

BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET EL18-053

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

DIRECT TESTIMONY OF JON THURBER
ON BEHALF OF THE COMMISSION STAFF
MARCH 14, 2019



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I. **INTRODUCTION AND QUALIFICATIONS**

Q. Please state your name and business address.

A. Jon Thurber, Public Utilities Commission, State Capitol Building, 500 East Capitol Avenue, Pierre, South Dakota, 57501.

Q. By whom are you employed and in what capacity?

A. I am a utility analyst for the South Dakota Public Utilities Commission ("Commission"). I am responsible for analyzing and presenting recommendations on utility dockets filed with the Commission.

Q. Please describe your educational and business background.

A. I graduated summa cum laude from the University of Wisconsin – Stevens Point in December of 2006, with a Bachelors of Science Degree in Managerial Accounting, Computer Information Systems, Business Administration, and Mathematics. My regulated utility work experience began in 2008 as a utility analyst for the Commission. At the Commission, my responsibilities included analyzing and testifying on ratemaking matters arising in rate proceedings involving electric and natural gas utilities. In 2013, I joined Black Hills Corporation as Manager of Rates. During my time at Black Hills Corporation, I held various regulatory management roles and was responsible for the oversight of electric and natural gas filings in Wyoming, Montana, and South Dakota. In July of 2016, I returned to the Commission as a utility analyst. In addition to cost of service dockets, I work on transmission siting, energy conversion facility siting, wind energy facility siting, and Southwest Power Pool transmission cost allocation issues.

In my ten years of regulatory experience, I have either reviewed or prepared over 175 regulatory filings. These filings include five wind energy facility and three transmission facility siting dockets. I have provided written and oral testimony on the following topics: the appropriate test year, rate base, revenues, expenses, taxes, cost allocation, rate design, power cost adjustments, capital investment trackers, PURPA standards, avoided costs, electric generation resource decisions, and wind energy facility siting dockets.

1 **Q. Are you familiar with Deuel Harvest Wind Energy LLC's ("Deuel Harvest" or**
2 **"Company" or "Applicant") application for a permit of a wind energy facility and a**
3 **345 kV transmission line, Docket EL18-053?**

4 A. Yes. I have reviewed the Company's prefiled testimony, appendixes, figures, and
5 responses to data requests produced by all parties as it pertains to the issues that I am
6 addressing.

7
8 **II. PURPOSE OF TESTIMONY**
9

10 **Q. What is the purpose of your direct testimony?**

11 A. The purpose of my direct testimony is to discuss the review performed by Commission
12 Staff of the Application, identify any issues or concerns with the representations made in
13 the Application or by the Applicant, and provide Commission Staff's recommendation on
14 whether the permit should be granted.

15
16 **III. REVIEW OF THE APPLICATION**
17

18 **Q. Please explain the review process performed by Commission Staff in Docket**
19 **EL18-053.**

20 A. After receiving the Application, Staff completed a review of the contents as it relates to
21 the Energy Facility Siting statutes, SDCL 49-41B, and Energy Facility Siting Rules,
22 ARSD 20:10:22. Staff then identified information required by statute or rule that was
23 either missing from the Application or unclear within the Application and requested Deuel
24 Harvest to provide or clarify that information. Once interested individuals were granted
25 party status, Commission Staff also issued discovery to the intervenors in order to
26 understand what concerns they had with the project. Please see Exhibit_JT-1 for Deuel
27 Harvest's responses to Commission Staff discovery, and Exhibit_JT-2 for the
28 Intervenors' responses to Commission Staff discovery.

29
30 In addition, Commission Staff subpoenaed experts from State Agencies to assist
31 Commission Staff with our review. Tom Kirschenmann, Deputy Director of the Wildlife
32 Division and Chief of the Terrestrial Resources Section at the Game, Fish, and Parks,
33 reviewed the potential impacts to wildlife and associated habitats. Paige Olson, Review
34 and Compliance Coordinator at the State Historic Preservation Office (SHPO), reviewed

1 the project to ensure historic properties are taken into consideration. Further,
2 Commission Staff hired David Hessler, Vice President at Hessler Associates, Inc., to
3 review the information on the noise emitted from the project.
4

5 Finally, Commission Staff assisted intervenors and affected landowners by providing
6 responses to numerous questions on the wind energy facility, the siting process
7 established by South Dakota law, and the opportunities available for these individuals to
8 be heard by the Commission. If the landowners had specific concerns with the wind
9 energy facility, Commission Staff often recommended that those individuals file
10 comments in the docket for the Commission's review. Where appropriate, Staff also
11 included some of the landowners' questions or concerns in Commission Staff's data
12 requests sent to Deuel Harvest to have them address the issue.
13

14 **Q. What is the purpose of Commission Staff's expert witnesses in this proceeding?**

15 A. Commission Staff sought experts within their respective fields to assess the merits and
16 deficiencies of the Application. Commission Staff requested that the experts address
17 whether the information submitted by Deuel Harvest aligns with industry best practices,
18 and if they agreed with the conclusions Deuel Harvest made regarding the potential
19 impacts from the project.
20

21 **Q. Did Commission Staff request assistance from the South Dakota Department of**
22 **Health in review of the Application?**

23 A. Yes. SDCL 49-41B-22(3) requires the Applicant establish that the Deuel Harvest North
24 Wind Farm will not substantially impair the health of the inhabitants. At the Public Input
25 Hearing and through written comments to the Commission, inhabitants have raised
26 concerns regarding health impacts from wind facilities. Commission Staff believes the
27 Department of Health is the appropriate State agency to assess the potential health
28 impacts from the facility.
29

30 **Q. Has the Department of Health commented on health impacts associated with wind**
31 **facilities in other dockets?**

32 A. Yes. For the Crocker Wind Farm (Docket EL17-028), the Department of Health provided
33 Commission Staff with a letter stating that the Department of Health has not taken a
34 formal position on the issue of wind turbines and human health. Further, they

1 referenced the Massachusetts Department of Public Health and Minnesota Department
2 of Health studies and identified those studies generally conclude that there is insufficient
3 evidence to establish significant risk to human health. I included the Department of
4 Health's letter as Exhibit_JT-3.

5
6 **Q. What is the Department of Health's position on the health impacts associated with**
7 **the Deuel Harvest North Wind Farm?**

8 A. On March 1, 2019, the Department of Health stated that it maintains the same position
9 for the Deuel Harvest North Wind Farm as previously provided for the Crocker Wind
10 Farm. Since the letter was provided for the Crocker Wind Farm, the Department of
11 Health has not become aware of any additional studies that would cause the Department
12 to re-evaluate their position.

13
14 **Q. Was Deuel Harvest's Application considered complete at the time of filing?**

15 A. At the time of the filing, the application was generally complete. However, as identified
16 above, Commission Staff requested further information, or clarification, from Deuel
17 Harvest which Commission Staff believed was necessary in order to satisfy the
18 requirements of SDCL 49-41B and ARSD 20:10:22. Deuel Harvest's responses to
19 Commission Staff's information requests received to date are attached as Exhibit_JT-1.
20 Finally, I would also note that an applicant supplementing its original application with
21 additional information as requested by Commission Staff is not unusual for siting
22 dockets.

23
24 **Q. Based on your review of the Application, responses to Commission Staff's data**
25 **requests and Deuel Harvest's testimony, do you find the Application to be**
26 **complete?**

27 A. Yes. Staff found that Deuel Harvest provided information that addressed the information
28 required by ARSD Chapter 20:10:22 and SDCL 49-41B. However, at the time of writing
29 this testimony, it is my opinion that Deuel Harvest should provide additional information
30 to more-thoroughly address certain rules, explain the project's potential impacts, and
31 clarify any discrepancies between turbine layout maps and the Application. This opinion
32 is based on Commission Staff's interpretation of the Commission's rules and the
33 testimony submitted by Commission Staff.

1 **Q. What issues and concerns does Commission Staff have with the Deuel Harvest**
2 **North Wind Farm?**

3 A. I will address the following issues on behalf of Commission Staff:

- 4
- 5 • County Permitting
- 6 • Decommissioning
- 7 • Aircraft Detection Lighting System
- 8 • Indemnity Bond for Road Damage
- 9 • Turbine Layout Changes
- 10 • Intervenor Concerns
 - 11 ○ Private Airstrip Setback – Homan Field
 - 12 ○ Ice Throw
 - 13 ○ Minimization and Avoidance Setback Inaccuracies
 - 14 ○ Setback from Non-participating Residences
- 15

16 Each Commission Staff expert witness identified issues or conditions that need to be
17 addressed by the Applicant in their respective areas of noise, cultural resources, and
18 wildlife and associated habitats.

19

20 **IV. COUNTY PERMITTING**

21

22 **Q. Did the Company receive a Special Exception Permit for the Deuel Harvest Wind**
23 **Farm from the Deuel County Board of Adjustment?**

24 A. A Special Exception Permit was issued on March 2, 2018. However, the Deuel County
25 Board of Adjustment's decision to issue the Special Exception Permit was appealed to
26 South Dakota Circuit Court.

27

28 **Q. Has Circuit Court issued a decision in the appeal, Case No. 19CIV18-19?**

29 A. Yes. The Petitioners' argued that the Board violated the Petitioners' due process rights
30 when it allowed board members with a bias or conflict of interest to vote on the Project.
31 On January 25, the Circuit Court found that Board members Dahl and DeBoer each had
32 a unacceptable risk of bias in voting on the Project after receiving funds from Deuel
33 Harvest for the Project. The Court listed the following facts regarding Board Members
34 Kevin DeBoer and Mike Dahl in its Memorandum Decision:

1
2 *“Board Members DeBoer and Dahl each had wind lease agreements with Deuel*
3 *Harvest for the Projects that were being considered by the Board. Dahl’s*
4 *agreement with Deuel Harvest was terminated by Deuel Harvest in 2016 due to*
5 *low landowner interest in this area. Dahl was paid \$3,095 by Deuel Harvest for*
6 *this easement prior to its termination. Board Member DeBoer also had*
7 *agreements with Deuel Harvest for this Project which were signed in 2016 before*
8 *he was a member of the Board of Adjustment. In 2017 DeBoer asked to be*
9 *released from the agreements with Deuel Harvest so that he may continue to*
10 *serve on the Board and participate in the proceedings. He received payments*
11 *from Deuel Harvest in the amount of \$3,060 in 2016 and another \$3,060 in 2017*
12 *prior to the termination of these agreements. There is no evidence that either*
13 *Board Member ever returned the funds to Deuel Harvest or even attempted to*
14 *return those funds.*

15
16 *The Court finds that Board member DeBoer and Dahl, by virtue of the payments*
17 *received from Deuel Harvest for this Project, held an unacceptable risk of actual*
18 *bias and should have been disqualified from voting on these Projects.”*
19

20 The Court invalidated the votes of Board Members DeBoer and Dahl, which resulted in a
21 decision by the Board by a margin of three to zero.
22

23 On February 22, 2019, the Court issued an Addendum to Memorandum Decision.
24 SDCL 11-2-59 and the Deuel County Zoning Ordinance Section 504(4) requires
25 conditional use permits to be approved by a two-thirds majority. Since Board Members
26 Dahl and DeBoer each were disqualified from voting on this project, the Project did not
27 pass the two-thirds majority required. The decision of the Board on the Project is
28 reversed and remanded for a rehearing on the application.
29

30 **Q. Does Deuel Harvest currently have a valid county permit?**

31 **A. No.**
32
33
34

1 **Q. Can a wind energy facility receive a state permit without having a county permit?**

2 A. Commission Staff would prefer that a county permit is obtained before the Commission
3 makes a determination on a state permit. However, there is no requirement to obtain a
4 county permit prior to obtaining a state permit. The Deuel Harvest North Wind Farm will
5 need to comply with all applicable laws and rules (SDCL 49-41B-22(1)), including
6 obtaining and complying with a valid Deuel County Special Exception Permit. To ensure
7 compliance, Commission Staff recommends the Commission include the following
8 condition if a permit is granted:

- 9
- 10 1. Applicant will obtain all governmental permits which reasonably may be
11 required by any township, county, state or federal agency, or any other
12 governmental unit for construction and operation activity of the Project prior to
13 engaging in the particular activity covered by that permit. Copies of any
14 permits obtained by Applicant shall be filed with the Commission.
15

16 The risk Deuel Harvest assumes when it requests a state permit without first obtaining
17 the Deuel County permit is, if Deuel Harvest can obtain the county permit, Deuel County
18 may include a condition that materially changes how the Applicant constructs, operates,
19 and maintains the Deuel Harvest North Wind Farm from what is presented in the state
20 proceeding. Any requests for material modifications to the state permit would need
21 approval from the Commission, and the filing could be in the form of a permit
22 amendment or require a new permit application. Commission Staff recommends the
23 following conditions, if a permit is granted, to ensure the Applicant constructs, operates,
24 and maintains the Deuel Harvest North Wind Farm consistent with the representations
25 made in this proceeding:

- 26
- 27 2. Applicant shall construct, operate, and maintain the Project in a manner
28 consistent with (1) descriptions in the Application, (2) Application
29 supplements, (3) responses to any data requests, (4) the Final Decision and
30 Order Granting Permit to Construct Wind Energy Facility, Attachment A-
31 Permit Conditions, (5) any applicable industry standards, (6) any permits
32 issued by a federal, state, or local agency, and (7) evidence presented by
33 Applicant at the evidentiary hearing.
34
- 35 3. Except as otherwise provided in the Permit Conditions, Applicant shall
36 comply with all mitigation measures set forth in the Application, Applicant's
37 responses to data requests, and Applicant exhibits and testimony at the
38 evidentiary hearing. Material modifications to the mitigation measures shall
39 be subject to prior approval of the Commission.
40

1 **Q. Does Commission Staff know the timeline for rehearing the Deuel County Special**
2 **Exception Permit?**

3 A. No, I do not. Commission Staff recommends the Applicant provide the status of county
4 permitting in rebuttal testimony.
5

6 **V. DECOMMISSIONING**
7

8 **Q. Did Deuel Harvest provide a decommissioning plan and cost estimate for the**
9 **Deuel Harvest North Wind Farm?**

10 A. Yes. Mr. Michael Svedeman provided a summary of decommissioning on Pages 21 –
11 22 of his pre-filed testimony, and the decommissioning plan and cost estimate was
12 included in Appendix U of the Application.
13

14 **Q. Did Commission Staff have any concerns regarding the decommissioning cost**
15 **estimate?**

16 A. Mr. Svedeman stated the net decommissioning cost is estimated to be \$3,256,300 (in
17 2018 U.S. Dollars) assuming salvage and no resale of Project components. This
18 estimate was based on the Project consisting of up to 112 turbines. The
19 decommissioning cost per wind turbine with salvage and no resale is estimated to be
20 \$29,074. Based on recently filed decommissioning cost estimates for other wind energy
21 facilities before the Commission, the cost estimate per turbine was lower than
22 anticipated. In December 2017, Mr. Copulus stated a conservative decommissioning
23 cost estimate in current dollars is between \$100,000 to \$150,000 per turbine after
24 salvage, including associated facilities for the Crocker Wind Farm. In October 2018, the
25 Dakota Range III wind farm estimated the net decommissioning cost per wind turbine of
26 \$101,420 (in 2018 U.S. Dollars), assuming salvage value and no resale of components.
27

28 **Q. Did Deuel Harvest work with Commission Staff to address your concerns**
29 **regarding the appropriate amount of financial assurance for decommissioning?**

30 A. Yes. Deuel Harvest proposed using similar decommissioning conditions as what the
31 Commission approved for Dakota Range I, II, and III. Please see Exhibit_JT-4 for the
32 red-line comparison of the condition modifications from Dakota Range III, with the
33 addition of the decommissioning condition to account for a potential ownership option of

1 a rate regulated utility in South Dakota from Dakota Range I and II. These conditions
2 addressed Commission Staff's concerns.

3
4 **Q. Are there any specific modifications to the decommissioning conditions in**
5 **Exhibit_JP-4 you would like to highlight?**

6 A. Yes, only one. In subpart b) that describes the escrow agreement, the parties
7 specifically identified the possibility that the Commission may determine that funds in the
8 escrow are sufficient to cover the costs of decommissioning and no additional funding is
9 required when Deuel Harvest files its next decommissioning cost estimate with the
10 Commission. Commission Staff believes the language used in past conditions already
11 provided for that possibility and we did not object to specifically identifying that option.
12

13 **VI. AIRCRAFT DETECTION LIGHTING SYSTEM (ADLS)**
14

15 **Q. Has Deuel Harvest committed to employ an ADLS?**

16 A. Yes. On Page 3-2 of the Application, Deuel Harvest stated "wind turbines will be
17 illuminated as required by Federal Aviation Administration (FAA) regulations and will
18 also employ an Aircraft Detection Lighting System (ADLS), subject to availability and
19 FAA approval."
20

21 **Q. Did any Intervenors request this technology be installed?**

22 A. Yes. In response to Staff Data Request 1-3, Mr. Jon Henslin requested that the
23 Applicant provide ADLS as mitigation.
24

25 **Q. Do you have any concerns with the ADLS commitment made by Deuel Harvest?**

26 A. I would prefer that the ADLS condition exclude the "subject to availability" condition, and
27 the Commission simply adopt the following condition:
28

29 4. Applicant shall utilize an Aircraft Detection Lighting System if approved by the
30 Federal Aviation Administration.
31

32 If ADLS availability issues occur due to industry wide demand, the Applicant would have
33 the ability to request the Commission modify the mitigation requirement if the
34 Commission adopts condition (3) previously mentioned in the County Permitting section

1 of my testimony. Under this approach, Deuel Harvest would need prior approval from
2 the Commission to forego ADLS deployment and be required to explain any availability
3 issues. Further, should ADLS availability be an issue at the time the project starts
4 commercial operation, the Applicant could develop a plan to install the ADLS system at a
5 later date.

6
7 In Docket EL18-046, Dakota Range III had similar concerns regarding ADLS availability,
8 and the approved settlement agreement adopted the same approach recommended by
9 Commission Staff in this proceeding.

10
11 **VII. INDEMNITY BOND FOR ROAD DAMAGE**

12
13 **Q. Did Deuel Harvest provide a proposal for an indemnity bond pursuant to SDCL 49-
14 41B-38 in their Application or Testimony?**

15 A. No. Per statute, Deuel Harvest is required to furnish an indemnity bond for damage to
16 roads and bridges as a result of constructing a transmission facility. This bond benefits
17 townships, counties, or other governmental entities that are crossed by a transmission
18 facility to ensure that damage beyond normal wear to public roads, highways, bridges, or
19 other related facilities are adequately compensated.

20
21 **Q. Does 49-41B-38 provide a method to calculate an amount of the indemnity bond?**

22 A. No. The statute states the bond should be furnished in "a reasonable amount."
23

24 **Q. Did Deuel Harvest propose an amount for an indemnity bond at Commission
25 Staff's request?**

26 A. Yes. The Applicant proposed furnishing an indemnity bond in the amount of \$100,000 to
27 comply with the requirements of SDCL 49-41B-38.

28
29 **Q. Does Commission Staff agree with this proposal for the indemnity bond?**

30 A. Yes, Commission Staff believes this a reasonable amount for an indemnity bond based
31 on the specifics of the proposed transmission facility. Since the proposed transmission
32 facility is approximately 150 feet, crosses one section line, and only requires two dead
33 end structures, the amount of road travel and hauling required to complete construction
34 or survey work is limited.

VIII. TURBINE LAYOUT CHANGES

Q. Has Deuel Harvest notified the Commission of any potential changes to the turbine layout proposed in the Application?

A. Yes. In the supplemental testimony of Mr. Michael Svedeman, two building permits were issued for houses after the Project obtained its Special Exception Permit from Deuel Count. These homes would be located within Deuel County's required 1,500-foot setback for participating residences from the nearest turbine. Deuel Harvest is currently assessing whether any turbines need to be relocated or removed from the project.

Due to the concerns raised at the public input hearing regarding a potential eagle nest near Lake Alice, Deuel Harvest surveyed the area for a potential nest. According to the supplemental testimony of Ms. Andrea Giampoli, the biologists for Deuel Harvest confirmed the nest was an eagle nest. Deuel Harvest will voluntarily apply a 2,625 feet setback from the nest, and this will cause Deuel Harvest to relocate the two turbines that had been sited within 800 meters of the nest. Ms. Giampoli stated Deuel Harvest will seek any required approvals for turbine relocations from the Commission.

Q. Has Deuel Harvest updated the Commission on turbine relocations or removals associated with the new building permits or eagle nest setback?

A. No. The information regarding possible turbine relocations and removals was provided to the Commission on February 14 in Deuel Harvest's supplemental testimony, and the Company has not requested any layout changes as of the submission of this testimony.

Q. Please explain your concerns regarding the turbine relocations or removals.

A. Commission Staff prefers that the information presented in the Application be as complete as possible. Although the Application is considered a continuing application up to and including the date on which the permit is issued or denied pursuant to ARSD 20:10:22:04(5), adequate time must be provided to review the Application and raise concerns. Commission Staff requests that Deuel Harvest provide an update on the layout changes in their rebuttal testimony, if not sooner.

IX. INTERVENOR CONCERNS

Q. Did you receive responses to discovery from all individuals granted party status?

A. I received responses from five of the six individuals when I drafted this testimony. Mr. Will Stone did not respond to Commission Staff's discovery request, but he did provide Commission Staff with a copy of his responses to the Applicant's first set of discovery.

Q. Please summarize some of the Intervenor concerns raised.

A. The following is a summary of concerns identified or mitigation measures requested by the Intervenor through their responses to discovery requests. The list does not include every concern or mitigation measure identified in response to discovery, and the Intervenor have stated that they may raise additional concerns through their testimony or at the hearing.

- Setback from residences, property lines, and public right-of-ways;
- Setback from a private airstip, Homan Field;
- Risks associated with ice throw;
- Setback from eagle nests;
- Future development of non-participant land;
- Implementation of property value guarantees;
- Deployment of ADLS;
- Impact on wildlife and wildlife habitat;
- Risks associated with fire from wind turbines;
- Health impacts associated with wind turbines;
- Geological, hydrological, and aquifer studies to assess the impact to the environment;
- Impacts anticipated to the northern redbelly dace;
- Impacts anticipated to the northern long-eared bat;
- Shadow flicker;
- Noise;
- Economic impact to a pheasant preserve business;
- Gross income guarantee for a negatively impacted business;
- Impact to visual landscape;

- Loss of enjoyment of property; and
- Invenenergy's business practices.

Some of the concerns and mitigation measures proposed were not fully explained or supported. Commission Staff served a second set of data requests on each Intervenor to increase our understanding of their concerns. Please see Exhibit_JT-5 for the additional discovery requests sent to the Intervenor. Commission Staff did not receive responses to these requests prior to drafting testimony.

Q. Did any of the Intervenor or commenters at the public input meetings request that the Commission relocate turbines?

A. Yes. SDCL 49-41B-36 specifically states that the Commission is not delegated the authority to designate or mandate the location of a wind energy facility. The Applicant proposes the location, and the Commission either approves or denies the location proposed based on evidence in the record. The Commission does not have the authority relocate any turbines to a specific location.

