wind farm owner and operator;
 - d) Identify the distance at which the photographs were taken; and
 - e) Identify the basis for your conclusion that oil was “streaming out the span of the blades.”

- 2-8) You conclude your direct testimony by stating, “[t]hat concludes my testimony at this time.” Is it your intention to present testimony at the evidentiary hearing that is different or in addition to your written direct testimony? If so, what subjects do you intend to address?
- 2-9) Refer to your response to Applicant’s Data Request 1-18. Describe safety concerns, if any, you have with regard to the location of the house and other structures currently under construction by John Homan with respect to the “Homan Field”.
- 2-10) Will non-family members be permitted to land aircraft at “Homan Field”? If so, please describe the steps you have taken to ensure the safety of non-family members, and family members that may be on the property at the time of landing.
- 2-11) Describe the insurance coverages you have obtained that would apply to the use of “Homan Field” and state whether those coverages would be available to non-family members who use “Homan Field.”
- 2-12) In Exhibit A Figures 5-8 of your testimony, you state, “I have identified 26 possible alternate sites (green circles) for the 6 turbines not meeting the SMS / COPA proposed setbacks from our runway and its approach surfaces (red circles). Also, it’s evident from the maps themselves that there are more possible alternate sites.” Please provide the siting criteria and considerations used for these locations. Do these locations meet all required setbacks?

With respect to your witness, Kevin Elwood:

- 2-13) Identify all other proceedings, including court, administrative, and legislative, in which Mr. Elwood has provided oral and/or written testimony.
- 2-14) Describe Mr. Elwood's educational and professional background.
- 2-15) Describe Mr. Elwood's education, training, and experience concerning federal aviation regulations in the United States.
- 2-16) Describe Mr. Elwood's education, training, and experience concerning the State of South Dakota's aviation regulations.
- 2-17) Identify all information provided to Mr. Elwood for the preparation of his testimony, and describe and/or provide such information.
- 2-18) Provide the "evidence and expert testimony that has been accepted by the Courts in Canada" referenced on page 3 of Mr. Elwood's direct testimony.
- 2-19) Is Mr. Elwood providing expert testimony in this proceeding?

2-20) Was Mr. Elwood qualified as an expert in the Canadian proceeding?

2-21) What do you mean by “Homan Aerodrome”? Where is it located?

Dated this 27th day of March 2019.

By /s/ Lisa Agrimonti

Mollie M. Smith

Lisa M. Agrimonti

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* **APPLICANT'S THIRD SET OF DATA**
* **REQUESTS TO GARRETT HOMAN**
* **EL18-053**
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Below, please find Deuel Harvest Wind Energy LLC's ("Applicant") Third Set of Data Requests to Garrett Homan. Please submit responses within 10 business days or promptly contact the undersigned to discuss an alternative arrangement.

3-1) In your rebuttal testimony, you state that you have identified 20 other turbine locations for the six you want moved.

(a) Have you conducted environmental survey, sound modeling, or shadow flicker modeling for these locations?

(b) Describe any communications you have had with the landowners of the parcels: (i) from which you propose to move turbines of their property; and (ii) to which you propose to move turbines.

3-2) Identify your training and education with respect to airspace regulation in Canada.

Dated this 4th day of April, 2019.

By /s/ Lisa Agrimonti

Mollie M. Smith

Lisa M. Agrimonti

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**GARRETT HOMAN’S RESPONSE TO
APPLICANT’S SECOND AND THIRD
SETS OF DATA REQUESTS**

EL18-053

Below, please find Garrett Homan’s response to Deuel Harvest Wind Energy LLC’s (“Applicant”) Second Set of Data Requests to Garrett Homan and Deuel Harvest Wind Energy LLC’s (“Applicant”) Third Set of Data Requests to Garrett Homan. The original request is restated and followed by the response to that request.

2-1) With respect to your request for a setback from “Homan Field,” describe any efforts you have undertaken to acquire avigational rights from your neighbors to establish the requested setbacks on neighboring properties.