Q. Did Commission Staff consider calling other state agencies as witnesses based on the concerns of the Intervenor?

A. Commission Staff considered calling the South Dakota Department of Environment and Natural Resources (DENR) to review the geological and hydrological impacts, including impacts to aquifers. Commission Staff asked additional discovery of the Intervenor to get a better understanding of the studies requested, specific concerns, and potential impacts to evaluate. Depending on the content and timing of the Intervenor responses to Commission Staff's discovery requests, Commission Staff may contact the DENR to evaluate the concerns of the Intervenor.

Q. Did Commission Staff consider hiring a witness to review the potential value impacts to property near wind turbines?

A. Commission Staff considered hiring David Lawrence, real property appraiser with DAL Appraisal and Land Services, to review the information on potential impacts a wind energy facility or wind turbine can have on real property values in South Dakota. According to past testimony submitted by Mr. Lawrence on behalf of Commission Staff, "any conclusions presented about the potential impacts of wind projects in South Dakota

1 need to be supported by credible market evidence from South Dakota.” Commission
2 Staff believes no new market evidence from South Dakota has been provided to review,
3 and as a result, the opinions and recommendations from Mr. Lawrence will likely not
4 have changed from Dockets EL17-055, EL18-003, and EL18-026.

5
6 Commission Staff sent discovery to the Intervenor to request market sales near a wind
7 turbine to support their assumption. Depending on the content and timing of the
8 Intervenor responses, Commission Staff may contact Mr. Lawrence regarding his
9 availability to review any new evidence submitted.

10 .
11 **Q. Intervenor also requested a property value guarantee as a mitigation measure to**
12 **address a potential decrease in property value. Has Mr. Lawrence provided the**
13 **Commission his position on a property value guarantee in past dockets?**

14 A. Yes. In Docket EL18-026, Mr. Lawrence provided the following written testimony
15 regarding a property value guarantee:

16
17 **“Q: In response to Staff Data Request 1-4, Ms. Karen Jenkins requested a**
18 **permit condition of a “guarantee of property value to be funded and**
19 **developed by the Applicant, subject to approval of the property owner to**
20 **protect residents in the footprint and buffer zone from financial loss should**
21 **the residence become unlivable and/or unmarketable.” Do you have any**
22 **comments on this condition request?**

23
24 A: While I understand the goal of a property value guarantee, I have concerns
25 about how to properly manage the valuation process for consistent results before
26 the project and after the installation of the wind project. Many variables can
27 influence the criteria to establish value or to reestablish value at a later date. For
28 example, who is qualified to provide a value opinion? What will be the scope of
29 work for establishing the market value before, and the market value after the
30 installation of the wind project? How will changes in a property’s condition such
31 as a well-maintained property versus a poorly maintained property be measured
32 for value differences in contrast to the operational date of the wind project? I
33 would be more supportive of the idea of a property value guarantee if there were
34 a way to consistently define and measure the valuation process for a property’s
35 market value in proximity to a wind project.”

36
37 Mr. Lawrence also provided similar oral testimony during questioning regarding a
38 property value guarantee associated with the Crocker Wind Farm, Docket EL17-055.

39
40 Commission Staff sent discovery to the Intervenor to determine if there are any
41 examples of how a property value guarantee has been implemented for any other wind

energy facility in other states. Depending on the content and timing of the Intervenor responses, Commission Staff may contact Mr. Lawrence regarding his availability to review any proposals for a property value guarantee.

Q. What specific concerns raised by the intervenors will you address further?

A. I will address the Intervenor concerns regarding the setback from a private airstrip (Homan Field), risks associated with ice throw, minimization and avoidance setback inaccuracies, and the setback from non-participating residences.

i. Setback from Private Airstrip - Homan Field

Q. Please summarize the concern regarding Homan Field, a private airstrip on John Homan's property.

A. According to the response of Garrett Homan to Commission Staff data request 1-2, he stated, "The project as proposed does not comply with 49-41B-22 (3) since proposed turbines to the northwest, west, and southwest of our family's airstrip (western half of section 32 in Glenwood township) pose a substantial threat of serious injury or death to users of the Airstrip."

Q. Did Garrett Homan provide a mitigation condition to address his safety concern for Homan Field?

A. Yes. In response Commission Staff data request 1-3, Garrett Homan provided the following mitigation measure with supporting explanation:

"I request the Commission order terms of the project to include:

- a) no turbine sites under a one-sided (biased to the East) traffic pattern airspace sized for category B aircraft, and
- b) no turbine sites within 10 rotor diameters (4,170 ft or .8 statute miles) of the runway and imaginary approach surfaces for the runway.

Regarding a), the dimensions of the traffic pattern airspace for our airstrip, defined per standards provided in FAA order JO 7400.2L, are 1.5 nautical miles (1.73 statute miles) from the north end, south end, and east side of the runway and .25 nautical miles (.29 statute miles) from the west side of the runway.

Regarding b), the imaginary approach surfaces for our runway, defined per the

standards provided in 14 CFR 77.19 for utility runways with visual approaches, extend 5,000 ft from each end of the runway and expand to a width of 1,250 ft centered about the extended centerline. The 10x rotor diameter distance is applied from the outer boundaries of this shape comprised of an approach surface to the south, the runway, and an approach surface to the north This could be simplified into a rectangular shape extending 1 mile west, 1.75 miles north, 1.75 miles east, and 1.75 miles south of the extents of the airstrip runway surface."

Commission Staff will refer to this setback request using the simpler terms of a 1 mile setback to the west of the airstrip, and 1.75 miles to the north, east, and south of the airstrip.

Q. Homan Field is located on the land owned by John Homan, father of Garrett Homan. Does John Homan share Garrett Homan's safety concern for the private airstrip?

A. Yes, John Homan has concerns regarding the safe usage of Homan Field. However, John Homan recommended a different mitigation condition than Garrett Homan. In response to Commission Staff data request 1-3, John Homan recommended the following condition to mitigate his safety concern: "A one mile set back to the west of Homan Field runway, and a two mile set back to the north, south, and east to accommodate the flight path for safe operations." Garrett included more explanation and support for this recommendation, so Commission Staff will focus our review and analysis on Garrett's proposed condition. The Homan's can clarify their condition request at the hearing, if needed.

Q. How many turbine locations would need to be removed from the layout if the Commission adopted Garrett Homan's recommended setback from Homan Field?

A. According to Garrett Homan's response to Commission Staff data request 1-3, six turbine locations (106, 107, 108, 117, 123, and 124) would need to be removed to provide a safe setback from Homan Field.

Q. How did Garrett Homan determine what was an appropriate setback for Homan Field?

A. According to Garrett Homan's response to Commission Staff data request 1-3, it appears as though his setback calculations were based off an FAA order (JO 7400.2L) and Codified Federal Regulations (14 CFR 79).

1 **Q. Based on your understanding, are those sources applicable to a private use**
2 **airport?**

3 A. No. Based on consultation with the South Dakota Department of Transportation
4 Aeronautics Office ("DOT Aeronautics Office"), it is my understanding the referenced
5 order and regulations are applicable to public-use airports, not private-use airports. In
6 addition, the DOT Aeronautics Office does not regulate setbacks of private airstrips.
7

8 **Q. Please provide some background information regarding the potential use of**
9 **Homan Field.**

10 A. Garrett Homan is the only immediate Homan family member identified as a pilot through
11 discovery. According to Garrett Homan's response to Applicant data request 1-15, he
12 believes he has flown to South Dakota one or two times in the last five years, and he has
13 never landed at the Clear Lake Airport. In response to Applicant data request 1-16,
14 Garrett Homan stated he does not currently own a plane, but he can rent a plane and it
15 has been a life goal of his to own a plane.
16

17 **Q. Has the Commission previously addressed the issue of a private airstrip in**
18 **proximity to a wind energy facility?**

19 A. No. In Docket EL17-055, Geronimo Energy voluntarily agreed to remove two turbines of
20 the Crocker Wind Farm near Sheldon Stevens private airstrip. The issue of private
21 airstrip setbacks has not been litigated before the Commission.
22

23 **Q. During your research of this issue, did you find any state that has provided a**
24 **setback for private airstrips?**

25 A. In 2015, Oklahoma provided a 1.5-mile setback from private airstrips as part of wind
26 siting legislation. After the law went into effect, Oklahoma saw a significant increase in
27 the number of private air strips registered with the state. A number of the private airstrip
28 applicants were not registered pilots, did not own planes, and admitted that they were
29 registering private airports to increase the setback from wind turbines around their
30 property. What was a good intentioned law to protect the safety of pilots legitimately
31 using private airports was being manipulated. In 2017, Oklahoma passed legislation to
32 eliminate the setback for private airports, while maintaining the setback for public
33 airports.
34

1 **Q. Do you have an opinion on Garrett Homan's recommended setback condition for**
2 **Homan Field?**

3 A. I have issued discovery requests to Garrett Homan, John Homan, and Deuel Harvest
4 regarding the requested condition, and I would like to review the responses before
5 providing an opinion on the Intervenor's requested setback.
6

7 **ii. Risks Associated with Ice Throw**
8

9 **Q. What is Deuel Harvest proposing for a setback to mitigate the potential hazard**
10 **associated with ice throw?**

11 A. According to the supplemental testimony of Jacob Baker, "The Project will be set back at
12 least 550 feet (1.1 times the tip height of the tallest proposed turbine) from non-
13 participating property lines, and roads. This distance is consistent with state standards
14 and the manufacturer's recommendations."
15

16 **Q. Do you agree that the setback proposed by Deuel Harvest is consistent with state**
17 **law?**

18 A. I agree that the setback proposed by Deuel Harvest is consistent with the minimum
19 standard established by state law. SDCL 43-13-24 states:
20

21 *Large wind energy system set back requirement--Exception. Each wind turbine*
22 *tower of a large wind energy system shall be set back at least five hundred feet*
23 *or 1.1 times the height of the tower, whichever distance is greater, from any*
24 *surrounding property line. However, if the owner of the wind turbine tower has a*
25 *written agreement with an adjacent land owner allowing the placement of the*
26 *tower closer to the property line, the tower may be placed closer to the property*
27 *line shared with that adjacent land owner.*
28

29 **Q. Did Deuel Harvest provide documentation from the proposed turbine**
30 **manufacturer to support its proposed setback?**

31 A. Yes. According Appendix V, Page 8, General Electric recommended the following
32 setback to mitigate the risk of ice throw:
33

1 "All turbine sites (blade failure/ice throw): 1.1 x tip height, with a minimum setback
2 distance of 170 meters"

3
4 **Q. Did the intervenors indicate concerns regarding the risk of ice throw?**

5 A. Yes. John Homan, Garret Homan, and Will Stone either indicated a concern or made an
6 alternative setback proposal to mitigate the risk of ice throw. In response to Commission
7 Staff data request 1-3, John Homan requested the following setback:

8
9 "A 1500 foot set back from all public roads and right-of-ways for safety concerns –
10 i.e. ice throw."

11
12 In response to Commission Staff data request 1-3, Garrett Homan requested the
13 following setback:

14
15 "In regards to protecting neighbors and the general public from risk of ice throw, I
16 request the Commission order terms of the project to include minimum setbacks from
17 non-participating property lines or public right of ways of at least 1100 ft to satisfy the
18 recommendations to reduce risk from ice throw provided in "GE Power and Water,
19 Technical Documentation, Wind Turbine Generator System 1&2MW Platform, Safety
20 Manual."

21
22 In response to Applicant data requests 1-6, 1-7, 1-8, and 1-15, it appears Will Stone has
23 concerns about ice throw, but a specific recommendation is not clear other than request
24 for the elimination and relocation of turbines:

25
26 "We have hunters on our property any time from September 1 to March 31 for the
27 purpose of hunting pheasants. Hunters are out on the property during all weather
28 conditions which may include times there would be ice build up on the wind tower
29 blades that could be thrown on our property putting them in danger."

30
31 "I am concerned of unconstitutionally imposing a safety zone on our property and on
32 public right of ways"

1 "The elimination turbines 109, 110, 111. Relocating turbines 103 and 112 2000' from
2 our business acres. Relocating turbines 51,52,64,72,A73,A74,A75,82,84,98,1122
3 and 123 so they do not impose a safety zone in public right of ways."

4
5 "Turbines 103, 109, and 111 will unconstitutionally impose about a 1000' safety zone
6 on the NW corner and North border line of our preserve acres."

7
8 "According to Vesta and Nordex manuals safety zone setbacks these turbines are
9 imposing safety zones on right of ways where school buses travel, people drive, jog
10 and ride bike."

11
12 **Q. Regarding John Homan's recommended mitigation measure for ice throw, do you**
13 **understand the basis for his recommendation?**

14 A. No, Mr. Homan did not provide documentation to support 1,500 feet as an appropriate
15 setback to mitigate the risk of ice throw. I have sent John Homan discovery requesting
16 further explanation and support for his recommendation.

17
18 **Q. Regarding Garret Homan's recommended mitigation measure for ice throw, did**
19 **Garrett Homan submit the technical documentation he referenced to support his**
20 **1,100 ft. setback recommendation?**

21 A. No, he did not submit the technical documentation referenced in response to Commission
22 Staff's discovery. It is unclear whether this documentation is applicable to the turbine
23 models under consideration for this project. I have sent additional discovery to Garret
24 Homan requesting further explanation.

25
26 **Q. Regarding Will Stone's concerns regarding ice throw and safety zone references,**
27 **do you understand his specific ice throw mitigation recommendation and the**
28 **basis for his safety zone concern?**

29 A. No, I do not understand what Mr. Stone is recommending for a setback to address the
30 risk of ice throw, but it appears his safety zone concerns are from the manuals of Vesta
31 and Nordex wind turbines. The turbines under consideration for this project are
32 manufactured by General Electric, not Vesta or Nordex. Commission Staff believes it is
33 more appropriate to use the technical documentation for the specific turbine models
34 under consideration in this project if setbacks are to be based on an operation or safety

1 manual. I have sent additional discovery to Will Stone to get a more thorough
2 understanding of his concerns and recommended mitigation measure.

3
4 **Q. Multiple Intervenors made reference to “safety zone” concerns when discussing**
5 **the risk associated with ice throw. Did you issue discovery to Deuel Harvest on**
6 **this concern?**

7 A. Yes. Through discovery, Commission Staff requested the safety and operation manuals
8 associated with the proposed turbines. Commission Staff also sent questions regarding
9 the safety zone specific to these wind turbines, and whether a safety zone was
10 appropriate to use as the basis for a setback to reduce the risk associated with ice
11 throw. Commission Staff did not receive responses to discovery in advance of drafting
12 my testimony, and requests Deuel Harvest address this issue in its rebuttal testimony.

13
14 **Q. Did Commission Staff request assistance from the South Dakota Department of**
15 **Transportation (DOT) in reviewing the setback to mitigate the risk of ice throw**
16 **adjacent to state highway right-of-way in past wind energy facility dockets?**

17 A. Yes. In Docket EL18-046, the DOT reviewed the potential ice throw impacts on State
18 Highway 12 and Interstate 29 from the Dakota Range III wind energy facility.
19 Commission Staff requested the DOT’s opinion on the proposed setback of 1.1 times the
20 tip height for Dakota Range III, and the DOT did not raise any concerns with the
21 proposed setback.

22
23 Depending on the content and timing of the responses to Commission Staff’s discovery
24 requests, Commission Staff may contact the DOT to evaluate the ice throw concerns on
25 public right-of-way.

26
27 **Q. Do you have an opinion on the Applicant’s proposed setback condition to mitigate**
28 **the risk of ice throw?**

29 A. I would like to review the responses to outstanding discovery requests and testimony
30 before providing an opinion on the Intervenors’ proposed setback.

1 **iii. Minimization and Avoidance Setback Inaccuracies**

2
3 **Q. Please summarize the concerns of Intervenor Christina Kilby and Heath Stone**
4 **regarding minimization and avoidance measures in the Application.**

5 A. On March 11, 2019, Ms. Kilby filed a motion to deny and dismiss the Application. In her
6 brief to support the motion, Ms. Kilby made the following argument:

7
8 “Deuel Harvest either intentionally misled or grossly erred in its Application and
9 Presentation. The Application states:

- 10
11 • All turbines will be sited away from Lake Alice; the nearest turbine will be
12 2.41.6 km (1.0 mi) from the lake;
13 • All turbines will be sited away from Long (Lone) Tree Lake, Lake Francis, and
14 Rush Lake; the nearest turbine will be 0.80 km (0.50 mi) from each lake...

15
16 (Application, Effect on Terrestrial Ecosystems, 13-27) These setbacks are also
17 stated in Deuel Harvest North Wind Farm Bird and Bat Conservation Strategy, p
18 37. However, Deuel Harvest’s Presentation at the Public Input Hearing and filed
19 Jan. 28, 2019 claim setbacks of at least two-miles from Lake Alice.

20
21 According to the project layout, the following turbines are in violation of these
22 setbacks. Turbines 18, 19, 20 21, 30, 31, 32, 33, 34, 42, 43, and 44 are all less
23 than two-miles from Lake Alice. Turbines 35, 36, 37, 38, 39, 40, and 41 are all
24 less than one mile from Lake Alice. Turbines 94 and 102 are less than .5 miles
25 from Rush Lake. And turbines 100, 101, 105, 111, 112, 113, and 114 are all less
26 than .5 miles from Lake Francis. (Affidavit of Heath Stone, Kilby Affidavit Ex F)

27
28 The two-mile setback from Lake Alice is also required by the Deuel County
29 Ordinance. (Application, Appendix C) As the Application shows, the Project will
30 not meet the required setbacks in Deuel County. In order to comply with the
31 setbacks, numerous turbines will need to be moved. New noise and flicker
32 analysis will need to be conducted utilizing a corrected layout. Deuel Harvest has
33 failed to meet its burdens. These significant errors in the project layout and
34 Application as a whole necessitate a denial of Deuel Harvest’s Application.”

35
36 **Q. Did Commission Staff contact Deuel County regarding the two-mile setback from**
37 **Lake Alice required per Ordinance?**

38 A. Yes. Here is the specific language from the Ordinance provided in the Application,
39 Appendix C:

40
41 “Distance from the Lake Park District located at Lake Cochrane 3 miles, Lake Alice 2
42 miles and 1 mile from the Lake Park District at Bullhead Lake.” (*emphasis added*)

Commission Staff contacted Deuel County shortly after the Application was filed because there were proposed turbine locations clearly less than 2 miles from Lake Alice. The Ordinance was confusing to Commission Staff because the "Lake Park District" descriptor was attached to both Lake Cochrane and Bullhead Lake, but not Lake Alice. The Zoning Officer for Deuel County indicated to Commission Staff that the setback was from the Lake Park District at Lake Alice, not from Lake Alice itself. Commission Staff will defer to Deuel County to interpret its Ordinance on the Lake Alice setback as the measure relates to the orderly development of the region, and the Commission has legislative direction to give due consideration to the views of governing bodies of affected local units of government pursuant to SDCL 49-41B-22(4).

Q. Do you agree with Ms. Kilby and Mr. Stone that turbines are proposed within the minimization and avoidance distances described in the Application?

A. Yes. Commission Staff agrees with Ms. Kilby and Mr. Stone that the minimization and avoidance measures included in the Application and Bird and Bat Conservation Strategy do not accurately describe the distance reflected in the proposed turbine location maps. It is unfortunate that these errors occurred. I recommended a permit condition on Page 7, lines 26-32, that requires the Applicant to construct, operate, and maintain the project in a manner consistent with descriptions in the Application. Commission Staff believes the Applicant should be held accountable for the commitments made in their Application.

Q. Are the setbacks identified by Ms. Kilby and Mr. Homan required by county or state law?

A. No. Commission Staff believes these were voluntary commitments made by Deuel Harvest in the Application.

Q. Has Commission Staff discussed with Deuel Harvest how they plan to address these errors?

A. Yes. It is Commission Staff's understanding that Deuel Harvest will not make any changes to the proposed turbine layout, and the Applicant will amend the avoidance and minimization measures in the Application to accurately describe the proposed turbine layout.

1 **Q. Were the Applicant's errors material to Commission Staff's review?**

2 A. No. Commission Staff did not intend to pursue setbacks from lakes or South Dakota
3 Game Production Areas for the Deuel Harvest North Wind Farm. With the Applicant's
4 proposed resolution to the issue, Commission Staff believes its analysis and review of
5 the Application will not be impacted since the turbine locations will not be moved.
6

7 ***iv. Setbacks from Non-participating Residences***
8

9 **Q. What is Deuel Harvest proposing for a setback from non-participating residences?**

10 A. Deuel Harvest proposes a setback from non-participating residences consistent with the
11 Deuel County Zoning Ordinance § 1215.03(2):
12

13 "Distances from existing non-participating residences and businesses shall be
14 not less than four times the height of the wind turbine. Distance from existing
15 participating residences, business and public buildings shall be not less than
16 1,500 feet. Non-participating property owners shall have the right to waive the
17 respective setback requirements. A setback of four times the turbine height of
18 the GE 2.82-127 turbine (1,996 feet; rounded to 2,000 feet) was used for all non-
19 participating residences."
20

21 **Q. Is there a state law that establishes a setback from non-participating residences?**

22 A. No. The legislature has not established a state standard for a setback from non-
23 participating residences.
24

25 **Q. Did the Intervenors request a larger setback from non-participating residences?**

26 A. Yes. John Homan and Christina Kilby proposed an alternative setback from non-
27 participating residences. In response to Commission Staff data request 1-3, John
28 Homan requested the following setback:
29

30 "One and one half mile setback from non-participating residences, especially in the
31 case of multiple residences in concentrated areas."
32

33 In response to Commission Staff data request 1-3, Christina Kilby requested the
34 following setback:

1
2 "I ask that setbacks for non-participating landowners be set at two miles with the
3 option of a waiver."
4

5 **Q. Regarding Mr. Homan's recommended setback from non-participating residences,**
6 **do you understand the basis for his recommendation?**

7 A. No, Mr. Homan did not provide an explanation to support a one and one-half mile
8 setback from non-participating residences. I have sent Mr. Homan discovery requesting
9 further explanation and support for his recommendation.
10

11 **Q. Did Ms. Kilby provide an explanation for her recommended setback from non-**
12 **participating residences?**

13 A. Yes. In response to Staff Data Request 1-3, Ms. Kilby stated "This is because of the
14 characteristics of and problems caused by infrasound that turbines are known to
15 produce." I have sent Ms. Kilby discovery requesting documentation that supports the
16 assertion that a two-mile setback is appropriate to alleviate problems caused by
17 infrasound.
18

19 **Q. Has the Commission previously considered the potential impacts associated with**
20 **infrasound and low frequency noise (ILFN) emitted from wind turbines?**

21 A. Yes. In Docket EL18-026, the Commission considered testimony regarding the potential
22 impacts associated with ILFN emitted from wind turbines for the Prevailing Wind Park.
23 Through discovery, Commission Staff requested Professor Mariana Alves-Periera
24 provide recommendations for an appropriate zoning law for industrial wind turbines to
25 address her concerns regarding ILFN. Ms. Alves-Periera did not offer a condition for
26 consideration and indicated that "there are currently no scientifically-valid studies
27 providing numerical data on 'safe distances' that can effectively protect families against
28 ILFN-contaminated homes (whatever the source)."
29

30 **Q. Did you request any additional information from Deuel Harvest to support the**
31 **proposed setback from non-participating residences?**

32 A. Yes. I requested Deuel Harvest provide evidence to support the reasonableness of
33 Deuel County's setback distance from non-participating residences. In addition, I
34 requested the Applicant provide documentation of Deuel County's reasoning and

1 findings to support the setback. I did not receive answers to these requests prior to
2 drafting my testimony.

3
4 **Q. Has the South Dakota legislature considered setbacks similar to the proposals of**
5 **Ms. Kilby and Mr. Homan?**

6 A. Yes. During the 2019 legislative session, the South Dakota House of Representatives
7 considered House Bill 1226, an act to revise the distance certain wind energy systems
8 must be set back from surrounding property. One of the proposals within the bill was a
9 setback from residences as shown below:

10
11 "Each wind turbine tower of a large wind energy system shall be set back at least
12 twelve times the height of the tower, or one and one-half miles, whichever
13 distance is greater, from the perimeter of any residence, business, or public
14 building, unless the owner of the wind turbine tower has a written agreement with
15 the owner of the residence, business, or building allowing for a lesser setback
16 distance. A residence is defined as a single or multi-family structure that has
17 been lived in within the past three years."
18

19 House Bill 1226 failed in the House Commerce and Energy Committee by a vote of 10 to
20 2.

21
22 **Q. How does Deuel County's setback for non-participating residences compare with**
23 **other county setbacks in recent wind energy facility siting dockets before the**
24 **Commission?**

25 A. See Table 1 for a listing of setbacks from non-participating residences by county for wind
26 energy facility siting dockets filed with the Commission between 2015 and 2018. The
27 setbacks provided below are minimum requirements, and wind turbines are often sited
28 further away than the minimum non-participating residence setback to comply with other
29 requirements and commitments.

1

Table 1 – Non-Participating Residence Setbacks

Docket	Facility Name	County	Non-Participating Residence Setback	Zoning
EL15-020	Willow Creek Wind Energy Facility	Butte	1,000 ft.	No
EL17-055	Crocker Wind Farm	Clark	3,960 ft.	Yes
EL18-003	Dakota Range Wind Project	Grant	1,000 ft.	Yes
		Codington	1,000 ft.	Yes
EL18-026	Prevailing Wind Park	Bon Homme	1,000 ft.	Yes
		Hutchinson	1,000 ft.	No
		Charles Mix	2,000 ft. or 3.5 ft. X Turbine Height	No
EL18-046	Dakota Range III Wind Project	Grant	1,000 ft.	Yes
		Roberts	1,225 ft. + 2.5 ft X Turbine Height > 500 ft.	Yes

2

3

4 **Q. Does Deuel Harvest's proposed turbine layout significantly exceed the minimum**
5 **setback requirement for most non-participating residences?**

6 A. In response to Commission Staff data request 1-5, Deuel Harvest indicated there are
7 only two turbine locations within ½ mile, or 2,640 feet, of non-participating residences in
8 the proposed turbine layout. Turbine location A99 is an alternative turbine location
9 approximately 2,052 ft. from a non-participating residence, and turbine location 1 is
10 approximately 2,520 ft. away from a non-participating residence.

11

12 **Q. Is a half-mile setback from non-participating residences achievable?**

13 A. Based solely on Deuel Harvest's response to data request 1-5, I think the possibility
14 should be explored. Without considering other constraints, an elimination of an
15 alternative turbine and a minor turbine shift of 120 feet would meet the non-participating
16 residence setback of one-half mile. The increased setback would limit the flexibility
17 Deuel Harvest has to make turbine shifts during final micro-siting and may impact the
18 financial opportunities of participating landowners.

19

20 **Q. Did Commission Staff evaluate any other alternative setbacks from non-**
21 **participating residences for this Project?**

22 A. Yes. See Exhibit_JT-6 for a map created by Commission Staff that shows hypothetical
23 setbacks from non-participating residences of ½ mile, ¾ mile, and 1 mile. Please note
24 this map only shows the non-participating residence setback and does not consider any

1 other setbacks or constraints. A significant number of proposed turbine locations would
2 be impacted if a ¾ mile setback was required from non-participating residences.

3
4 **Q. Do you have a recommendation regarding a setback from non-participating**
5 **residences?**

6 A. Commission Staff would like to review the responses to discovery requests and pre-filed
7 testimony before offering a recommendation. Commission Staff has historically focused
8 on the impacts associated with wind facilities, such as audible noise, and Commission
9 Staff's recommended limits associated with those impacts have resulted in turbine
10 locations that exceeded the minimum setback requirements from non-participating
11 residences. Generally, the impacts associated with wind turbines become less at
12 greater distance, and Applicants should strive to minimize impacts on non-participants to
13 the maximum extent possible.

14
15 **X. COMMISSION STAFF'S PERMIT RECOMMENDATION**
16

17 **Q. Does Commission Staff recommend the Application be denied or rejected**
18 **because of Commission Staff's issues and concerns?**

19 A. Not at this time. Because Deuel Harvest still has the opportunity to address outstanding
20 issues on rebuttal and, to an extent, through the evidentiary hearing, Commission Staff
21 reserves any position until such time as we have a complete record upon which to base
22 the position. I would also note that some of the outstanding issues may be addressed
23 through conditions should the Commission grant a permit.

24
25 **Q. Does this conclude your testimony?**

26 A. Yes, this concludes my written testimony. However, I will supplement my written
27 testimony with oral testimony at the hearing to respond to Intervenor testimony, Deuel
28 Harvest rebuttal testimony, and responses to discovery.
29

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

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APPLICANT'S RESPONSES TO
STAFF'S FIRST SET OF DATA
REQUESTS

EL18-053

Below, please find Applicant's responses to Staff's First Set of Data Requests to Applicant.

- 1-1) Refer to Section 2.3 of the Application. Provide copies of all pleadings and briefs filed in Case No. 19CIV18-19, as well as copies of transcripts of all depositions.**

Lisa Agrimonti: The documents requested were previously provided to Staff.

- 1-2) Provide a project area map that includes section-line roads.**
a. Do the tower setbacks account for section-line roads, which are public highways pursuant to SDCL 31-18-1?

Michael Svedeman: The Land Ownership Map filed on January 11, 2019, includes section lines. When establishing setbacks of wind turbines from public highways, the Applicant considered all section lines to be public highways. Attachment 1-2(A) is an updated version of Figure 2-A filed with the Application, which has been revised to also show setbacks from section lines.

- 1-3) Provide a map that identifies landowners within two miles of the project area. Staff requests this map be filed in the docket.**
a. Include all landowners who are plaintiffs in 19CIV18-19 regardless of distance from the project area.

Lisa Agrimonti: Applicant conferred with Staff regarding the scope of this request, and Staff revised this request to ask for a figure showing parcels owned by landowners who are parties to the Deuel County Circuit Court Docket 19CIV18-19.

Michael Svedeman: The requested figure is attached as Attachment 1-3(A). Note that this figure also identifies, to the best of the Applicant's knowledge, parcels owned by entities in which those landowners have an interest. Also, it is Applicant's understanding that the Holborns have sold the residence and property they owned near the Project and no longer live near the Project. Once Applicant has determined the current ownership of the property, Applicant will further update the Project map.

1-4) Provide a shadow flicker study that accounts for minutes per day.

Lisa Agrimonti: Applicant conferred with Staff on this request, and Staff agreed to withdraw this request at this time.

1-5) Provide a constraints map depicting the project area with setbacks from non-participating landowners at one-half mile.

Lisa Agrimonti: Applicant conferred with Staff regarding this request, and Staff revised this request to ask that Applicant identify non-participating residences within one-half mile of a Project wind turbine.

Michael Svedeman: There are two non-participating residences within one-half mile of a Project wind turbine: (1) Matthew Thomas – approximately 2,052 feet (0.39 miles) from Turbine ID A99; and (2) John Lynde – approximately 2,520 feet (0.48 miles) from Turbine ID 1.

1-6) Provide a noise level contour map similar to Exhibit A10-2, page 33 in Docket EL18-026. Include contours for noise at 30, 35, 40, and 45 dBA.

Mike Hankard: See Attachment 1-6(A).

1-7) Provide GIS shape files for the project and project facilities.

Michael Svedeman: The GIS shape files for the Project Area and Project facilities are being provided to Staff in the accompanying zip file. Note that the shape files include a constraints layer that includes the constraints on Figure 2-A from the Application, as well as section line setbacks.

Dated this 25th day of January, 2019.

By /s/ Lisa Agrimonti

Mollie M. Smith

Lisa A. Agrimonti

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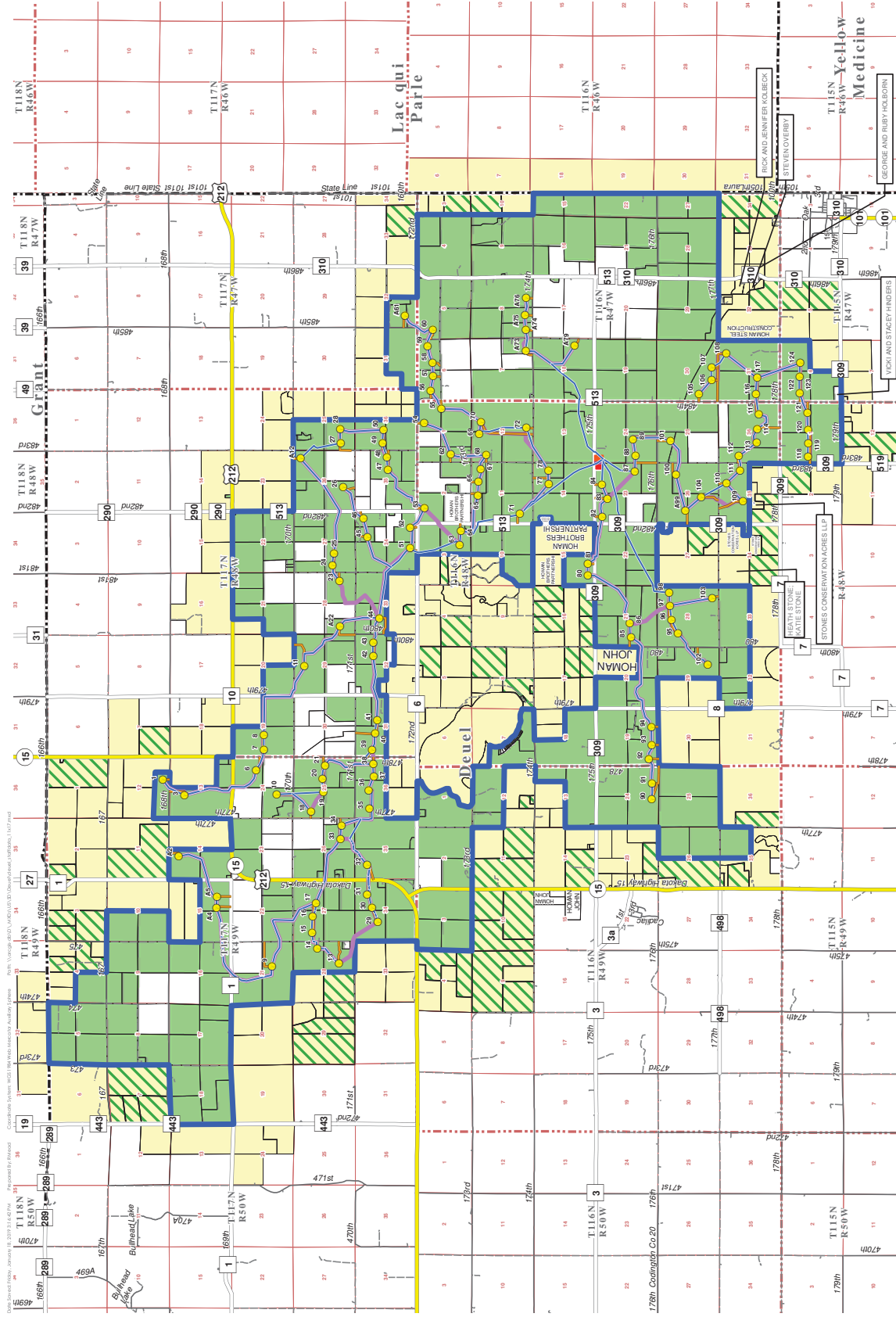
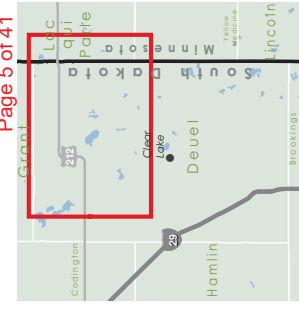
Fax: (612) 492-7077

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Figure A-2
Turbine Siting Constraints Map
Deuel Harvest North Wind Farm
Deuel Harvest Wind Energy LLC
Deuel County, South Dakota

ATTACHMENT 1-3(A)



Legend

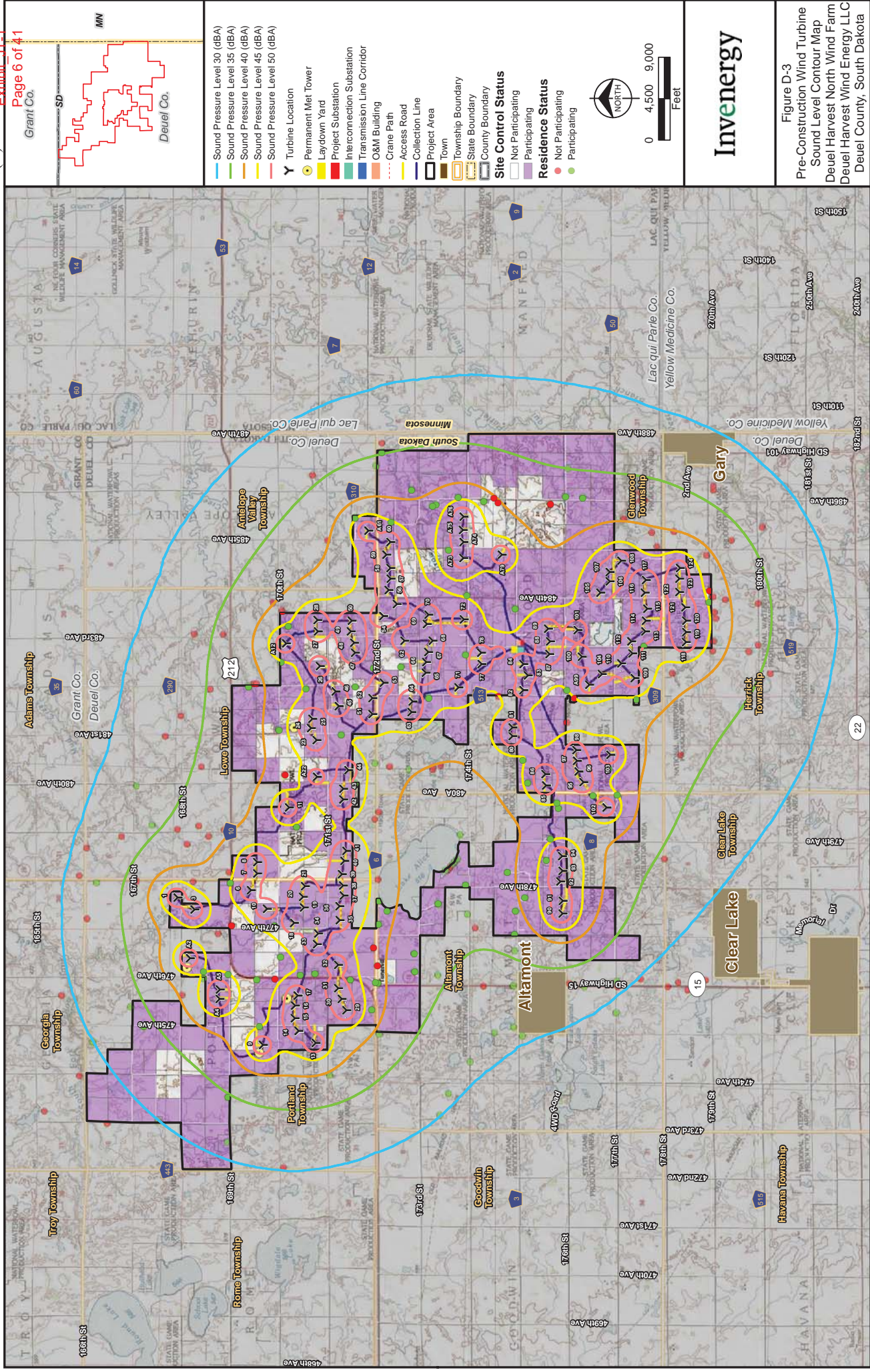
- Turbine Location
- Collection Corridor
- Access Road
- Crane Path
- Interconnection Substation
- Project Substation; O&M Building
- Transmission Line Corridor
- Township/Range Boundary
- Section Line
- Project Boundary
- Landowner Parcel Status
- Participating
- Holds lease with Deuel
- Harvest
- Within 1/2 mile of project boundary
- Road Classification
- US/State Route
- County Road
- Local Road
- Dirt/Unpaved Road

Staff Data Request 1-3(a)

Deuel Harvest North Wind Farm | Deuel County, South Dakota

Rev. 00
January 18, 2019





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

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APPLICANT'S RESPONSES TO
STAFF'S SECOND SET OF DATA
REQUESTS

EL18-053

Below, please find Applicant's responses to Staff's Second Set of Data Requests to Applicant.

- 2-1) Please explain the Deuel County setback from Lake Alice and how the county measures the 2 mile setback. For example, is the distance from the edge of the water or some other location surrounding the lake?**

Lisa Agrimonti/Michael Svedeman: The setback is from the Lake Alice Lake Park District, not the lake itself. See Attachment 2-1. The Applicant understands the setback to be measured from the edge of the district boundary. Based on that measurement, the closest turbine is 10,690 feet (Turbine 41) from the Lake Alice Lake Park District.

- 2-2) Referring to section 11.1.1.3 of the Application, please confirm that Figure A-7 is the correct figure to reference to identify sand and gravel operations in the project area.**

Michael Svedeman: The reference should be to Figure A-9. Please see Attachment 2-2, which is a revised Figure A-9. We have adjusted the symbology within the figure to show these operations more prominently than before, as they were shadowed behind other data layers.

- 2-3) Referring to Figure A-6, please identify the surface water drainage patterns on the map in accordance with ARSD 20:10:22:15(1).**

Michael Svedeman: Please see Attachment 2-3. Figure A-6 was edited to show the directional flow of surface water flowing features.

- 2-4) Referring to section 14.1.2.2 of the Application, please explain why the first paragraph states “[b]ased on the northern redbelly dace’s associated habitats, historical documentation, and type and size of the perennial water sources within the Project Area, these waterbodies may provide suitable habitat for this species” and the second paragraph states “...and associated habitat with the appropriate size and type of perennial water sources is lacking.” (The two statements contradict each other).

Andrea Giampoli: Please see the revised language from Section 14.1.2.2, either with strikethrough (to be removed) or highlighted (added/moved):

Based on the northern redbelly dace’s associated habitats,~~historical documentation,~~ and type and size of the perennial water sources within the Project Area, these waterbodies may provide suitable habitat for this species. The northern redbelly dace once existed south of the Project Area between Clear Lake and Monighan Creek.; Correspondence from the SDGFP Sensitive Species/Sensitive Habitats Review indicated historical records for the northern redbelly dace exist south of the Project area between Clear Lake and Monighan Creek, but the last known record was in 1973 (C. Heimerl, pers. comm., August 10, 2016; Figure 1.1). ~~However, no historical documentation of this species occurs within the Project Area, and associated habitat with the appropriate size and type of perennial water sources is lacking.~~ A low likelihood exists of this species occurring in the Project Area, and no impacts are anticipated.

- 2-5) Referring to section 15.6.2 of the Application, when will Deuel Harvest know if it needs to complete an in-depth FAA radar impact study? Further, should a study be required, please explain whether or not the results of the study could impact the turbine layout.

Michael Svedeman: As noted in the Application, Appendix S, the pre-screening tool used by the Department of Defense (DoD) and the Department of Homeland Security Long Range Radar Joint Program Office (JPO) indicates that areas of the Project area are visible to one FAA/DoD Air Route Surveillance Radar within 45 miles of the Project. Specifically, Figures 5 and 5a show the results of the screening tool which indicates that the southern part of the Project area overlaps with the edge of the FAA/DOD visible area. For means of comparison, the screening tool also indicates that the existing Buffalo Ridge wind farm is visible to FAA/DoD radar.

Deuel Harvest will know if an in-depth radar impact study is required upon receipt of turbine location determinations from the FAA. Deuel Harvest submitted turbine locations to the FAA in November 2018, and expects to receive an FAA determination within six months, barring any unforeseen study delays.

At this time, Applicant does expect the Air Route Surveillance Radar to have any impact on the layout. Applicant will provide further information regarding the results of the FAA determination when received.

2-6) Referring to section 15.6.5 of the Application, please file the IRAC determination once received.

Michael Svedeman: Deuel Harvest will file the IRAC determination once received. The IRAC determination has been delayed as a result of the agencies involved being impacted by the government shutdown.

2-7) Referring to section 20.3.1 of the Application, please provide an update on the discussions with ITC and identify if Deuel Harvest plans to enter into an agreement with ITC.

Michael Svedeman: The Applicant entered into an agreement with ITC dated November 26, 2018. See Attachment 2-7.

2-8) Referring to section 24.1 of the Application, please define “severe icing conditions.”

Michael Svedeman: The use of the word “severe” in describing icing conditions was intended to reflect the circumstances when turbines would be shut down and was not intended to be inconsistent with the Commission’s conditions in EL18-003 and EL18-026. Generally, the type of icing conditions that would lead to an automatic or manual shutdown are situations 1) when the ambient temperatures are below 3°C (37.4 °F) and 2) when there are deviations in the turbines standard power curve are greater than established thresholds, or when meteorological data from on-site permanent meteorological towers, on-site anemometers, and other relevant meteorological sources determine ice accumulation is occurring.

Dated this 6th day of February 2019.

By /s/ Lisa Agrimonti

Mollie M. Smith

Lisa M. Agrimonti

FREDRIKSON & BYRON, P.A.