The question is not clear. I do not have any neighbors in the vicinity of Homan Field Airport. I have not personally undertaken any formal efforts to acquire the airspace rights of any landowners around Homan Field Airport. The 10x rotor diameter setbacks I’ve been discussing/requesting for the safe use of Homan Field are NOT intended to be used for flight (avigational) in that setback distance (that wouldn’t be safe), but to provide a safe distance from the airport (which in South Dakota is defined as “any area of land or water used, or intended to be used, for landing and take-off of aircraft, and any appurtenant area, structure, facility, or right of way to facilitate that use. The term includes any military airport, private airport, public airport, and temporary airport;” SDCL 50-1-1). Wind turbines closer than that setback distance will negatively affect the safety of the airport, the airspace over the airport runway, the approach surfaces to the runway (which are areas germane to the airport and required for landing of aircraft), or any airspace over the property. Furthermore, Deuel Harvest has not attempted to acquire any rights to use, contaminate, or otherwise preclude the safe use of airspace germane to Homan Field Airport or airspace over the property Homan Field is on.

2-2) With respect to your request for a setback from “Homan Field,” describe any communications, whether written or oral, with the landowner(s) who would be impacted by your requested setback.

See response to 2-1).

2-3) Do you agree that the Special Exception Permit issued for “Homan Field” stated “that the only way to be guaranteed unrestricted access to the airspace over his neighbor’s property is to secure those rights from the adjacent property owners?” If not, please explain why not.

John Homan’s Rebuttal Testimony includes a copy of the Letter of Assurances, where a Condition was placed on John Homan by way of the SEP that states “Applicant hereby acknowledges that the only way to be guaranteed unrestricted access to the airspace over the neighbor’s property is to secure those rights from the adjacent property owners. By signing this letter of assurance, Applicant does not waive any legal rights to which he is entitled. That the applicant communicates with their adjacent property owners.” Upon reading the Letter of Assurances, it is not clear to me who the neighbor is in the phrase “the neighbor’s property.” It is clear to me that the “Applicant does not waive any legal rights to which he is entitled” still applies. And I don’t believe the last sentence is actually a complete sentence, so I can’t speak to that.

2-4) Provide any and all correspondence to or from the Federal Aviation Administration (“FAA”) concerning “Homan Field.”

This question is repetitious to 1-18) e) (previously answered).

2-5) Describe your education, training, and experience concerning wind turbine operations.

I do not claim to have any formal or professional education, training, or experience specific to wind turbine operations. What I have learned, I have learned from educating myself (GE manuals, research papers, etc. which I have submitted as evidence). However, in college I did take an Environmental Studies elective where we learned a bit about the pros and cons of large-scale wind energy as a grid power source. Some of those cons include the inefficiencies of generating and transferring power from large scale wind turbines due to intermittence of wind as a source, intermittence of power being supplied to the grid (variable, too much, too little), inability to store wind power for use when the grid really needs it, losses associated with long distance power transmission lines, increased dependence on fossil fuel/nuclear infrastructure required to support wind power when it’s not producing, and the

costs associated with building, maintaining, and decommissioning large wind farms with relatively short life cycles compared to other power sources.

2-6) With respect to your statement on page 12 of your direct testimony that “[w]ind turbines fires are not uncommon in wind farms,” provide the basis for this statement and related documentation not already provided in your direct testimony.

A simple Google search provides hundreds of examples of burning wind turbines in the recent past. Additionally, just since I made my direct testimony and provided previous evidence, there has been another news worthy turbine fire, this one in Huron County, Michigan. As reported by a number of sources (one of them: <https://www.mlive.com/news/saginaw-bay-city/2019/04/wind-turbine-catches-fire-in-huron-county.html>) a wind turbine caught fire on Berne Road near Elkton in Oliver Township, on April 1st, according to a statement by Huron County Sheriff Kelly Hanson. Something burning fell to the ground which can be seen in the numerous pictures and videos captured. Fire fighters weren’t able to do anything to combat the fire other than secure the area and keep people away. Quoting from the article - “There really are no firefighting efforts that can take place, so we could only secure the area and keep it safe,” Hanson said. In my opinion, it is just lucky that this didn’t occur during a dry harvest time as there could have been significant damage from the piece that fell to the ground. In addition to the Uadiale report I provided previously that states about 9 out of 10 turbine fires are not reported publicly, the April 1st fire in Michigan would support my opinion that wind turbine fires are not uncommon.