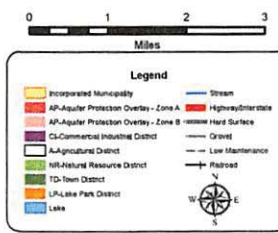
Attorneys for Applicant

200 South Sixth Street, Suite 4000

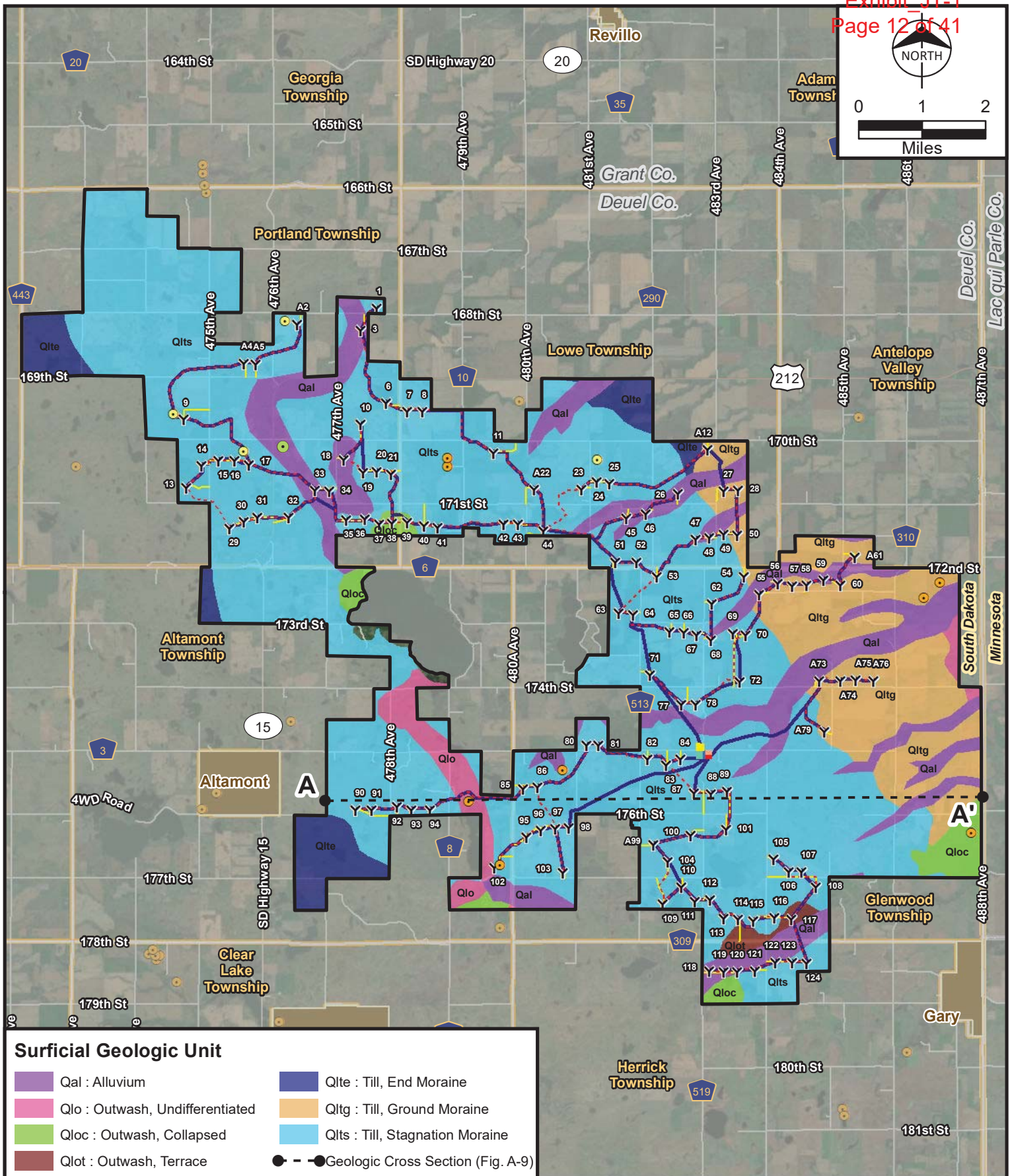
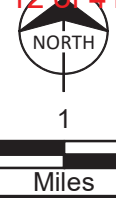
Minneapolis, MN 55402

Phone: (612) 492-7000

Fax: (612) 492-7077



Date _____



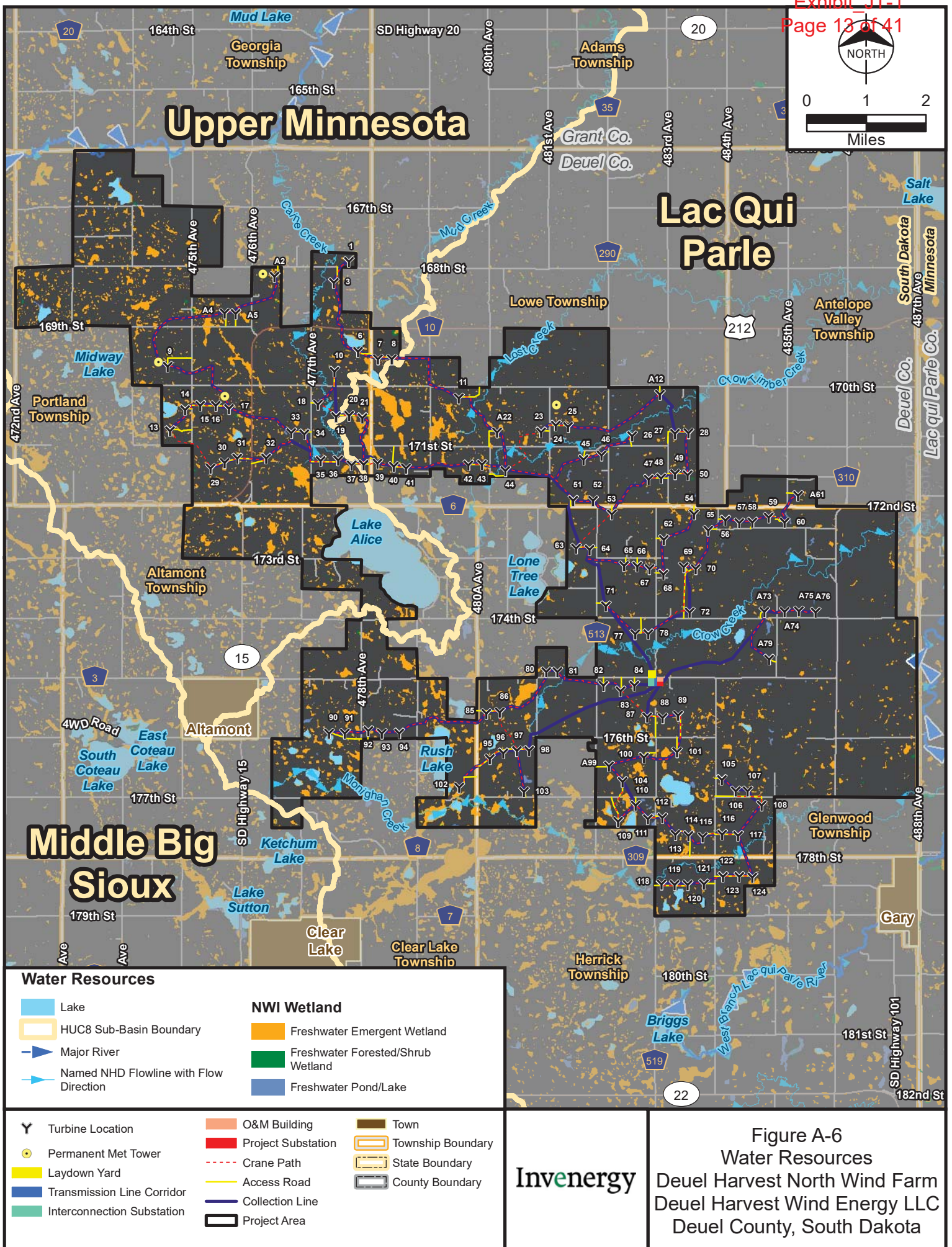
Surficial Geologic Unit

- | | |
|---------------------------------|---|
| Qal : Alluvium | Qlte : Till, End Moraine |
| Qlo : Outwash, Undifferentiated | Qltg : Till, Ground Moraine |
| Qloc : Outwash, Collapsed | Qlts : Till, Stagnation Moraine |
| Qlot : Outwash, Terrace | ● - - ● Geologic Cross Section (Fig. A-9) |

- | | | |
|------------------------------|--------------------|--------------------------------|
| Y Turbine Location | O&M Building | Town |
| ● Permanent Met Tower | Project Substation | Township Boundary |
| ■ Laydown Yard | --- Crane Path | State Boundary |
| ■ Transmission Line Corridor | — Access Road | County Boundary |
| ■ Interconnection Substation | — Collection Line | ● Inactive Sand and Gravel Pit |
| | ■ Project Area | ● Active Sand and Gravel Pit |

Invenergy

Figure A-9
Surficial Geology
Deuel Harvest North Wind Farm
Deuel Harvest Wind Energy LLC
Deuel County, South Dakota



AGREEMENT

It is hereby agreed and understood by and between **Deuel Harvest Wind Energy LLC**, located at One South Wacker Drive, Suite 1800, Chicago, IL 60606, hereinafter referred to as "Deuel Harvest", and **Interstate Telecommunications Cooperative, Inc.**, P.O. Box 920, Clear Lake, South Dakota 57226, hereinafter referred to as "ITC", as follows:

WHEREAS, Deuel Harvest has been issued a Special Exception Permit for a Consolidated Wind Energy System in Deuel County, South Dakota (Permit Number 18-01; issued March 2, 2018) for the right to construct, maintain, and operate a wind energy system for the purpose of distributing and/or transmitting electricity and electric energy over, upon, along and across certain public highways located within Deuel County, South Dakota (the "Project"); and

WHEREAS, ITC has expressed concern in connection with such Project, and believes the construction of a wind energy system and its transmission and distribution lines in certain areas may interfere with ITC's existing telephone and telecommunication lines and the signals carried by such lines; and

WHEREAS, Deuel Harvest has agreed that all construction will be done in a manner so as to not cause "Unreasonable Interference" with the maintenance and operation of any ITC owned utility and telecommunication lines existing in public highway right-of-ways or elsewhere; now therefore,

IT IS HEREBY AGREED AND UNDERSTOOD by and between the respective parties that in the event the construction of the Project and its distribution and/or transmission lines should cause Unreasonable Interference with the operation of the ITC telephone and telecommunication lines upon the wind energy system being energized or at any time thereafter

which requires the need for repairs or replacement of lines owned by ITC, then Deuel Harvest shall promptly cooperate in good faith to accomplish such repairs or replacement by promptly taking such steps as may be necessary to resolve or mitigate any such interference. "Unreasonable Interference" is defined as ITC's existing telephone and telecommunication lines and the signals carried by such lines having degraded from "4.1.2 Acceptable" or better to "4.1.4 Not Recommended" or worse as a result of the construction of the Project or whenever the wind energy system is energized. Such terms are defined and used in "IEEE Std 820™ - 2005" (which shall be the applicable standard for assessing any interference described herein). All costs and expenses resulting from proven Unreasonable Interference shall be timely satisfied in full by Deuel Harvest, provided that ITC provides documentation demonstrating the telephone and telecommunication lines and the signals carried by such lines in question were at "4.1.2 Acceptable" standards prior to the Project's construction.

Dated this 26th day of November, 2018.

DEUEL HARVEST WIND ENERGY LLC





Jon Saxon
Vice President, Development

INTERSTATE TELECOMMUNICATIONS



General Manager

- Lisa Agrimonti: No. An SEP from Deuel County is not a pre-condition for obtaining permits from the South Dakota Public Utilities Commission. The Project will comply with any requirements imposed by Deuel County, and Deuel Harvest Wind may not commence construction of the Project unless and until it obtains all required local approvals.

3-3) Provide a map that shows the proposed turbines within 2 miles from the residence of the following individuals. Please provide a map similar to Page 88 of 156 of Staff Exhibit_JT-1 in Docket EL18-003 for Ms. Teresa Kaaz (<http://puc.sd.gov/commission/dockets/electric/2018/EL18-003/exhibits/staff/s1.pdf>).

- a) Mr. John Homan;**
- b) Mr. Jon Henslin; and**
- c) Mr. George L. Holborn.**

Michael Svedeman: After further consultation with Staff, the maps included as Attachment 3-3(a) identify turbines within two miles for the following:

- (a) A proposed home site and a structure (which, according to Mr. Homan's response to Deuel Harvest Request 1-15, is used as an office, shop, and equipment storage) on Mr. Homan's property in Section 32 TWP 116, R 47.
- (b) As shown on Attachment 3-3(b), there are no turbines within two miles of Mr. Henslin's address at 1020 Lake Alice Drive, Clear Lake, SD 57226.
- (c) Mr. Holborn resides in Sioux Falls and has withdrawn as a party; as such, his residence is not identified.

3-4) Provide the predicted sound levels from the Project and the estimated annual frequency of shadow flicker associated with the operation of the Project wind turbines at the following residences. In addition, provide the distance from the closest wind turbine to the following residences.

- a) Mr. John Homan;**
- b) Mr. Jon Henslin; and**
- c) Mr. George L Holborn.**

Michael Svedeman: After further consultation with Staff, Deuel Harvest Wind provides predicted sound levels for the following:

- (a) The proposed home site at Mr. Homan's property (in Section 32 TWP 116, R47): predicted sound level is 43.3 dBA, and the expected hours of shadow flicker per year are 12:57. The structure used as an office, shop, and equipment storage on Mr. Homan's property (in Section 32 TWP 116, R 47): predicted sound level is 41.1 dBA, and expected hours of shadow flicker per year are 5:59;
- (b) Mr. Henslin's address at 1020 Lake Alice Drive, Clear Lake, SD 57226: The distance from the closest wind turbine to this residence is shown on the attachments to Response 3-3; as indicated on Attachment 3-3(b), there are no turbines within two miles of Mr. Henslin's residence and as such predicted sound and shadow flicker levels are 0 at this property.

(c) Mr. Holborn resides in Sioux Falls and has withdrawn as a party; as such, his residence is not identified.

- 3-5) Provide a map that shows the proposed turbines within 2 miles from the property line of Heath Stone, Will Stone, and Stone's Conservation Acres. Please provide a map similar to Page 88 of 156 of Staff Exhibit_JT-1 in Docket EL18-003 for Ms. Teresa Kaaz (<http://puc.sd.gov/commission/dockets/electric/2018/EL18-003/exhibits/staff/s1.pdf>).**

Michael Svedeman: Attachment 3-5 shows turbines within two miles of the potential future home site noted by Heath Stone in his public comment and discovery responses, Will Stone's residence, and the property line of Stone's Conservation Acres.

- 3-6) Please provide the safety and operations manuals for the General Electric 2.82-127 turbine and 2.3-116 turbine.**

Lisa Agrimonti: See Attachments 3-6(a) and 3-6(b). These documents are being provided confidentially and subject to an agreement with General Electric that they will be provided on an "Attorneys' Eyes Only" basis.

- 3-7) Refer to Page 3-2 of the Application regarding ADLS. Please explain why the Applicant included the phrase "subject to availability" in the minimization measure proposed for the Project.**

Michael Svedeman: Applicant plans to install ADLS on the Project and agrees to the condition imposed by the Commission in Docket EL 18-046, which stated, "Applicant shall utilize an Aircraft Detection Lighting System if approved by the Federal Aviation Administration."

- 3-8) Refer to Page 8-4 of the Application. The Applicant included the following request:**

Deuel Harvest requests the Commission provide flexibility for the Project to use a turbine of comparable capacity and specifications, provided it meets all applicable County and State setback requirements and specified noise and shadow flicker requirements; cultural resource impacts are avoided or mitigated in consultation with SHPO; environmental constraints are adhered to as agreed upon with the USFWS and the SDGFP; and wetland impacts are avoided. Prior to implementing the turbine adjustment, the Applicant would file in the docket an affidavit demonstrating compliance with the limitations set forth above.

- a) Please further define comparable capacity. For example, does comparable capacity mean a turbine with a nameplate capacity equal to or less than 2.82 MW?**

Michael Svedeman: Deuel Harvest interprets "comparable capacity" to mean a turbine model that would result in impacts similar or lesser to the model identified in the Application. With respect to the specific example provided in this request, a turbine model with comparable capacity would mean a turbine with a nameplate capacity of between 2.0 and 3.0 and which has similar dimensions to the turbine models identified in the Application.

- b) Please further define comparable specification. For example, does comparable specification mean a turbine with a tip height less than 499 ft? Please provide all specifications the Applicant are evaluating for comparability.**

Michael Svedeman: Deuel Harvest interprets "comparable specifications" to mean a turbine model that would result in similar or lesser impacts than those identified in the Application. Any turbine used for the Project will have a tip height of less than 499 feet.

- c) Will the studies performed using the 2.82-127 turbine, including, but not limited to, the sound and shadow flicker models, be materially different if a different but comparable turbine is ultimately selected? Please explain.**

Michael Svedeman: Yes. Those studies will be conducted to confirm that the Project would comply with all applicable requirements. Deuel Harvest anticipates that a condition similar to Condition No. 29 in Docket EL 18-026 could be imposed on this Project and would comply with those requirements prior to construction.

- d) Please explain why it is necessary to be granted flexibility to use a different, but comparable, turbine model.**

Michael Svedeman: Deuel Harvest requests the flexibility to use a different, but comparable, turbine model to allow Deuel Harvest to select the turbine model that is most appropriate for the Project at the time of construction, considering both economics, availability, and impacts and constraints.

- e) Has the Commission allowed turbine model flexibility in any previous dockets? Please provide references.**

Lisa Agrimonti: Yes. In Docket No. EL18-026, the Commission included the following language in Condition No. 29: "should Applicant decide at a later point to use a different turbine model, it shall provide the information required in parts a-d above."

f) Has the Applicant evaluated using 3 MW and 4 MW turbines to reduce the number of turbines in Project area? Please explain the Company's consideration in selecting the turbine model.

Michael Svedeman: Yes. Deuel Harvest evaluated multiple wind turbine technologies and ultimately chose the model based on economics, anticipated availability, and ability to comply with local ordinances and other requirements. Deuel Harvest did evaluate the GE 3 MW and 4 MW platform but determined that the models identified in the Application are a better fit for the Project site because of the wind class found within the Project area in addition to the other above mentioned factors.

3-9) Refer to Page 8-13 of the Application. Please provide the basis the supports an estimated service life of 30 years for the transmission facility.

Michael Svedeman: The 30-year service life for the transmission facility is based off the expected life of the wind project; because the purpose of the transmission facility is to serve the wind project, Deuel Harvest does not at this time anticipate that the transmission facility would operate after the wind project is decommissioned. To the extent the wind project is repowered to extend its life, Deuel Harvest anticipates that the transmission facility would continue to be used, as well.

3-10) Refer to Page 9-3 of the Application. Please provide a copy of the voluntary lease agreement for property owners.

Michael Svedeman: See Attachment 3-10, which is being provided confidentially.

Dated this 12th day of March 2019.

By /s/ Lisa Agrimonti
Mollie M. Smith
Lisa M. Agrimonti
FREDRIKSON & BYRON, P.A.
Attorneys for Applicant

200 South Sixth Street, Suite 4000
Minneapolis, MN 55402
Phone: (612) 492-7000
Fax: (612) 492-7077

66059377.1

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE
WIND ENERGY LLC FOR A PERMIT
OF A WIND ENERGY FACILITY AND
A 345-KV TRANSMISSION LINE IN
DEUEL COUNTY**

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**RESPONSE TO APPLICANT'S
FIRST SET OF DATA
REQUESTS TO JON HENSLIN**

EL 18-053

Below, please find Deuel Harvest Wind Energy LLC's ("Applicant") First Set of Data Requests to Jon Henslin. Please submit responses within 10 business days or promptly contact the undersigned to discuss an alternative arrangement.

1-1) Provide copies of all data requests submitted by PUC staff to you in this proceeding and copies of all responses to those data requests. Provide this information to date and on an ongoing basis.

1-2) Identify the address of your permanent residence (where you reside).

1020 Lake Alice Drive
Clear Lake, South Dakota 57226

1-3) Identify all property you own within the vicinity of the Deuel Harvest North Wind Farm ("Project") and the location (by section, township, and range) of such property. Are there any habitable buildings on the property you own?

Altamont Township, Lake Alice Shores, 7-116-48, Lot 10
Yes, our home is on this lot.

1-4) If you have a residence in the vicinity of the Project, identify whether you live at the residence throughout the entire year and, if not, how many months of the year you reside at the residence.

Entire year; however, have occasionally taken a month vacation in the winter.

1-5) Identify how you use your land, including, but not limited to, whether you use your land for agricultural purposes.

As our primary residence, and since it is on the lake, recreation (fishing etc.).

1-6) Identify any sensitive or unique features of your property that you assert would be impacted by the Project.

I am concerned that the view (day and night), sound, property value, and flashing red lights could negatively impact my property.

1-7) Describe your concerns regarding the Project.

Effects on property values
Constant Flashing Lights
Bald eagle nest on north end of Lake Alice.
Contracts
Health effects

1-8) Describe what mitigation measures would address the concerns you identified in response to Request 1-7 and whether any of the mitigation measures identified by the Applicant in its Application could address any of your concerns.

Provide property value guarantees for nonparticipants in the siting area.

Provide ADLS – I believe the applicant plans to use ADLS; but would like assurance.

Provide two-mile radius safety zone for all bald eagle nests, including the nest identified at the PUC public hearing held in Clear Lake on this project.

Have the PUC or the State Attorney General Office review the lease and easement agreements to make sure the documents follow state and federal laws and rules.

The health effects mitigation measures would be tied to setbacks.

1-9) Identify any documents, information, education, training, or professional experience you have relied upon to form your opinions concerning the Project. Where you have relied upon documents or other tangible materials, please provide such documents and/or materials.

Graduated from SDSU with a BS degree in Engineering in 1971.
Licensed Professional Engineer (PE) in Minnesota.
39 Years of work experience with Minnesota Department of Transportation.
Retired in 2011.

Some materials I have relied upon:
Deuel County Zoning Ordinance
South Dakota Energy Siting Rules (Chapter 20:10:20)
South Dakota Codified Law Title 49
Invenergy (Special Exception Permit Application dated December 2017)
PUC Docket EL 053
List is not all inclusive.

1-10) Identify any witnesses, including expert witnesses, you plan to have testify on your behalf. For each witness (including expert witnesses), please provide a resume or statement of qualifications of the witness(es), identify the subject matter regarding which the witness will testify, and identify and provide any exhibits the witness will refer to or introduce.

None, at this time.

1-11) Are you asserting that the Project will negatively impact your property value? If so, provide copies of any appraisals or other valuations that have been conducted for such property within the last ten years.

I am concerned that this project will negatively impact my property. I do have a copy of an appraisal on my home. It was made when I applied for a mortgage. We had the home built for us and when the appraisal was made the construction had just started. The appraisal was based primarily on the house plans. However, major changes were made that greatly increased the square footage of finished living space. As a result, the appraisal is by no means accurate. Currently my wife and I are on vacation until the beginning of April. I did not bring a copy of the appraisal along. I would gladly provide you with a copy of the appraisal when we return. The home is currently for sale.

1-12) Identify any communications, written or otherwise, you have had with units, officials, and/or representatives of local, state, and/or federal governments or agencies concerning the Project.

a) For any written communications, provide a copy of the communication;

December 6, 2017 email to Senator Rounds

I know congress is working on a tax bill that is generating a lot of press. I am very much concerned about our national debt; let us not leave a legacy of debt to our children and grandchildren.

One item that I feel it is time to do away with is the Production Tax Credit (PTC) for Industrial Wind Turbines. Over the last year there has been a lot of debate about wind turbines in Deuel County. It is very obvious that (despite what the developers say) these wind farms are not feasible without the PTC. The bottom line is that the tax payers are paying for a large amount of the initial cost in PTC and continue to subsidize the Wind Farms thru increases in our electric bills. I obtain electricity from two cooperatives; both identify the cost of solar and wind energy as a reason for rate increases. Yet the wind developers claim that wind will provide cost savings to the consumers.

Wind developers have repeatedly informed me that Wind Turbines do not affect property values. A 500 ft. wind turbine installed 1000 feet of your home does not affect property value? If there is no effect on property values, why have all three companies currently planning wind farms in Deuel County refused to provide any property value guaranties?

Representatives of one of the wind farm developers visited with my wife and I. They wanted us to sign a lease agreement. I asked them why, since we own a home on a lake and our lot is less than an acre in size. They told us it was to make sure we did not construct a tall structure on our property. That did not make much sense to me since our zoning already has height restrictions. We did not sign but they left a copy of an agreement with us. I later read the agreement over and what I found was rather disturbing. It would be nice to discuss the contents of the agreement with you and/or your staff. Have you had the opportunity to read one of these agreements? If not I would gladly provide you with a copy of the one given to me.

In closing I encourage you to consider doing away with the PTC or at the very least not extending it. I would appreciate the opportunity to discuss the lease agreement with you or your staff.

Sincerely

Jon Henslin

March 23, email to Josh Haeder

Josh,

I truly appreciate your call this morning. Attached is the first half of the lease agreement being used for the Deuel County wind farm. I will be sending the second half in another email due to the size of the document. I will try to obtain a copy of the Good Neighbor Agreement. I left you a phone message asking if next Monday March 26 at 1:00 PM would work for you to meet with us at our home.

Looking forward to that meeting.
Jon Henslin

Quoting "Haeder, Joshua (Rounds)" <josh_haeder@rounds.senate.gov>:

Thanks for speaking with me, shoot over copy of contract to this email and I will review.

Thanks,

Josh Haeder

Northeast Director | Sen. Mike Rounds (R-SD)

March 24, 2018 email to Josh Haeder

Hi Josh,

We did send you a copy of the lease and easement agreement however it bounced back to us because the size was too large to be accepted by the senate server. I will break it down to fewer pages per attachment so hopefully it will go through this time.

We would like to meet with you on Monday at 1:00 PM if that doesn't work anytime on Monday would work or anytime Wednesday until 4:00 PM or anytime Thursday until 4:00 PM. We added these extra times due to the weather and the message bouncing back. Hope one of those works for you.

Jon

April 2, 2018, meeting with Josh Haeder

April 5, 2018, email to Josh Haeder

Hello Josh,

Josh, thank you for taking the time to meet with Nancy and I on Monday. I hope we didn't keep you too long. We would not want to interfere with your daughters' elephant rides!

You had requested some layouts of the Deuel Harvest North and south Wind Farms and they are attached. We will be sending an additional map that shows both project's footprints. We are sending it separately due to the size of the attachments.

The maps show the project footprints, turbine locations and residences (participating and non-participating). At the Special Excepting Public Hearing the Developer provided the County with three maps showing various possible turbine locations for each project North and South (the zoning regulations call for a map - singular). The Developer requested approval with the stipulation that they could change the number and location of the turbines in the final layout submitted for a building permit, as long as they met the Counties zoning regulations and stayed within the project footprint. The Special Exception was granted. We can discuss this further at our next meeting.

Could we schedule another meeting at our home on April 17th, 18th, 19th or 20th? We do have some other residents that would like to share their concerns. If possible plan for a two hour visit. We can furnish coffee and a veggie/fruit plate.

Again thank you for listening to our concerns.

Jon and Nancy Henslin

April 23, 2018, second meeting with Josh Haeder

April 5, 2018 email to Josh Haeder

Dear Josh Haeder,

Josh, I don't know how to put into words the enormous amount of appreciation that Nancy and I have for you taking the time to meet with us. I know the whole group that was here Monday shares that sentiment. It was refreshing to have someone sincerely listen to our concerns.

I know you heard from us that we are not against wind energy. If you had the time to listen to the entire video of the January 22, 2018 Public Hearing, regarding Invenergy's application for a Special Exception to construct two Wind Energy Systems (WES) in Deuel County; that fact would be evident. However, we are concerned about the effects of WES on health, property rights, and property values. We are also concerned about the approval process, funding, and overall plan (including cost vs benefit).

Wind Lease and Easement Agreement

Josh at our first meeting we reviewed a Wind Lease and Easement Agreement used by Invenergy. Attached you will find another Wind Lease and Easement Agreement that is being used in South Dakota by Crown Ridge Wind Energy Center LLC., an affiliate of NextEra Energy Resources, LLC. I did quickly read thru the agreement and found many items that were similar to those we addressed in the Invenergy Agreement. You can have your legal staff review it. I did wonder about the last sentence in 3.5 Exercise of Option, you may want to look at that.

Lighting

At the Monday meeting I gave you a handout on Lighting. I would like to explain that handout better. Number the sheets from 1 to 6 and the explanation is as follows.

Page 1, is a fact sheet I prepared regarding lighting for the WES projects that were approved at the January 22, 2018 Board of Adjustment Meeting.

Page 2, is the presentation that Nancy Henslin gave at the January 22, 2018 meeting.

Page 3, on this page the highlighted area is Section 504.5.e (Deuel Co. Zoning), which refers to exterior lighting. Also refer to item 5 on this page where it states "satisfactory provision and arrangement has been made concerning the following" (which includes exterior lighting and turbine lights are exterior lights).

Page 4, on this page the highlighted area is Section 1215.03.4 (Deuel Co. Zoning), which addresses FAA requirements.

Page 5, this page is copied from Invenergy's Special Exception permit application. The highlighted area refers to Section 504.5.e. The only exterior lighting addressed is lighting for their O&M Building.

Page 6, this page is copied from the Board of Adjustments' Findings of Fact for Invenergy's Special Exception. In its Findings of Fact the Board of Adjustment fails to even identify exterior lighting.

Comments: The constant blinking red turbine lights, cause light pollution and negatively impact the public's property value and quality of life. The technology to reduce this negative effect is readily available. The question is who is going to require it; County, State, or Federal? Our experience in Deuel County has been that it is not working at the County level even though the County has the authority and responsibility to address the lighting issue. The Developer (Invenergy) has not been willing to provide the technology and at the public hearing for the Special Exception provided false information regarding the Aircraft Detection Lighting System. It appears that the State or Federal government would be the most effective level for implementation. In Deuel County alone the number of wind turbines could increase from zero in 2010 to over 500+ in 2020 to over 1000+ in 2030. I for one, at night want to look at the heavens and see stars, planets, constellations and the moon on a black background.

Property Value

You were also given a handout on property value. As with lighting I would like to explain it better. Number the sheets from 1 to 9 and the explanation is as follows.

Page 1&2, these pages are taken from Deuel County's Zoning Ordinances and cover Purpose,

Special Exceptions and Power and Jurisdiction Relating to Special Exceptions.

Page 3&4, the top of page 3 discusses the purpose and intent of the zoning regulations. The important part here is: "The regulations are intended to preserve and protect existing property uses and values against adverse or unharmonious uses...". The remaining portion of page three and page four relate to effects of a Special Exception on adjoining properties and properties generally in the district. It documents the input we provided the Board of Adjustments at the January 22, 2018 Public Hearing. It also documents the response given by Invenergy.

Page 5, the area highlighted on this page refers to that portion of the county zoning that addresses the effects of the special exception (WES) on adjoining properties and properties generally in the district. The effects mentioned were economic, noise, glare, odor, or other effects. The Board of Adjustment is required to make written findings certifying that satisfactory provision and arrangement has been made concerning these effects. This was not done.

Page 6, the area highlighted was taken from Invenergy's special exception permit application. This section was to address section 504.5.b. It covered the off-street parking portion but completely eliminated the portion related to the effect of the WES on adjacent properties etc..

Page 7, the area highlighted is taken from the Board of Adjustment's Findings of Fact regarding 504.5.b.

Page 8 is an interesting letter put together by Brenda Taylor (Deuel County citizen). In it she documents actual cases where home owners in Deuel/Brookings Counties have had problems selling properties after wind turbines were constructed. The information from local relators is also interesting.

Page 10 is a copy of a letter I sent to the Clear Lake paper regarding property value guarantee. Comments: Do wind turbines effect property value? I am convinced the answer is yes. I have always heard that in real estate the rule is location, location, location. Realtors I have spoken with tell me that wind turbines have a negative impact on property values. Of course if one is purchasing just land with turbines on it and you obtain revenue off them that could be different. Most of the articles I have read state, there is no negative effect due to the presence of wind turbines, have been based upon Spatial Hedonic Analysis. It is interesting that Ben Hoen, the author of many of those reports, in an interview in 2010 stated "I think one of the things that often happens is that (wind) developers put our report forward and say look property values aren't affected, and that's not what we would say specifically. On the other hand, they have little ground to stand on if they say we won't guarantee that." It also appears to me in the Spatial Hedonic Analysis there are a lot of characteristics included for the homes in the study area, which is good. However, it appeared to me that turbine characteristics were not well defined. For example a one hundred foot tall turbine would not have the same effect as a 600 foot turbine at the same distance from a home. Also only the closest turbine distance was considered in the analysis. Obviously a home with one turbine within a mile will be less impacted than a home with 8 turbines in a mile. The amount of negative impact on a home's value increases rapidly as the distance to the turbine decreases. Wind Turbines do negatively affect property values.

Invenergy has assured us that this project (discussed earlier) will not affect property values, which is not true. Our Board of Adjustment has approved the special exception for this project without providing written findings certifying that satisfactory provisions and arrangements have been made concerning these effects. Who will protect the property rights and values in South Dakota Counties? For us the county is not doing the job. Who should? It appears to me that it

would be a State or Federal issue. Another option would be the Counties/State providing training for County Zoning Officers/Boards/States Attorneys. Property values/rights are an important issue, with the large number of current and potential projects, timing is critical. Maybe a moratorium is a logical course of action.

Again Josh thank you for making time in your work schedule to visit our home and listen to all of our concerns.

Sincerely

Jon and Nancy Henslin

August 12 2018 text message to Josh Haeder

Good morning Josh, did you prepare any findings or get any legal opinions done on wind leases?
Jon and Nancy Henslin How is you campaign going?

October 16, 2018 presentation to the Deuel county Commissioners.

The two Deuel Harvest and the portion of Crowned Ridge in Deuel County have a projected cost of about 900 million dollars. The projects have a combined foot print of about 85 thousand acres which is over 20 percent of the land in Deuel County. The impact of these projects (positive and negative) will affect 100 percent of the county.

I am here today as a citizen of Deuel County to express my concerns about the Public Hearings that were held regarding the Special Exception Applications for these projects.

How effective have the hearing been?

Invenergy, NextEra and wind lease holders may feel the hearings were excellent.

Many who had concerns about the projects are probably disappointed.

Most Deuel County residents did not attend the hearing so would not have any comments on its effectiveness. I remember prior to the vote on the Invenergy application one of the board members stated regarding the application document: "I think you all have access to (pause) I'm not 100% sure, but if you want to see it(application) it is up at the zoning office. It's been published for a long time". I doubt that 1% of the voting members of Deuel County have read what was in the application. With all of Deuel County being affected by these two projects, more effort should have been put into educating Deuel County residents.

At the Public Hearing for Deuel Harvest, the number of speakers was limited to about 25, with each speaker allowed three-minutes. Which calculates to 90 seconds per project. At the Public Hearing for Crowned Ridge no limits were placed upon the number of speakers, however, a three-minute time limit was again used. Since there was a time limit imposed, many of the speakers were not able to communicate their whole concern, which is unfortunate. Some presenters brought along printed copies of their presentations and supporting data so that it could be reviewed by the Board, if the speaker were unable to complete their talk in the three minutes. In the case of Deuel Harvest Wind, providing printed copies was a waste of time for the board

voted on the Special Exception that evening. They had no time to consider the printed information provided.

One of the concerns that I had was flashing red lights. At the Public Hearing for Deuel Harvest, it was suggested that an Aircraft Detection Lighting System be used. When the Board asked Invenergy about the use of that system, Invenergy said that Aircraft Detection Lighting System was unproven technology, which is untrue.

When the Public Hearing was held for Crowned, the Board asked about the use of an Aircraft Detection Lighting System. NextEra indicated an Aircraft Detection Lighting System would require a two-step approach and that it would be a “departure from the intent” of a lighting system. Wrong on both accounts. The intent of the lighting system is to warn aircraft not provide constant flashing lights. The Aircraft Detection Lighting System provides the required aircraft warning. An Aircraft Detection Lighting System and a constant flashing lights system have the same approval process.

Any Wind Energy System developed in Deuel County or expanded in Deuel County should require an Aircraft Detection Lighting System. Since Invenergy provided incorrect information their Special Exception should be amended to include an Aircraft Detection Lighting System.

I am also concerned about property value impacts. Special Exception Application Documents prepared by Invenergy and NextEra do not address property value impacts on adjacent properties. The Board of Adjustments is specifically required to consider the property value impacts on adjacent properties.

Commissioner Steve Rhody allowed me to question Invenergy about property value impacts not being included in their Special Exception Permit application. Invenergy spoke but did not provide an answer to the question.

NextEra was asked about the effects of their project on property values – specifically regarding non-participants. Their response indicated there are no long-term negative impacts on home values. NextEra’s representative spoke of an extensive study consisting of 50,000 homes in 9 states and 27 counties that found no net negative or positive effects.

The extensive study referred to was done by the Lawrence Berkeley National Laboratory (LBNL). It is interesting that Ben Hoen, the primary author of the extensive report has said:

“I think one of the things that often happens is that (wind) developers put our report forward and say look property values are not affected, and that’s not what we would say specifically. On the other hand, they have little ground to stand on if they say we won’t guarantee that.”

That statement should ring a bell with you. During the Hearing held to update the Wind Energy System ordinances Gary Dejong told the Wind Energy System developers to: “Put their money where their mouth is” in regard to property value guarantees.

I have copies of a few papers that address problems related to the extensive study identified by Next Era. One of the authors Albert Wilson states “the Report should not be given serious consideration for any policy purposes. The underlying analytical methods cannot be shown to be

reliable or accurate”. Another article by Michael McCann states “Regardless of terminology or focus, the fact is that the raw data shows a post construction negative impact of 28% for homes less than 1-mile from turbines vs. homes in the 3-10-mile range”

The visual impact of wind turbines has been researched. It is interesting that the number of turbines visible and the distance to the turbines both affect property value. One research study (Yasin Sunak and Reinhard Madlener) identifies over 10% reduction in property value if eight or more turbines were visible.

The PUC hired David Lawrence, a South Dakota State-Certified General Appraiser. He was hired to determine if the studies and testimony of the applicant adequately reflect the potential impact to the value of properties in the vicinity of the proposed Crocker Wind Project. His answer was:

“It is my opinion that the studies and testimony do not provide adequate market evidence that can be applied to the subject area of the Crocker Wind Project.” Note these studies included the LBNL studies referenced by NextEra.

About a month later, David Lawrence was again hired by the PUC to review Dakota Range I and II. He was again asked the same question related to that project. His answer was:

“It is my opinion the studies and testimony presented by Dakota Range provide a good starting point; however, the studies presented have limitations that need to be considered for their applicability to South Dakota.” Note these studies included the LBNL studies referenced by NextEra.

David Lawrence believes; a comprehensive study from the market area of South Dakota will provide the evidence that is required to determine the potential impacts of a wind energy project on property values. The methodology that is applicable in this type of study is referred to as the case-by-case sales comparison approach which provides a more reliable alternative to the hedonic analysis.

I believe the comprehensive study identified by David Lawrence needs to be done immediately. Such a study would take about 6 months. The study would provide a reliable tool in South Dakota to assess impacts on property values. Any Special Exceptions approved prior to the completion of such a study needs to include a property value guarantee.

Getting back to the Public Hearings. The items I brought before the Board of Adjustment at the Deuel Harvest Public Meeting were not adequately addressed. Satisfactory provisions and arrangement should have been made for these issues. Others who tried to express their concerns in the 3 minutes provided, felt the same way. It appeared the public hearing for Deuel Harvest had been scripted ahead of time (possibly by First District). Our voices were heard, but very little was listened to.

Regarding the Crowned Ridge Hearing, 30+ speakers addressed the Board of Adjustments. Were any asked follow up questions? I hope that is not an indication that they were only heard

but not listened to. It is encouraging that the Board did not immediately vote on the Special Exception. Not voting will allow them time to consider the public input provided.

In closing:

The Special Exception process for large Wind Energy Systems can be very difficult. To move forward with these complicated projects, every “I” must be dotted and every “T” crossed. Doing it right will take time. The application needs to be gone thru line by line and if deficiencies are found, address them and if concerns are raised, solutions should be explored. We must remember that our requirements listed in the ordinances are minimum requirements and if needed, more strict measures may be taken. The Board must religiously adhere to the responsibilities given to them in the zoning regulations including those associated with Special Exceptions. The public should be well informed regarding projects of this magnitude. One or more public information meetings may be necessary. Public Hearings should be conducted in such a manner that the public feels their input is listened to and considered by the Board members. Enough time must be provided for the public to present their input.

January 22, 2018, presentations for the special exception public meeting.

Effects on Adjoining Properties

Deuel County Zoning states in section 504 the following:

Part B in this section refers to two separate items. One is off street parking and loading areas which Invenergy’s application addresses. However the second part of this ordinance refers to **the economic, noise, glare, odor or other effects of the special exception on adjoining properties and properties generally in the district.**

The economic, noise, glare, odor or other effects are those caused by the special exception which is the Wind Energy System (WES) not the off-street parking and loading areas. These items need to be addressed, especially the economic effects of the turbines on adjacent residences and businesses.

7.5 Permit Expiration

Deuel County Ordinance addresses the expiration of a Wind Energy System Special Exception Permit. It states: “the permit shall become void if no substantial construction has been completed within three (3) years of issuance.”

The Deuel Harvest Wind has requested that substantial construction be defined as ‘pouring a single foundation within the project footprint’. This definition is the definition used in SD Codified Law to define the “development of potential to produce energy”.

The two definitions are not interchangeable. For a large Wind Energy System (WES) the pouring of a single foundation does not seem to constitute substantial construction. Leaving the

wording as it currently reads in the zoning, retains control in the county and requires the permittee to show substantial progress. The county can always extend the permit if necessary.

In addition if Invenergy hold to the project schedule provided, construction will be completed in less than 2 years for the North Project and less than 3 years for the South Project.

Decommissioning Plan

Deuel County Zoning states in part: the decommissioning plan shall include the permittee post a bond or other adequate security sufficient to pay the entire cost of the decommissioning process.

Deuel Harvest states in their application regarding the decommissioning process the following. To avoid duplication and potential conflicts in obligations Deuel Harvest requests that the county defer to and accept the SDPUC's final decision on financial assurance.

However the SD Energy Facility Siting Rules states the following regarding decommissioning of Wind Energy Facilities (20:10:22:33:01)

Decommissioning of wind energy facilities -- Funding for removal of facilities. The applicant shall provide a plan regarding the action to be taken upon the decommissioning and removal of the wind energy facilities. Estimates of monetary costs and the site condition after decommissioning shall be included in the plan. The commission **may require** a bond, guarantee, insurance, or other requirement to provide funding for the decommissioning and removal of a wind energy facility. The commission shall consider the size of the facility, the location of the facility, and the financial condition of the applicant when determining **whether to require some type of funding**. The same criteria shall be used **to determine the amount of any required funding.**"

As stated earlier Invenergy has requested in order to avoid duplication and potential conflicts in obligations, Deuel Harvest requests that the County defer to and accept the SDPUC's final decision on financial assurance. However by so doing the County may not receive the adequate security that our ordinance requires. The ordinance states: The decommissioning plan shall include the requirements that Permittee post a bond or other adequate security sufficient **to pay the entire cost** of the decommission process.

Invenergy's request does not assure adequate security nor full cost of the decommission process; therefore it would not be prudent to grant this request.

Lighting

The Deuel Harvest Special Exception Permit Application contains information on lighting.

I would like to submit the following regarding the lighting of turbines.

Last year North Dakota signed into law a bill which requires "Light-Mitigating Technology Systems" on Wind Energy Systems (WES) capable of producing more than 500 kW of electricity. The system first proposed was an Aircraft Detection Lighting System (ADLS). In December of 2015, FAA introduced standards for ADLS. The first FAA approved commercial

operation of an ADLS was installed in Wyoming NY. The Wyoming NY installation was very effective. An article about this installation stated “Since we turned the system on in Wyoming, we regularly see nights where the lights are off 99% of the time.”

What will Deuel County look like in 5-10 years? If Wind Energy Systems (WES) continue to expand in the county, and additional phases add more and more turbines within the footprints of existing Wind Energy Systems (WES), we will no longer have the prairie view that was so familiar to indigenous peoples and our forefathers. The landscape will be a metal forest of turbines. However, at night, if the Aircraft Detection Lighting Systems (ADLS) is installed, we may be able to enjoy the same view of the stars that those who were here before us marveled at years ago.

I believe that if a public meeting had been held on these two projects and our citizens (participating and non-participating) had been allowed to freely express their views on this subject, the vast majority would have requested the red lights remain dark and only flash when an aircraft is detected.

We encourage the Board of Adjustment to require that all turbines in Deuel County have Aircraft Detection Lighting System (ADLS) technology. This technology should be part of the initial construction not delayed to be incorporated at a later date.

And

b) For any unwritten communications, provide the date of the communication, the persons involved, and the subject matter of the communication.

January 2019, met with Adam Behnke, Conservation Officer (SD Game Fish and Parks), subject matter bald eagle nest.

September 18, 2018, voice message from Jennifer Hieb regarding response from Senator Rounds regarding PTC.

January 2019, phone call with Josh Haeder regarding legal opinions on wind leases.

1-13) With respect to your statements at the January 24, 2019, public input hearing, state all facts that support the statements you made and produce copies of all documents that support statements you made.

All statements should be supported in the information provided to the PUC. One exception is the article related to Suicide. That article can be found at:

<https://docs.wind-watch.org/Zou-suicide-2017-Oct.pdf>

Dated this 26th day of February 2019.