2-7) With respect to the turbine pictures in Exhibit H to your testimony:

a) Identify the wind farm to which you are referring;

It is around the intersection of 410th St. and Killdeer Ave. near Kensett, IA. I do not know the name of the wind farm as we were just driving through the area.

b) Identify the turbine model;

The best picture I have of a nacelle that would show the turbine model name is not possible to read, without being more familiar with turbine models, due to distance and the nacelle being covered in oil.



- c) Identify the wind farm owner and operator;

I do not have that information.

- d) Identify the distance at which the photographs were taken; and

The photos were taken at a variety of distances. All photos were taken from the road. Some were so close they sounded like jet engines and I could easily feel the pulses of the blades passing once I stepped out of the truck. I do not have the exact distances.

- e) Identify the basis for your conclusion that oil was “streaming out the span of the blades.”

Oil is clearly visible streaming down the blades while they spin in the figures I previously submitted. Here it is again for clarity. It is important to note that this was not an isolated incident, many turbines had visible oil streaks and markings signifying a considerable amount of oil streaming out of them. Since they were still operating, I would assume this amount of oil leaking into the environment is a “normal” operating condition for wind turbines.



2-8) You conclude your direct testimony by stating, “[t]hat concludes my testimony at this time.” Is it your intention to present testimony at the evidentiary hearing that is different or in addition to your written direct testimony? If so, what subjects do you intend to address?

I intend to give testimony on the topics I’ve already given pre-filed and rebuttal testimony on.

2-9) Refer to your response to Applicant’s Data Request 1-18. Describe safety concerns, if any, you have with regard to the location of the house and other structures currently under construction by John Homan with respect to the “Homan Field”.

This question has absolutely nothing to do with the Deuel Harvest Wind Project application to the SD PUC. The other buildings on the property don’t present hazards as obstacles since they are low enough to the ground and far enough away from the runway, and as fixed structures they don’t create hazardous wake turbulence, wind shear, or vortices like the wind turbines to the west will.

2-10) Will non-family members be permitted to land aircraft at “Homan Field”? If so, please describe the steps you have taken to ensure the safety of non-family members, and family members that may be on the property at the time of landing.

This question has absolutely nothing to do with the Deuel Harvest Wind Project application to the SD PUC. As is common with private airstrips, operators will need to receive permission in advance to use the airstrip. This is both for the safety of the operator as well as for the knowledge and safety of personnel on the ground. Most airport directory listings for private airstrips include under airport use something similar to “Private use. Permission required prior to landing.” And contact information for the airport manager is included. This is pretty basic stuff for operating into and out of private airstrips.

2-11) Describe the insurance coverages you have obtained that would apply to the use of “Homan Field” and state whether those coverages would be available to non-family members who use “Homan Field.”

I object to this question as it has absolutely nothing to do with the Deuel Harvest Wind Project application to the SD PUC.

2-12) In Exhibit A Figures 5-8 of your testimony, you state, “I have identified 26 possible alternate sites (green circles) for the 6 turbines not meeting the SMS / COPA proposed setbacks from our runway and its approach surfaces (red circles). Also, it’s evident from the maps themselves that there are more possible alternate sites.” Please provide the siting criteria and considerations used for these locations. Do these locations meet all required setbacks?

When reviewing the project layouts for potential alternate sites, I was trying to find sites that would be attractive to the developer in that they were located on existing collection lines, close to public roads or existing access roads so additional road construction would be minimized, located away from any residences marked on the layout maps, and situated near other turbine sites so that set back considerations could be met. However, there are miles and miles of project area on the layout maps that do not have turbines located on them where other ones could be placed, particularly on pages 1-3 of the Figure A-4 Project Layout.

With respect to your witness, Kevin Elwood:

2-13) Identify all other proceedings, including court, administrative, and legislative, in which Mr. Elwood has provided oral and/or written testimony.

This question as it is overly broad and not limited in scope. With respect to the testimony Mr. Elwood has provided, he has provided testimony during the Environmental Tribunal Review Case 16-036.

2-14) Describe Mr. Elwood's educational and professional background.