By /s/ Jon Henslin

Jon Henslin







1020 Lake Alice Drive

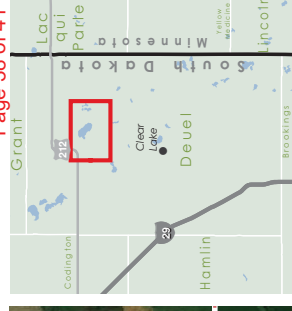
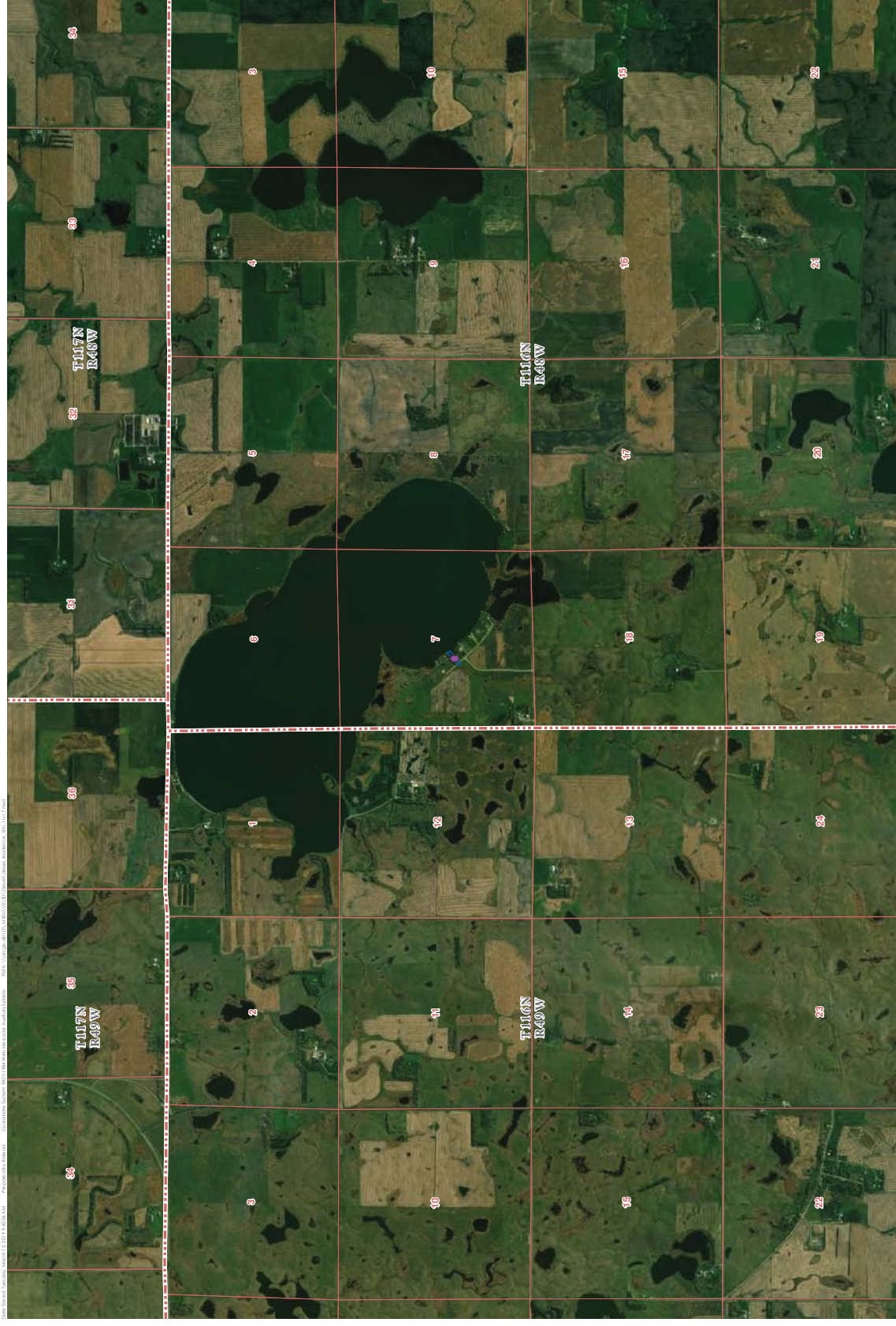
Clear Lake, South Dakota

jnhenslin@itcmilbank.com



Legend

-  Turbine Location
-  Residence
-  Residence to Turbine
-  Parcel Boundary
-  Township/Range Boundary
-  Section Line



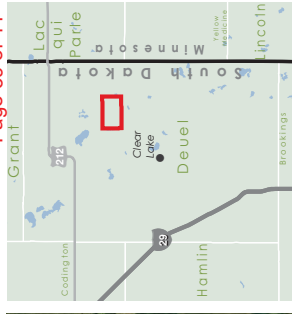
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Feet

Legend

- Residence
 - Parcel Boundary
 - Township/Range Boundary
 - Section Line

Deuel Harvest North Wind Farm | Deuel County, South Dakota



Legend

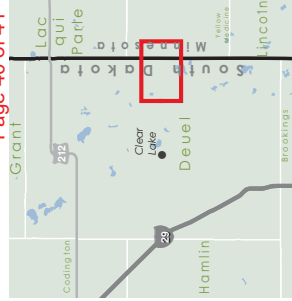
- Turbine Location
- Potential Home Site
- Residence to Turbine
- Parcel Boundary
- Township/Range Boundary
- Section Line

Residence Summary: Heath Stone

Deuel Harvest North Wind Farm | Deuel County, South Dakota

Rev. 00
March 12, 2019

D:\GIS\Projects\JT-1\Map_Series\Map_Series_12_2019_4-4200_A4.mxd Coordinates: NAD83 WGS 1984 Web Mercator Units: Feet Date: 12/11/2019 10:07 AM



Legend

- Residence
- Parcel Boundary
- Township/Range Boundary
- Section Line

Residence Summary: Will Stone

Deuel Harvest North Wind Farm | Deuel County, South Dakota

Rev. 00
March 12, 2019

Devel Harvest North Wind Farm | Deuel County, South Dakota



Legend

- Turbine Location
- Residence to Turbine
- Parcel Boundary
- Township/Range Boundary
- Section Line



Residence Summary: Stone Conservation Acres

Deuel Harvest North Wind Farm | Deuel County, South Dakota

Rev. 00
March 12, 2019

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE
APPLICATION BY DEUEL HARVEST
WIND, LLC FOR A PERMIT OF A
WIND ENERGY FACILITY AND A 345-
kV TRANSMISSION LINE IN DEUEL
COUNTY

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CERTIFICATE OF SERVICE

EL18-053

I hereby certify that true and correct copies of

John Homan's response to PUC Staff's 1st set of data request

were served electronically to the Parties indicated below, on February 25th, 2019, addressed
to:

Ms. Kristen Edwards Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 Kristen.edwards@state.sd.us (605) 773-3201 - voice	Ms. Lisa M. Agrimonti - Representing: Deuel Harvest Wind Energy LLC Attorney Fredrikson & Byron, P.A. 200 South Sixth Street, Suite 4000 Minneapolis, MN 55402-1425 lagrimonti@fredlaw.com (612) 492-7000 - voice (612) 492-7077 - fax
Ms. Amanda Reiss Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 amanda.reiss@state.sd.us (605) 773-3201 - voice	

Date: 2-25-19

John Homan
Intervenor
4114 12th Ave. NE
Watertown, SD 57201
Homan1971@gmail.com

**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**

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**INTERVENOR JOHN HOMAN'S
RESPONSE TO PUC STAFF'S FIRST SET
OF DATA REQUESTS**

EL18-053

Below, please find John Homan's responses to Staff's First Set of Data Requests. The original request is restated and followed by my response.

1. Provide copies of all data requests submitted to or by you and copies of all responses provided to those data requests. Provide this information to date and on an ongoing basis.

Yes, we will include that information and forward it to you.

2. Refer to SDCL 49-41B-22.

A. Please specify particular aspect/s of the applicant's burden that you intend to personally testify on.

Applicant has the burden of proof that the project will not have negative impacts on, or cause the following issues:

1. The project's effect on environmentally sensitive area that will destroy the habitat for the existing wildlife, many different species of songbirds, waterfowl, eagles, turkeys, the list is long.
2. Our deer population that our property and trees support year round.
3. We have a large population of monarch butterflies, and the effects on that population.
4. The impact it could have on the Northern Long-eared Bat, and its habitat and feeding areas.
5. The effect of the project on Monighan Creek and its drainages, and the concern for the springs that feed it. It's a home to the Northern Redbelly Dace, a threatened species.
6. The fire dangers from turbine fires and how it could devastate acres of wildlife habitat, trees, shrubs, grassy areas, and nearby homes and buildings.
7. The concern for the safe usage of our landing strip, Homan Field, which is permitted and FAA approved.
8. The negative impact that the project would have, because of the close proximity of industrial wind towers to our property. Such as how it would affect the health and well being of our family's usage and enjoyment of the property in a manner that we have for

the past 30 years - our usage has no negative effects on any neighboring properties. Also the negative effect it would have on the property value, the value that is attributed to the use of the property as well as the monetary value.

B. Please specify particular aspect/s of the applicant's burden of proof that you intend to call a witness to testify on.

I have no witnesses at this time but would reserve the right to add witnesses at a later date, and to call them to testify remotely if needed.

3. Refer to SDCL 49-41B-25. Identify any "terms, conditions, or modifications of the construction, operation, or maintenance" that you would recommend the Commission order. Please provide support and explanation for any recommendation.

I would like to have the applicant provide an independent geological and hydrology study of the project area within a minimum distance of two miles of Monighan Creek, and within a two mile distance from our property boundaries. It is critical since Monighan Creek is a spring-fed, free flowing creek and our property contains 4 spring-fed dams that could be impacted by contamination from the process of construction and the long term damage that could be caused by the impacts of these massive turbine foundations and the ground vibrations caused by the operations of the towers. One of our dams is a natural restocking fishery.

Monighan Creek is one of a few homes to the Northern Redbelly Dace minnow which is on the state threatened species list.

I would like the applicant to show locations of all aquifers and the depths to those aquifers. We request an aquifer study and report to be submitted with their application.

A. Specifically, what mitigations efforts would you like to see taken if this Project is constructed?

1. That the towers be set back a minimum of 2 miles from environmentally sensitive areas, sensitive because of the concentration of wildlife and the forested and riparian areas.
2. One and one half mile setbacks from non-participating residences, especially in the case of multiple residences in concentrated areas.
3. One half mile set back from all non-participating property lines.
4. Zero shadow flicker on non-participating residences, and any outbuildings on non-participating properties. A maximum of 15 minutes per day on non-participating properties at property boundaries.
5. A maximum of 35 dBA at non-participating residences.

6. A maximum of 38 dBA at any non-participating outbuilding that are for human use, such as workshops, garages, barns, etc.
7. A maximum of 45 dBA at non-participating property lines.
8. The limits of noise to be verified by an independent testing company paid for by the applicant.
9. A one mile set back to the west of Homan Field runway, and a two mile set back to the north, south, and east to accommodate the flight path for safe operations.
10. A 1500 foot set back from all public roads and right-of-ways for safety concerns - i.e. ice throw, etc.

4. Please list with specificity the witnesses that you intend to call. Please include name, address, phone number, credentials, and area of expertise.

I have no witnesses at this time but would reserve the right to add witnesses at a later date, and to call them to testify remotely if needed.

5. Do you intend to take depositions? If so, of whom?

None at this time, but I reserve the right to submit depositions that were taken in our on-going lawsuit against the Deuel County Board of Adjustment for conflicts of interest during the Deuel Harvest permitting process.

Date: 2-25-19

John Homan

John Homan

Intervenor

4114 12th Avenue NE

Watertown, SD 57201

Homan1971@gmail.com

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE
APPLICATION BY DEUEL HARVEST
WIND, LLC FOR A PERMIT OF A
WIND ENERGY FACILITY AND A 345-
kV TRANSMISSION LINE IN DEUEL
COUNTY

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CERTIFICATE OF SERVICE

EL18-053

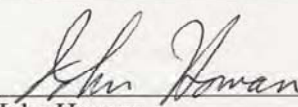
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Ms. Amanda Reiss Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 amanda.reiss@state.sd.us (605) 773-3201 - voice	

Date: 2-25-19



John Homan
Intervenor
4114 12th Ave. NE
Watertown, SD 57201
Homan1971@gmail.com

**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 JOHN HOMAN'S**
* **RESPONSES TO APPLICANT'S FIRST**
* **SET OF DATA REQUESTS**

* **EL18-053**
*
*

Below, please find John Homan's responses to Applicant's First Set of Data Requests. The original request is restated and followed by my response.

1-1) Provide copies of all data requests submitted by PUC staff to you in this proceeding and copies of all response to those data requests. Provide this information to date and on an ongoing basis.

1-2) Identify the address of your permanent residence (where you reside).

John Homan
4114 12th Ave NE
Watertown, SD 57201

1-3) Identify all property you own within the vicinity of the Deuel Harvest North Wind Farm ("Project") and the location (by section, township, and range) of such property. Are there any habitable buildings on the property you own?

John Homan = 224 acres - Sec 20, Twp. 116, R 48
John Homan = 138 acres - Sec 15, Twp. 116, R 49
Homan Steel Constr, Inc = 310 acres - Sec 32, Twp. 116, R 47
House under construction, a 48' x 70' building, includes office, shop, and storage.

1-4) If you have a residence in the vicinity of the Project, identify whether you live at the residence throughout the entire year and, if not, how many months of the year you reside at the residence.

None at this time.

1-5) Identify how you use your land, including, but not limited to, whether you use your land for agricultural purposes.

/s/

The land in section 32 = some farm land, pasture, CRP, and used to support wildlife, and for outdoor recreation.

1-6) Identify any sensitive or unique features of your property that you assert would be impacted by the Project.

Description of section 32 property is as follows:

The property is crossed by Monighan Creek, in the half mile we have 1.3 miles of creek. The entire valley is covered with a variety of natural growth, shrubs, trees, native plants and grasses, as well as many acres of planted trees and shrubs. The valley transitions to rolling hills and drainages.

In addition to the free flowing, spring fed creek, we have developed 4 spring fed dams with bordering grasses, cattails, trees, and shrubs. One of the dams is a approx. 6 acre natural restocking fishery.

It is a haven for all kinds of wildlife!

The property in section 20 is a mix of pasture, crp, farm land, and several acres of trees and shrubs. The property includes an approx. 35 acre lake/slough that is a waterfowl haven, within the designated duck nesting habitat area.

The property in section 15 is pasture land dotted with cattail sloughs.

1-7) Describe your concerns regarding the Project.

The close proximity of these massive, industrial wind turbines will be detrimental to all the birds and wildlife.

As the proposed project shows, we will have approximately 9 towers within a mile of the property, and approximately 17 towers within 2 miles of the property in section 32. There will be towers adjacent to my property in section 20. The closest one approx. 600' from our property line.

I am concerned that the close proximity of the towers will harm the usage of the property, by all the wildlife, local and migratory.

It will be very harmful for the usage of the property that we have worked for an invested in for 30 years.

The work and enjoyment that our entire family has invested in, including our children and grandchildren. We are concerned about the safety and health of our family in the normal use of the property that we are accustomed to.

The property in section 32, includes approximately 50 acres of trees and shrubs. It was a playground for our children and it is also now for our grandchildren!

We are concerned about fire danger to our persons and trees and shrubs, because of the proximity of wind turbines. In a rural situation like this, a fire could not be controlled in a location like this.

The landing strip that we are constructing would not be safe to use, and safety was a concern of our zoning board before they granted us the permit, as well as a great concern to our family and anyone else that would be using the landing strip.

I am also greatly concerned about possible damage to, and contamination of, our numerous springs and aquifers.

1-8) Describe what mitigation measures would address the concerns you identified in response to Request 1-7 and whether any of the mitigation measures identified by the Applicant in its Application could address any of your concerns.

Towers could be moved or removed to accommodate our concerns, without any harm to the overall project. Already many original towers have been moved or removed. Towers need to be moved to allow for the safe usage of our landing strip. Towers should be moved to prevent damage to the environmentally sensitive areas that support many species of wildlife. Towers also need to be moved to prevent problems from noise, infrasound, and shadow flicker for ourselves and many other non-participants to prevent health problems, quality of life problems, and loss of property values.

1-9) Identify any documents, information, education, training, or professional experience you have relied upon to form your opinions concerning the Project. Where you have relied upon documents or other tangible materials, please provide such documents and/or materials.

I would like to reserve the right to provide documents at a future time. Information is readily available from many sources, studies, and news reports of issues caused by industrial wind turbines.

My professional experience is from traveling all over the United States in the course of our construction business and hearing about the negative effects of living near industrial wind projects.

1-10) Identify any witnesses, including expert witnesses, you plan to have testify on your behalf. For each witness (including expert witnesses), please provide a resume or statement of qualifications of the witness(es), identify the subject matter regarding which the witness will testify, and identify and provide any exhibits the witness will refer to or introduce.

I would reserve the right to add witnesses at a later time.

1-11) Are you asserting that the Project will negatively impact your property value? If so, provide copies of any appraisals or other valuations that have been conducted for such property within the last ten years.

I am absolutely asserting that the project will negatively affect the value of our property in the respect of the purpose and use that the property was developed for, in the past, and for the future. Value of property is not always based on monetary value, usage value is determined by different individuals. I do not have a current appraisal at this time, but would reserve the right to submit later.

1-12) Identify any communications, written or otherwise, you have had with units, officials, and/or representatives of local, state, and/or federal governments or agencies concerning the Project.

a) For any written communications, provide a copy of the communication; and

I will include written letters to the county boards and presentations at hearings. I will submit others that may have been sent as I find them.

b) For any unwritten communications, provide the date of the communication, the persons involved, and the subject matter of the communication.

I have personally talked to Deuel County Commissioners, at different times, while county setbacks etc. were being determined, and at Commissioners meetings. Also many conversations with members of the zoning board, at the zoning board meetings, concerning my landing strip, over a 6 month period in 2017. Most of the conversations were about how my landing strip would affect the possible future industrial wind towers.

1-13) Your Application for Party Status does not identify your interest in this proceeding. Please briefly explain your interest in this proceeding.

Explained in 1-7.

1-14) Please state the address where you reside.

4114 12th Ave NE

Watertown, SD 57201

1-15) Does Homan Steel Construction, Inc. ("Homan Construction") own the property legally described as the W1/2 Section 32-116-47, Glenwood Township, Deuel County, South Dakota ("Glenwood Property")? If so, please describe the Homan Construction business activities that occur on the Glenwood Property.

Yes, it is used as an office, shop, and equipment storage for farming and construction activities, as well as recreational activities.

1-16) On July 31, 2017, Deuel County issued a building permit, Attachment 5, for a "new 24' x 40' house" on the Glenwood Property. With respect to the proposed house, please state a) the status of construction; b) the intended purposes for the residence; c) whether the house has a certificate of occupancy; and d) whether, if completed, the house is occupied.

Construction to be completed spring 2019.

1-17) On September 11, 2017, Deuel County issued a Special Exception Permit, Attachment 6, for construction of "an airplane landing strip for private use" on the Glenwood Property ("Private Landing Strip"). With respect to the Private Landing Strip, please state a) the status of construction; b) the intended purposes for the air strip; c) whether the air strip has been used; and d) the intended use of the air strip, including frequency and timing of use.

Construction to be completed spring 2019. The intended purpose and usage will be for our family's use for transportation to and from the farms and surrounding recreation areas. For use by friends and business associates if requested. For use by other local residents if requested, and for any emergency uses necessary. For use by airplanes and ultralights.

1-18) Describe your experience and qualifications related to piloting an aircraft.

I am not a licensed pilot.

1-19) Describe the type of business engaged in by and ownership of Homan Steel Construction, Inc.

Homan Steel Construction, Inc. owners John and Teresa Homan.

I have been in the construction business as a subcontractor and general contractor since 1970. Grain storage handling, grain elevator construction, wood framed and steel frame buildings - farm and commercial, concrete construction. We have built projects from North Carolina and Georgia to Oregon and California, from Canada border to Texas valley, from Michigan to New Mexico. We have traveled extensively through the United States due to our construction business.

1-20) Referring to Attachments 1 and 2, did you submit these attachments to the Clear Lake Courier?

I did provide maps from Invenergy, and supplied information included.

1-21) Does Attachment 3 depict the location of the Private Landing Strip and location of the

new house on the Glenwood Property?

That is correct.

This transition includes 3 letters of communications in response to your request.

Labled A, B, C.

Date: 2-25-19



John Homan

Intervenor

4114 12th Avenue NE

Watertown, SD 57201

Homan1971@gmail.com

John Homan

4114 12th Ave NE

Watertown, SD 57201

605-520-4992

E mail: homan 1971@gmail.com

Deuel County Commission Members and concerned parties,

I am writing this letter in regards to, and because of my concerns about the proposed wind tower project in Deuel County.

I currently live near Watertown, but I own property in Deuel County, some of which is northwest of Gary. I need to point out that I do not consider myself an outsider. I grew up on a farm in the county, went to school in Clear Lake, have always done business and my banking at DNB, and have many relatives in the county. In our construction business, I have worked with and for farmers and agricultural business's my entire life, and have a pretty good understanding of it.

I am not in favor of these industrial wind towers for several reasons. One reason being the proposed setbacks. The setbacks as currently proposed, I believe would negatively impact many residences and landowners. They should be greatly increased. These large wind turbines will negatively affect safety, health, well being, property values and overall quality of life for the community.

This area is very unique in many respects. In its geography, its creeks and trees, its hills and valleys, its wide open spaces and open views, its clean air etc.. It is a big part of the reasons people choose to live here, to farm here, to raise livestock, and to raise families here. I have seen more than enough of our country to know that this area is special. I've had many people from Watertown and other places, tell me how unique this area is and how they enjoy coming out. We, referring to my family, and all the people living around the entire area, get to enjoy the creek drainages, the trees, the lakes, the sloughs, all the wildlife that we have in the area, including deer, turkeys, pheasants, even bald eagles, and all kinds of birds if you take the time to look and enjoy. Another thing we wouldn't want to lose is the view of the night sky with little or no light pollution, it is amazing and everyone should check it out with your kids or grandkids. The sun rises and sunsets should not have to be viewed by anyone through the obstruction of a 500' wind tower. I'm sure there are many other areas in the county that many people feel the same way about. These things may not seem important to some people now, but at some time in their lives, priorities change and they will be important.

These huge industrial wind towers will forever change the views and the landscapes for everyone, and for their children and grandchildren!

I would like to touch on the property rights issues. I understand that all property owners should have the right to use their property as they choose, as long as it does not negatively affect surrounding property owners. Many things have restrictions such as water, air pollution, noise pollution, as well as building heights, in rural as well as urban areas. Ordinances seem more strict for cell phone towers than they are for these much larger and much more dangerous wind towers.

People buy property for many reasons, not just economic but also quality of life reasons. Home owners and other property owners should feel that they have the right to maintain their quality of life as they chose, and that someone else should not have the right to negatively affect it. For me personally, I have put an awful lot of time and money into enhancing and developing my property for the benefit of the wildlife and the environment, and the farmland quality, for my family as well as others. I hope it has also benefitted other people in the surrounding community.

I believe most people would not have built homes or acreages if wind towers would already have been in place. I think it will greatly restrict any further development in the rural areas or even in the towns that are in any close proximity to the wind towers. I personally would not carry through with plans to build a house or any business in the area if it is in the vicinity of industrial wind towers. Please consider the rights of all property owners who want to enjoy their homes as they are currently.

There would also be the fairness issue to all that would be impacted if the project went ahead. I would think that individual rural home owners and all property owners, would have the right to the same setbacks as others. If Lake Cochran residences are granted a two mile setback, I would think that Clear Lake, Gary, or any other town or even rural residences and any non participating properties would be entitled to the same rights under county protection. I feel that county government should protect everyone's property values. If someone wanted to grant a variance for a closer setback to his own property, that could be a personal choice. I personally feel that if you were in the position of having towers placed on all sides of your own property, a 2 mile setback would not be enough.

I haven't even touched on the health and safety issues and effects of industrial wind towers. Damage can be done in a quite extensive area because of structural failure. Ice that forms on the blades can fly off; ice that we know can be an issue in this area. Despite what the wind companies would like everyone to believe, there is a lot of info and research available on the various subjects if you take the time to check it out.

I would not want to subject my kids or grandkids to any of these issues if I didn't have to, and I assume most other people wouldn't either. I have to ask, would you personally want your own families living close to these huge wind towers? The potential for increased profit to some in the community should not justify such risks to health and safety for many others.

Let me make the point that I would in no way consider these wind towers as an agricultural project. This is strictly an industrial project and should be looked at as such. You folks have a big responsibility to all the property owners in the county.

In regards to the project and the companies, there are several questions that need to have complete and accurate answers, not just vague soothing words from the wind companies. There are cases where wind projects have been idled or abandoned, what happens and what are the responsibilities of the wind companies?

If they lose tax incentives is the project even viable, do they file bankruptcy and walk away?

If the company goes bankrupt, what happens?

If they sell to another company, what happens?

If the second or third company goes bankrupt, what happens?

What happens to payments to the landowners, are they guaranteed perpetually, if the company goes bankrupt, are the agreements null and void, or does a new company have the right to negotiate down?

If the towers are abandoned, I believe it would not be economically feasible to take down, scrap out, or move to rebuild. It would probably be cheaper to build new towers somewhere else. It may be more expensive to remove the entire structure than it was to build it. I believe it would financially break a lot of landowners to have to remove the towers on their own. The wind companies should therefore be bonded for the most extreme situation.

I have traveled through and worked in many parts of this country in the last forty some years and spent a lot of time in rural areas. I have never met anyone who was glad to be in any close proximity to a wind tower project. I have had many people relate negative stories and opinions, because of health problems and concerns, as well as aesthetic reasons, which to many may not sound as important.

I do understand the economic reasons that a project like this sounds attractive to many people, as the supposed increase in tax revenues. But, I do think there will be an economic and development drawback because of it, and a decrease in some land values and loss of other developments that would affect tax revenues.

At first, a large project like this sounds good for the county, but I sincerely hope you take a look at the long term aspect of it, and the overall effect to the community, which I hope you already have. Please ask yourself if you would personally want to live or have your families live next to a large wind tower which will change your landscape and life forever.

With all respect and sincerity, John Homan

3.

Letter To Editor=

I would like to express my opinion about how the zoning board meeting of Jan. 22nd was conducted. In my opinion it was a complete sham with a predetermined result by the zoning board with the help of the wind tower company. The zoning board, who's job it is to protect all the citizens of the county, appears to be nothing but a rubber stamp for the wind company. We have a copy of a letter to the board from Invenergy, dictating how the meeting should be conducted, even to limiting any opposition presenters to the 3 minute limit!

An issue that will severely affect hundreds of people and the entire county for generations, did not have to be limited to one meeting for any good reason! They even limited the number of speakers. Is there a limit to the number of people who's lives will be changed by this industrial wind project?

For a special exception to plant trees to close to a property line, can and would be opposed by an adjacent landowner and they would not be limited to 3 minutes! But for a special exception permit for a 500' wind tower, 550' from my property line, the board can limit my list of opposing reasons to 3 minutes, and then still ignore the reasons! For a house permit in the county, they require details about the exact location and details of the foundation, they did not even have one question about the massive foundation design for a 500' wind tower, how it might affect the local aquifers, underground springs, or possibly pollute our creeks and or wells.

The board obviously did not take the time to do their due-diligence for this concern, as well as many others that would need to be addressed in the sitting of all individual towers. This should be a priority of the board, but they are ignoring it. As I understood from the boards statement, they do not intend to even allow any opposition from adjacent landowners when the wind company applies for a permit for one or all of the 250 500'+ wind turbines, this would be unbelievable!

From my personal experience, it took me approx. 6 months and 5 zoning board meetings for me to be granted a permit for a grass airport landing strip on my property. There was no time restrictions for anyone opposing the project, and they were allowed to oppose it at multiple meetings if they wanted, am I the only one that sees a problem here? By the way, the first question I was asked by the board chairman, when I applied for the landing strip permit, was "how will it affect wind towers", there were no wind towers and there were no permits for wind towers!

The board all stated at the opening of the meeting that they have no conflicts of interest in regards to the wind tower project, from my experience, I personally doubt that. Does having signed a wind tower contract constitute a conflict of interest, you be the judge. State ordinance states that any predetermined bias or potential monetary gain by a public official involved in a decision, constitutes a conflict of interest.

At the 1-22nd meeting the board denied any opposing speakers to defend their statements but gave every opportunity to the wind tower company to rebut any or all issues they disagreed with. There are many other issues about the meeting that may be covered at another time.

I would like to reiterate, it is the duty of the zoning board "to protect the health , welfare, and property value of all the citizens of the county. It is not their duty to make it easier for an industrial wind tower company to make more money at the expense of many in the community.

John Homan

To the editor;

All residents of Deuel County need to be aware of and involved in what is about to happen that will change the county forever. I am referring to the project that could cover the area with 500' industrial wind towers. But the supporters of the project like to refer to this as a "wind farm". There is nothing agricultural about this. The wind tower companies will turn the county into an industrial park and then they will be gone!

I am writing this letter because of my serious concerns for the future of all of the county as well as my own property. I am one of those absentee landowners, but one that does not support wind towers for monetary gain. I currently live near Watertown but spend as much time as possible in Deuel County. I do not consider myself an outsider. I grew up on a farm in the county, went to school in Clear Lake, have done business, and have many relatives in the area. In our construction business, I have worked with and for farmers and agricultural business's my entire life and have a pretty good understanding of it.

This area is very unique in many respects. In its geography, its creeks and trees, its hills and valleys, prairies, open spaces and open views, lakes and sloughs, its clean air, etc.. It is a big part of the reasons people choose to live here, to farm and ranch -raise livestock here, and to raise families here. I have seen more than enough of the rest of our country to know that this area is special. I have had many visitors tell me what a beautiful area this is because of the terrain and the wildlife and the peacefulness. There are many other areas in the county that other people feel the same way about.

Whether you live in Clear Lake, Gary, or any other town or on a farm or ranch or acreage, everyone will be affected by 500' wind towers. Every drive in the country, every quiet evening enjoying our great outdoors, every time you go out hunting, fishing on our many lakes, camping, or just out watching the wildlife or our many birds, you will never be out of sight nor probably out of sound of industrial wind towers! Every horizon you would look at would include looking at wind towers! The sunrises and sunsets should not have to be viewed by anyone through the obstruction of a 500' wind tower. Your children and grandchildren should not have to try to look at the night sky through a veil of blinking red lights. I believe you would be able to see 500' wind towers from about every point in the county.

I have traveled through and worked in many parts of the country in the last forty some years and spent a lot of time in rural areas. I have never met anyone who was glad to be in any close proximity to a wind tower project. I have had many people relate negative stories and opinions because of health issues and concerns, as well property value problems and aesthetic reasons. I do understand the economic reasons that a project like this sounds attractive to some, as the supposed increase in tax revenue, but I do believe there will be economic and development drawbacks because of it and a decrease in land and residential values because of wind towers.

People buy property for many reasons, not just economic but also quality of life reasons. Home owners and other property owners should have the right to maintain their quality of life as they have chosen and someone else should not have the right to negatively affect it. For me personally, I have put

an awful lot of time and effort into enhancing and developing my property for the benefit of wildlife and the environment and farmland quality, for my family as well as the surrounding community. I believe most people would not have built homes or acreages if wind towers would have already been in place. I think it will greatly restrict any further development in the rural areas or even in towns that are in any close proximity to industrial wind towers. Another consideration is the health and safety issue effects of industrial wind towers. Please take some time to check these concerns of many people. Despite what the wind companies would like you to believe, there is a lot of legitimate concerns and problems directly resulting from wind towers. Ask yourself, would you want your own family living next to 500' wind towers. The potential for increased profits for a wind tower company or a few in the community should not justify risks to health and safety for many others. I would not want to subject my kids or grandkids to any of these risks and I assume most other people wouldn't either.

Some may feel wind turbines are beneficial "green" energy and that the harms they will bring to the area are justified, these giant wind turbines will likely never make up for the carbon footprint their construction creates. The only benefit from them is to the wind companies in the form of tax credits, and possibly to landowners who give up control of their land in exchange for some payments from the wind companies, but even for the landowners, any income from wind towers could be offset by many negative effects on crops or land uses and values.

These huge industrial wind towers will forever change the views and landscapes for everyone, and for their children and grandchildren! Some of your children and or grandchildren will never know how beautiful this area of the country was before it was turned into an industrial wind energy park. Everyone, participants and nonparticipants, should ask themselves, what have I done, or further yet, what have I not done to protect the quality of life in Deuel County!

I firmly believe that there will be a time when most of the folks in the county will regret the decision to turn the county into an industrial wind project!

John Homan

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**

* **GARRETT HOMAN'S RESPONSE TO**
* **STAFF'S FIRST SET OF DATA**
* **REQUESTS TO INTERVENORS**

* **EL18-053**
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Below, please find Garrett Homan's response to Staff's First Set of Data Requests to Intervenors. The original request is restated and followed by my response to that request.

- 1-1) Provide copies of all data requests submitted to or by you and copies of all responses provided to those data requests. Provide this information to date and on an ongoing basis.

The Applicant's first data request to Garrett Homan is attached to this response, and I will continue to provide all future correspondences.

- 1-2) Refer to SDCL 49-41B-22.
a. Please specify particular aspect/s of the applicant's burden that you intend to personally testify on.

Particular aspects of the applicant's burden I intend to testify on include:

- 1. The project as proposed does not comply with 49-41B-22 (3) since proposed turbines to the northwest, west, and southwest of our family's airstrip (western half of section 32 in Glenwood township) pose a substantial threat of serious injury or death to users of the airstrip (family, friends, approved users, and the public in emergency situations).**
- 2. The project as proposed does not comply with 49-41B-22 (3) since the minimum setbacks used for siting do not meet the wind turbine manufacturer's (GE) recommendations for the required safety distances surrounding turbines in freezing weather to mitigate hazards associated with ice throw. This puts the safety of neighbors and the general public using roads at risk.**
- 3. The project as proposed does not comply with 49-41B-22 (2) and (3) since construction, operation, and decommissioning of the turbines poses a threat of serious injury to the environment and the social and economic condition of current and future inhabitants as well as health and welfare of the inhabitants.**

- b. Please specify particular aspect/s of the applicant's burden of proof that you intend to call a witness to testify on.

None at this time.

- 1-3) Refer to SDCL 49-41B-25. Identify any “terms, conditions, or modifications of the construction, operation, or maintenance” that you would recommend the Commission order. Please provide support and explanation for any recommendations.
- a. Specifically, what mitigation efforts would you like to see taken if this Project is constructed.

1. In regards to protecting the safety of users of our airstrip, I request the Commission order terms of the project to include:

a) no turbine sites under a one-sided (biased to the East) traffic pattern airspace sized for category B aircraft, and

b) no turbine sites within 10 rotor diameters (4,170 ft or .8 statute miles) of the runway and imaginary approach surfaces for the runway.

Regarding a), the dimensions of the traffic pattern airspace for our airstrip, defined per standards provided in FAA order JO 7400.2L, are 1.5 nautical miles (1.73 statute miles) from the north end, south end, and east side of the runway and .25 nautical miles (.29 statute miles) from the west side of the runway.

Regarding b), the imaginary approach surfaces for our runway, defined per the standards provided in 14 CFR 77.19 for utility runways with visual approaches, extend 5,000 ft from each end of the runway and expand to a width of 1,250 ft centered about the extended centerline. The 10x rotor diameter distance is applied from the outer boundaries of this shape comprised of an approach surface to the south, the runway, and an approach surface to the north. These safe setbacks currently effect turbine sites 106, 107, 108, 117, 123, and 124 from the application layout maps. See the appended figure showing these dimensions and our runway simply illustrated on an excerpt of the application layout map. This could be simplified into a rectangular shape extending 1 mile west, 1.75 miles north, 1.75 miles east, and 1.75 miles south of the extents of the airstrip runway surface.

2. In regards to protecting neighbors and the general public from risk of ice throw, I request the Commission order terms of the project to include minimum setbacks from non-participating property lines or public right of ways of at least 1100 ft to satisfy the recommendations to reduce risk from ice throw provided in “GE Power and Water,

Technical Documentation, Wind Turbine Generator Systems 1&2MW Platform, Safety Manual" (safety manual).

3. In regards to protecting the environment and participants' and non-participants' health and safety, I request the Commission order terms of the project include a state-managed 24-7 hotline and response department for the intended purpose of providing a means for the public to report environmental, health, and safety issues (such as oil leaks or other pollution, ground water contamination, excessive noise and shadow flicker, road or property damage from ice throw or turbine failures, fire, etc.) observed during project construction and operation and to coordinate the appropriate independent assessments and corrective actions. This hotline and response department should be funded by the applicant via an escrow account for the duration of the project, but managed by the state to ensure the public's best interest is being served and to remove any potential for the applicant to delay or mishandle reports due to financial incentives.

- 1-4) Please list with specificity the witnesses that you intend to call. Please include name, address, phone number, credentials and area of expertise.

None are planned at this time, but I reserve the right to call witnesses at a later date.

- 1-5) Do you intend to take depositions? If so, of whom?

None are planned at this time.

Date 2/24/19



Garrett Homan

Intervenor

5669 Maple Grove Road

Hermantown, MN 55811

garhoman@gmail.com

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

- 1-1) Provide copies of all data requests submitted by PUC staff to you in this proceeding and copies of all responses to those data requests. Provide this information to date and on an ongoing basis.
- 1-2) Identify the address of your permanent residence (where you reside).
- 1-3) Identify all property you own within the vicinity of the Deuel Harvest North Wind Farm (“Project”) and the location (by section, township, and range) of such property. Are there any habitable buildings on the property you own?
- 1-4) If you have a residence in the vicinity of the Project, identify whether you live at the residence throughout the entire year and, if not, how many months of the year you reside at the residence.
- 1-5) Identify how you use your land, including, but not limited to, whether you use your land for agricultural purposes.
- 1-6) Identify any sensitive or unique features of your property that you assert would be impacted by the Project.
- 1-7) Describe your concerns regarding the Project.
- 1-8) Describe what mitigation measures would address the concerns you identified in response to Request 1-7 and whether any of the mitigation measures identified by the Applicant in its Application could address any of your concerns.
- 1-9) Identify any documents, information, education, training, or professional experience you have relied upon to form your opinions concerning the Project. Where you have relied upon documents or other tangible materials, please provide such documents and/or materials.

- 1-10) Identify any witnesses, including expert witnesses, you plan to have testify on your behalf. For each witness (including expert witnesses), please provide a resume or statement of qualifications of the witness(es), identify the subject matter regarding which the witness will testify, and identify and provide any exhibits the witness will refer to or introduce.
- 1-11) Are you asserting that the Project will negatively impact your property value? If so, provide copies of any appraisals or other valuations that have been conducted for such property within the last ten years.
- 1-12) Identify any communications, written or otherwise, you have had with units, officials, and/or representatives of local, state, and/or federal governments or agencies concerning the Project.
- a) For any written communications, provide a copy of the communication; and
 - b) For any unwritten communications, provide the date of the communication, the persons involved, and the subject matter of the communication.
- 1-13) In the last five years, how often have you visited South Dakota? Of those visits, how many times did you use aircraft as transportation?
- 1-14) What locations in South Dakota have you visited in the past five years?
- 1-15) How many times in the past five years you have landed an aircraft in South Dakota and, of those times, how many landings were at the Clear Lake Airport?
- 1-16) Describe any ownership interest you have in, or right to use, a personal aircraft.
- 1-17) Describe any interest you have in Homan Steel Construction, Inc. ("Homan Construction") or the W1/2 Section 32-116-47, Glenwood Township, Deuel County, South Dakota ("Glenwood Property")
- 1-18) In your January 15, 2019 comment to the PUC, you state that your "family is currently constructing a 2,350 foot long turf runway, named Homan Field, on the western half of section 32 in the Glenwood township of Deuel County" ("Private Landing Strip"). With respect to the Private Landing Strip:
- a) What is the intended use of the Private Landing Strip?
 - b) You state that turbines on the northeast side of the proposed Private Landing Strip have been removed and "This allows for a one-sided traffic pattern to be flown without flying over any wind turbines, except turbine number 108 which is under the margin the FAA standards establish on the far side." i) What FAA standards are you asserting apply? ii) Is turbine location No. 108 the only turbine location you assert will interfere with the Private Landing Strip? If not, please explain.

- c) You include a discussion of and figure showing approach surfaces. What regulations are you asserting establish these surfaces for the Private Landing Strip?
- d) What experience, education and training do you have regarding wake turbulence and wind shear?
- e) Provide any correspondence to or from the Federal Aviation Administrative regarding the Private Landing Strip.

Dated this 13th day of February 2019.

By /s/ Lisa Agrimonti

Mollie M. Smith

Lisa M. Agrimonti

FREDRIKSON & BYRON, P.A.

Attorneys for Applicant

200 South Sixth Street, Suite 4000

Minneapolis, MN 55402

Phone: (612) 492-7000

Fax: (612) 492-7077

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**

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**GARRETT HOMAN'S RESPONSE TO
APPLICANT'S FIRST SET OF DATA
REQUESTS**

EL18-053

Below, please find Garrett Homan's response to Deuel Harvest Wind Energy LLC's ("Applicant") First Set of Data Requests to Garrett Homan. The original request is restated and followed by my response to that request.

- 1-1) Provide copies of all data requests submitted by PUC staff to you in this proceeding and copies of all responses to those data requests. Provide this information to date and on an ongoing basis.

The Staff's first data request to Garrett Homan is attached to this response, and I will continue to provide all future correspondences.

- 1-2) Identify the address of your permanent residence (where you reside).

5669 Maple Grove Road, Hermantown, MN, 55811

- 1-3) Identify all property you own within the vicinity of the Deuel Harvest North Wind Farm ("Project") and the location (by section, township, and range) of such property. Are there are any habitable buildings on the property you own?

I do not own property in the vicinity of the project.

- 1-4) If you have a residence in the vicinity of the Project, identify whether you live at the residence throughout the entire year and, if not, how many months of the year you reside at the residence.

I do not have a residence in the vicinity of the project.

- 1-5) Identify how you use your land, including, but not limited to, whether you use your land for agricultural purposes.

This question is broad. Assuming the question is in regards to land in the vicinity of the project, I do not own land there. Regarding how we use my parents' property in the vicinity of the project, my family loves to spend time there enjoying nature in the peace and quiet – such as hunting and fishing, watching the variety of birds and wildlife, developing habitat, stargazing with the clear skies, camping, hiking, canoeing, developing habitat, planting and harvesting pumpkins, picking fruit, and generally enjoying nature and our time together.

- 1-6) Identify any sensitive or unique features of your property that you assert would be impacted by the Project.

Unique features of my parents' property that will be impacted by the project include – safe use of the airstrip we're building; abundant wildlife, habitat, and hunting; the local ecosystem, including Monighan Creek and its drainage areas; and our enjoyable use of and future development of the property.

- 1-7) Describe your concerns regarding the Project.

I have many concerns regarding the Project:

- 1. The safety of my family, friends, and myself in using our airstrip.**
- 2. Noise and shadow flicker negatively affecting the wildlife and driving them away from the habitat we have worked so hard to develop on the property.**
- 3. Noise and shadow flicker and blinking lights negatively affecting my family's use and enjoyment of the property**
- 4. The large grouping of wind turbines affecting the safety of all inhabitants with respect to masking tornadic activity in the area and reducing the ability of meteorologists to track storms and tornados and provide accurate warnings.**
- 5. Risks of ice throw and turbine damage hurting people and damaging property, as well as risk of fires that can't be put out in a timely manner devastating habitat and property and putting human life at risk.**
- 6. The ecological impact associated with construction, operation, and decommissioning – driving wildlife away, directly killing birds, bats, bugs, and butterflies, contaminating ground water and the sensitive Monighan Creek and its drainage systems, pollution from oil leaks, and the**

substantial landfills that will be required to handle a mountain of non-reclaimable materials used in wind turbines.

- 1-8) Describe what mitigation measures would address the concerns you identified in response to Request 1-7 and whether any of the mitigation measures identified by the Applicant in its Application could address any of your concerns.

Keeping a rectangular area measuring 1.0 miles to the west and 1.75 miles to the north, east, and south of our runway free of turbines would allow use of our runway by family, friends, and the general public without substantially affecting flight safety. This would also provide the benefit of protecting the wildlife, habitat, ecosystem, and enjoyable use of our property.

In general throughout the project, increasing the minimum setbacks from property lines to be 1,100 feet would mitigate the risk to non-participating neighbors and the public right of ways for ice throw, by meeting the manufacturers safety recommendations.

In regards to protecting the environment and participants' and non-participants' health and safety, I request a State-managed 24-7 hotline and response department for the intended purpose of providing a means for the public to report environmental, health, and safety issues (such as oil leaks or other pollution, ground water contamination, excessive noise and shadow flicker, road or property damage from ice throw or turbine failures, fire, etc.) observed during project construction and operation and to coordinate the appropriate independent assessments and corrective actions. This hotline and response department should be funded by the Applicant via an escrow account for the duration of the project, but managed by the State to ensure the public's best interest is being served and to remove any potential for the applicant to delay or mishandle reports due to financial incentives.

- 1-9) Identify any documents, information, education, training, or professional experience you have relied upon to form your opinions concerning the Project. Where you have relied upon documents or other tangible materials, please provide such documents and/or materials.

I have read many online articles about the safety concerns of flying around wind turbines, including articles and summaries of the wind turbine accident in Highmore, SD in 2014 that resulted in 4 fatalities. I have attached an article from the Airplane Owners and Pilots Association about the safety effects wind turbines can have on aircraft especially in the vicinity of airports.