This is repetitious as this was provided by Mr. Elwood in his pre-filed testimony. Mr. Elwood is an ATPL-rated professional pilot with over 5800 hours and 30 years of experience and that has flown all over Canada, the US, and Europe. Mr. Elwood owns and operates a private airport called Clearview Aerodrome (CLV2) in Stayner, Ontario. He has been an elected Municipal Councilor from 2014-2018, and currently serves as the Southern Ontario Director for the Canadian Owners and Pilots Association, whose mission it is "To Advance, Promote, and Preserve the Canadian Freedom to Fly." Mr. Elwood has experience flying a wide range of aircraft in a wide variety of locations – from ultra-light aircraft, to small single engine piston aircraft, to larger turbo prop aircraft, and finally to Gulfstream business jets.

Kevin Elwood – Additionally, I do have Post-Secondary College education with a diploma in Forestry.

2-15) Describe Mr. Elwood's education, training, and experience concerning federal aviation regulations in the United States.

Kevin Elwood - None other than piloting aircraft within US airspace. I do an annual on-line re-currency course on Canadian US airspace differences related to ATC clearances and approach procedures. I see this question as irrelevant to testimony as I am speaking to the safety risks associated with locating of physical obstacles in close proximity to an aerodrome. Not regulations in doing so.

2-16) Describe Mr. Elwood's education, training, and experience concerning the State of South Dakota's aviation regulations.

Kevin Elwood – Same as above.

2-17) Identify all information provided to Mr. Elwood for the preparation of his testimony, and describe and/or provide such information.

Kevin Elwood - I referenced the documents posted on the Duel Harvest Project North Wind website and South Dakota Public Utilities Commission website <https://puc.sd.gov/Dockets/Electric/2018/EL18-053.aspx> and comments submitted by Garrett Homan on January 15, 2019.

Garrett Homan – I provided Kevin Elwood with my public comments submitted to the docket for EL18-053 on January 15, 2019, which provides info on Homan Field airport layout, the traffic pattern airspace, spacing from closest wind turbines, and project layout maps.

2-18) Provide the “evidence and expert testimony that has been accepted by the Courts in Canada” referenced on page 3 of Mr. Elwood’s direct testimony.

Garrett Homan – These were already provided as Appendices to Mr. Elwoods’ pre-filed testimony.

Kevin Elwood - All the appendixes I refer to in my comments were accepted by the tribunal under the conditions required for expert testimony.

2-19) Is Mr. Elwood providing expert testimony in this proceeding?

Yes, in accordance with SDCL 19-19-702, Mr. Elwood is qualified as an expert. He has knowledge, skill, experience, and technical and specialized knowledge in the areas of aviation safety, especially the unique areas of aviation safety near wind farms.

2-20) Was Mr. Elwood qualified as an expert in the Canadian proceeding?

Kevin Elwood - No. I was an Appellant in my hearing and therefor my counsel did not want me to be an expert witness but to submit testimony.

2-21) What do you mean by “Homan Aerodrome”? Where is it located?

“Aerodrome” is the parlance used in Canada for private airports (like airstrips is sometimes used for private airports in the US). The “aerodrome” referenced is Homan Field Airport.

Responses to Applicant’s Third Set of Data Requests:

3-1) In your rebuttal testimony, you state that you have identified 20 other turbine locations for the six you want moved.

(a) Have you conducted environmental survey, sound modeling, or shadow flicker modeling for these locations?

(b) Describe any communications you have had with the landowners of the parcels:

(i) from which you propose to move turbines of their property; and

(ii) to which you propose to move turbines.

For the selection of alternate sites I've identified for the 6 turbines that must be moved/removed to ensure the safety of users of Homan Field, see my response to 2-12). Since I am not the project developer, I have not communicated with any landowners regarding changing the project layout since that is not my responsibility. Furthermore, I do not believe the individual landowners have any ability to dictate the project layout details to Deuel Harvest Wind.

3-2) Identify your training and education with respect to airspace regulation in Canada.

I do not claim to have any formal training or education with respect to airspace regulation in Canada. However, since only a few additional requirements exist for a US pilot to fly and land in Canada (per AOPA, it's largely radio licensing and requirements, customs and passport requirements, ICAO flight plan format, and some fees) the airspace and aviation operations in Canada must be largely similar to those in the US.

Date

4/10/19



Garrett Homan

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