I have also spoken with aerial applicators, one being Denny Meyer from Steier Ag Aviation in Whittemore, IA, a highly experienced commercial pilot, who shared his harrowing tale of flying in and around wind turbines and how they “shake the hell out of you.” His business has decided to no longer service land in or around wind turbines due to the substantial safety risk they pose to him and his sons who fly for the family business as well.

I have also read wind turbine wake effect research papers published for the wind turbine industry to use for siting turbines to maximize performance and mitigate turbine blade fatigue life issues from upwind turbine wakes. There are numerous such research papers available online that demonstrate turbine wakes have aerodynamic effects that should be addressed properly, one such that I have attached is Vermeer et al, “Wind Turbine Wake Aerodynamics”, Progress in Aerospace Sciences, Volume 39, Issues 6 and 7, August to October 2003.

I have also educated myself by using the COPA/SMS Report No. 1101, Aviation Safety-risk Assessment of the Effect of Wind Turbines on General Aviation Aircraft (see references), summarizes the results and determinations of a 9-member panel that consisted of experts representing pilots COPA (the Canadian Owners and Pilots Association, a group representing airplane owners and pilots), aviation safety (SMS Aviation Safety Inc.), the Canadian civil aviation authorities (Transport Canada and Nav Canada), and a wind energy consulting engineering firm (Genivar). The report was produced with the intent of being used by policy makers, industrial wind turbine project developers, and pilots to manage the risks imposed on aviation by industrial wind turbines. I have permission to use this report to help in promoting aviation safety and have attached the report to this response.

Regarding safety around wind turbines in freezing weather and icing conditions, I have reviewed the “GE Power and Water, Technical Documentation, Wind Turbine Generator Systems 1&2MW Platform, Safety Manual” which is included in the public docket for the OPSB Application for Seneca Wind and can be easily found online. The safety manual considers icing a “special danger” and states “it is advisable to cordon off an area around the wind turbine generator system with the radius R^* during freezing weather conditions, in order to ensure that individuals are not endangered by pieces of ice thrown off during operation. $R^* = 1.5 \times (\text{hub height [m]} + \text{rotor diameter [m]})$ (Recommendation of the German Wind Energy Institute DEWI 11/1999).”

- 1-10) Identify any witnesses, including expert witnesses, you plan to have testify on your behalf. For each witness (including expert witnesses), please provide a resume or statement of qualifications of the witness(es), identify the subject matter regarding which the witness will testify, and identify and provide any exhibits the witness will refer to or introduce.

None are planned at this time. However, I reserve the right to call witnesses at a later date.

- 1-11) Are you asserting that the Project will negatively impact your property value? If so, provide copies of any appraisals or other valuations that have been conducted for such property within the last ten years.

I do not own property in the vicinity of the project. However, I do assert that the project will negatively affect the property value of my parents' property, both monetary and the intrinsic value.

- 1-12) Identify any communications, written or otherwise, you have had with units, officials, and/or representatives of local, state, and/or federal governments or agencies concerning the Project.

a) For any written communications, provide a copy of the communication; and

I have submitted statements to the Deuel County Board of Adjustment and made verbal statements during the Project permitting process. My submittals can be found on the docket maintained for that hearing by the Deuel County auditor.

b) For any unwritten communications, provide the date of the communication, the persons involved, and the subject matter of the communication.

None that I am aware of.

- 1-13) In the last five years, how often have you visited South Dakota? Of those visits, how many times did you use aircraft as transportation?

In the last five years, I have visited South Dakota numerous times per year (exact numbers unknown). My wife, children, and I love spending time in South Dakota enjoying the beautiful area I grew up in. We come back to South Dakota often for family birthdays and

get-togethers, holidays and vacation days, and spending time on our family's property hunting, canoeing, hiking, camping, gardening, watching wildlife, and enjoying nature in the peace and quiet. In the past 5 years, I believe I've only flown to South Dakota 1 or 2 times. We look forward to flying much more often in the future because of the availability of our airstrip.

1-14) What locations in South Dakota have you visited in the past five years?

This question is overly broad. We have visited too many locations to list them all. Most of our time is spent at our family's property in Deuel County (Section 32, Township 116, Range 47; Section 20, Township 116, Range 48; Section 15, Township 116, Range 49) and Watertown, Clear Lake, Gary, Lake Cochrane, Pierre, Rapid City, and the Black Hills.

1-15) How many times in the past five years you have landed an aircraft in South Dakota and, of those times, how many landings were at the Clear Lake Airport?

In the past 5 years, I believe I've only flown to South Dakota 1 or 2 times, and I have not landed at the Clear Lake Airport.

1-16) Describe any ownership interest you have in, or right to use, a personal aircraft.

As a private pilot, I can rent single engine land airplanes from any Fixed Based Operator or other rental company following a basic checkout procedure with their instructor. I currently am a member of and use airplanes from the Duluth Flying Club in Duluth, Minnesota. I have been considering buying an airplane or entering into a shared ownership for the past few years, since it has been a life goal of mine to own an airplane since I was young. I have also been considering buying a powered parachute or ultralight aircraft for use at our airstrip. I love South Dakota and I love flying and I can't think of many things more enjoyable than flying over that countryside in an open cockpit ultralight or parachute.

1-17) Describe any interest you have in Homan Steel Construction, Inc. ("Homan Construction") or the W1/2 Section 32-116-47, Glenwood Township, Deuel County, South Dakota ("Glenwood Property")

I have no ownership interest in Homan Steel Construction.

1-18) In your January 15, 2019 comment to the PUC, you state that your “family is currently constructing a 2,350 foot long turf runway, named Homan Field, on the western half of section 32 in the Glenwood township of Deuel County” (“Private Landing Strip”). With respect to the Private Landing Strip:

a) What is the intended use of the Private Landing Strip?

The airstrip is intended to serve operations ranging from ultralight aircraft up to 4+ seat general aviation airplanes. The airstrip is intended to be used by myself, my family and friends, and public use will be allowed with prior approval. The construction and operation of the airstrip is also intended to provide a benefit to South Dakota and the general aviation community in the form of a charted navigational aide and, more importantly, a safe landing site in the event of an in-flight emergency.

b) You state that turbines on the northeast side of the proposed Private Landing Strip have been removed and “This allows for a one-sided traffic pattern to be flown without flying over any wind turbines, except turbine number 108 which is under the margin the FAA standards establish on the far side.” i) What FAA standards are you asserting apply?

My comments submitted to the docket contain clarifying information:

What is the traffic pattern airspace required in order to use Homan Field? Since the Deuel Harvest North Wind project layout has changed since the Special Exception Permit approval, wind turbines to the northeast of Homan Field have been removed by the developer. This allows for a one-sided traffic pattern to be flown without flying over any wind turbines, except turbine number 108 which is under the margin the FAA standards establish on the far side of the runway. The dimensions of the traffic pattern airspace for Homan Field, as defined by FAA standards established in FAA order JO 7400.2L, are 1.5 nautical miles (1.73 statute miles) from each end and the east side of the runway and .25 nautical miles (.29 statute miles) from the west side of the runway. Figure 2 [attached at the end of my response] illustrates the airport environment around Homan Field superimposed over a section of the project layout map. The yellow dashed line illustrates the traffic pattern airspace boundary.

ii) Is turbine location No. 108 the only turbine location you assert will interfere with the Private Landing Strip? If not, please explain.

My comments submitted to the docket contain clarifying information:

What are safe setback distances from wind turbines for general aviation operations? The expert panel reviewed the available research and addressed numerous potentially catastrophic risks associated with wind turbines, as obstacles for low flying aircraft and sources of wake turbulence and wind shear. The expert panel made recommendations for minimum setback standards for industrial wind turbines near airports and airstrips should include:

- **a restriction on constructing wind turbines within the distance equal to 7-10 rotor diameters from the runway or approach surfaces and**
- **the area of land under the traffic pattern airspace is free of wind turbines.**

In Figure 2 [attached at the end of my response], red lines are used to show the a 10x rotor diameter setback from the runway and approach surfaces. As shown above, the wind turbines numbered 106, 107, 108, 117, 123, and 124 from the application layout maps do not meet the recommended setback standards for wake turbulence and wind shear and therefore pose a substantial risk to serious injury or death for those flying into or out of Homan Field.

- c) You include a discussion of and figure showing approach surfaces. What regulations are you asserting establish these surfaces for the Private Landing Strip?

My comments submitted to the docket contain clarifying information:

Title 14 of the Code of Federal Regulations Part 77 defines the federal regulations for the Safe, Efficient Use, and Preservation of the Navigable Airspace. The standards used to define approach surfaces for runways are defined per section 77.19. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end. For Homan Field, a preliminary assessment of the approach surfaces shows the approach surfaces are sized as follows. The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of 1,250 feet. The approach surface extends for a horizontal distance from the ends of the runway of 5,000 feet at a slope of 20 to 1. In Figure 2 [attached at the end of my response], purple lines sketch the dimensions for the approach surfaces.

- d) What experience, education and training do you have regarding wake turbulence and wind shear?

As a private pilot, I have received training on the basics of aircraft wake turbulence and wind shear and the significant effects they can have on flight safety and the importance of avoidance. As an aerospace engineer, I have a Bachelor's of Science in Aerospace Engineering and a basic professional understanding of aerodynamics and fluid dynamics.

- e) Provide any correspondence to or from the Federal Aviation Administrative regarding the Private Landing Strip.

I have included a figure I had sent to the FAA showing the proposed location details during the permitting process (attachment included below). I no longer have the sent emailed.

Date

2/25/19



Garrett Homan

Intervenor

5669 Maple Grove Road

Hermantown, MN 55811

garhoman@gmail.com

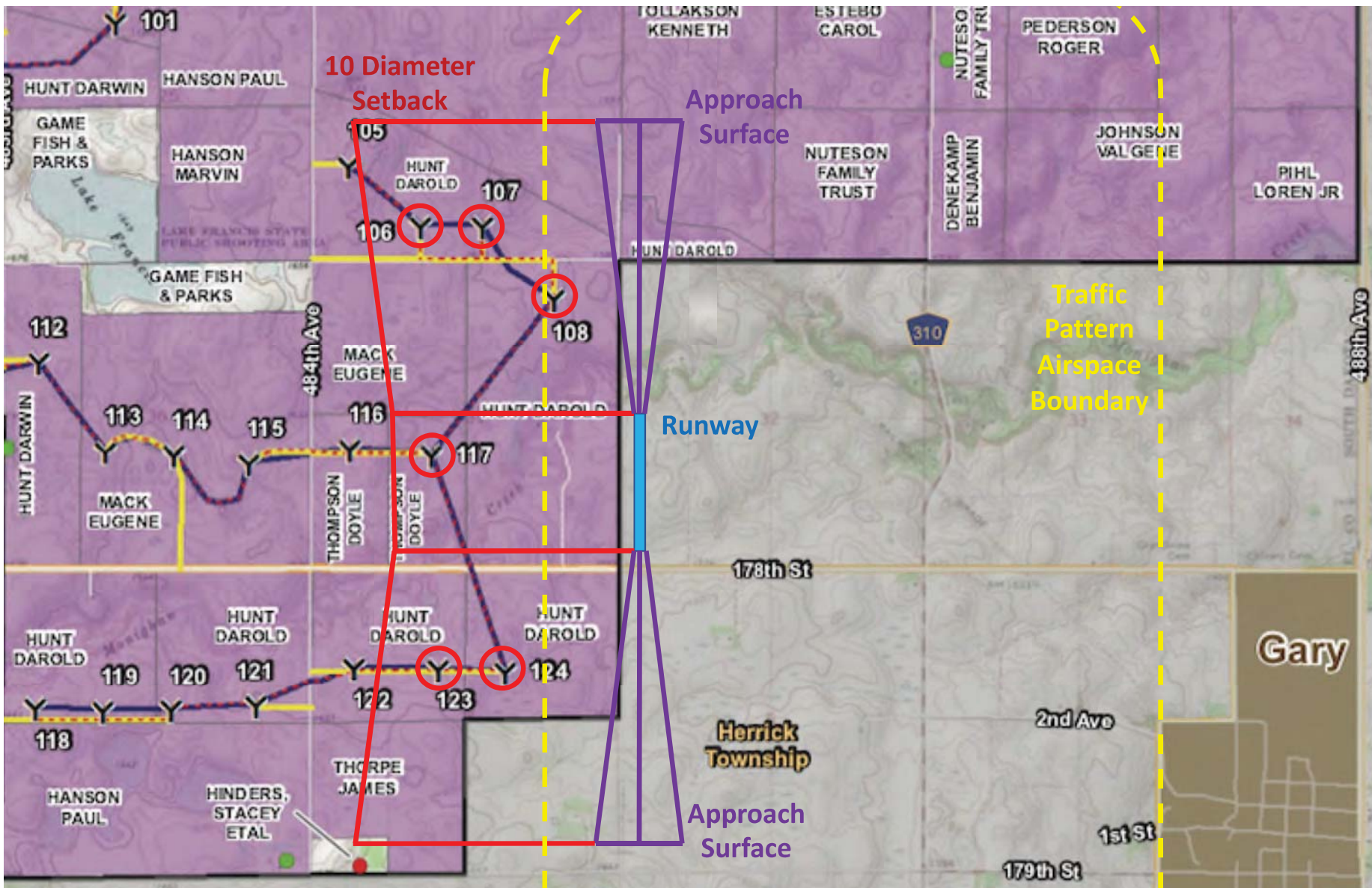
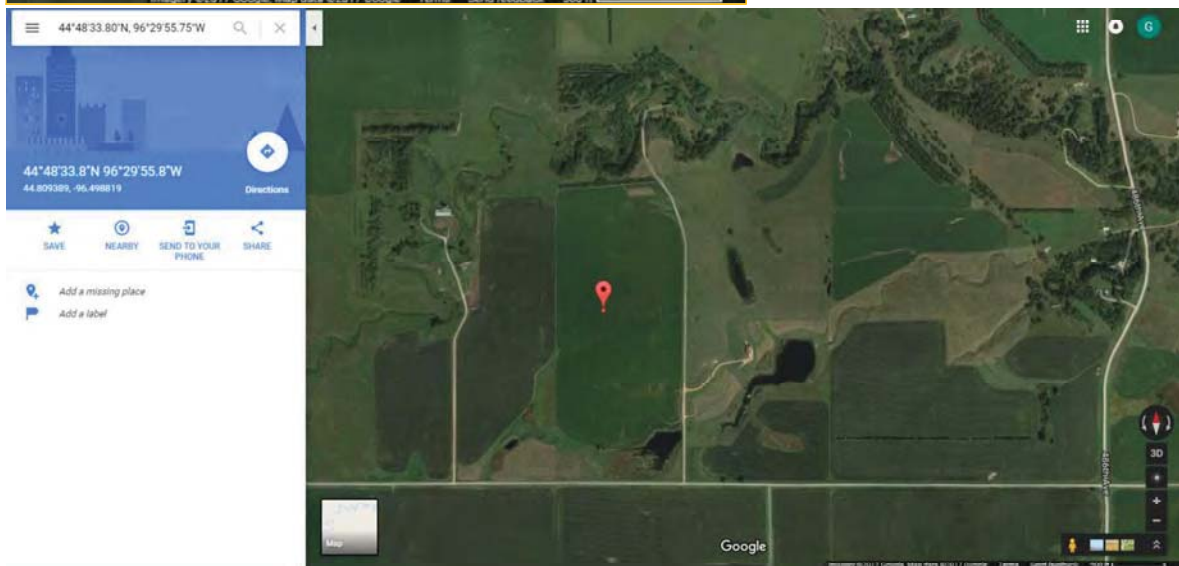
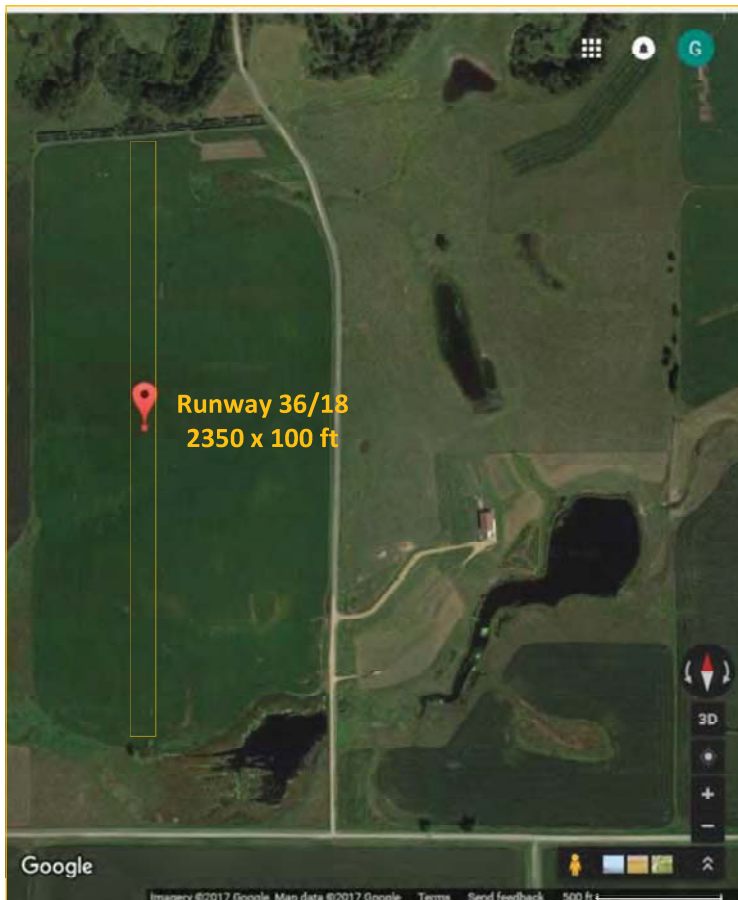


Figure 2 from My Public Comments



Attachment Sent to FAA During Airstrip Permitting Process

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**

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**JON HENSLINS'S RESPONSE TO
STAFF'S FIRST SET OF DATA
REQUESTS TO INTERVENORS**

EL18-053

Below, please find Staff's First Set of Data Requests to Intervenors. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

1-1) Provide copies of all data requests submitted to or by you and copies of all responses provided to those data requests. Provide this information to date and on an ongoing basis.

1-2) Refer to SDCL 49-41B-22.

a. Please specify particular aspect/s of the applicant's burden that you intend to personally testify on. None at this time.

b. Please specify particular aspect/s of the applicant's burden of proof that you intend to call a witness to testify on. None at this time.

1-3) Refer to SDCL 49-41B-25. Identify any "terms, conditions, or modifications of the construction, operation, or maintenance" that you would recommend the Commission order. Please provide support and explanation for any recommendations.

a. Specifically, what mitigation efforts would you like to see taken if this Project is constructed.

---Provide 2 mile radius safety zone for all bald eagle nests.

---Provide ADLS

---Provide Property Value Guarantee for nonparticipants in siting area.

---Review Lease and Easement Agreements and Good Neighbor Agreements to assure compliance with State and Federal Laws and Rules.

---List is not all inclusive.

No support or further explanation at this time.

1-4) Please list with specificity the witnesses that you intend to call. Please include name, address, phone number, credentials and area of expertise. None at this time.

1-5) Do you intend to take depositions? If so, of whom? Not at this time.

Dated this 20th day of February 2019.

/S/ Jon Henslin
Jon Henslin

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE
WIND ENERGY LLC FOR A PERMIT
OF A WIND ENERGY FACILITY AND
A 345-KV TRANSMISSION LINE IN
DEUEL COUNTY**

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**RESPONSE TO APPLICANT'S
FIRST SET OF DATA
REQUESTS TO JON HENSLIN**

EL 18-053

Below, please find Deuel Harvest Wind Energy LLC's ("Applicant") First Set of Data Requests to Jon Henslin. Please submit responses within 10 business days or promptly contact the undersigned to discuss an alternative arrangement.

1-1) Provide copies of all data requests submitted by PUC staff to you in this proceeding and copies of all responses to those data requests. Provide this information to date and on an ongoing basis.

1-2) Identify the address of your permanent residence (where you reside).

1020 Lake Alice Drive
Clear Lake, South Dakota 57226

1-3) Identify all property you own within the vicinity of the Deuel Harvest North Wind Farm ("Project") and the location (by section, township, and range) of such property. Are there any habitable buildings on the property you own?

Altamont Township, Lake Alice Shores, 7-116-48, Lot 10
Yes, our home is on this lot.

1-4) If you have a residence in the vicinity of the Project, identify whether you live at the residence throughout the entire year and, if not, how many months of the year you reside at the residence.

Entire year; however, have occasionally taken a month vacation in the winter.

1-5) Identify how you use your land, including, but not limited to, whether you use your land for agricultural purposes.

As our primary residence, and since it is on the lake, recreation (fishing etc.).

1-6) Identify any sensitive or unique features of your property that you assert would be impacted by the Project.

I am concerned that the view (day and night), sound, property value, and flashing red lights could negatively impact my property.

1-7) Describe your concerns regarding the Project.

Effects on property values
Constant Flashing Lights
Bald eagle nest on north end of Lake Alice.
Contracts
Health effects

1-8) Describe what mitigation measures would address the concerns you identified in response to Request 1-7 and whether any of the mitigation measures identified by the Applicant in its Application could address any of your concerns.

Provide property value guarantees for nonparticipants in the siting area.

Provide ADLS – I believe the applicant plans to use ADLS; but would like assurance.

Provide two-mile radius safety zone for all bald eagle nests, including the nest identified at the PUC public hearing held in Clear Lake on this project.

Have the PUC or the State Attorney General Office review the lease and easement agreements to make sure the documents follow state and federal laws and rules.

The health effects mitigation measures would be tied to setbacks.

1-9) Identify any documents, information, education, training, or professional experience you have relied upon to form your opinions concerning the Project. Where you have relied upon documents or other tangible materials, please provide such documents and/or materials.

Graduated from SDSU with a BS degree in Engineering in 1971.
Licensed Professional Engineer (PE) in Minnesota.
39 Years of work experience with Minnesota Department of Transportation.
Retired in 2011.

Some materials I have relied upon:
Deuel County Zoning Ordinance
South Dakota Energy Siting Rules (Chapter 20:10:20)
South Dakota Codified Law Title 49
Invenergy (Special Exception Permit Application dated December 2017)
PUC Docket EL 053
List is not all inclusive.

1-10) Identify any witnesses, including expert witnesses, you plan to have testify on your behalf. For each witness (including expert witnesses), please provide a resume or statement of qualifications of the witness(es), identify the subject matter regarding which the witness will testify, and identify and provide any exhibits the witness will refer to or introduce.

None, at this time.

1-11) Are you asserting that the Project will negatively impact your property value? If so, provide copies of any appraisals or other valuations that have been conducted for such property within the last ten years.

I am concerned that this project will negatively impact my property. I do have a copy of an appraisal on my home. It was made when I applied for a mortgage. We had the home built for us and when the appraisal was made the construction had just started. The appraisal was based primarily on the house plans. However, major changes were made that greatly increased the square footage of finished living space. As a result, the appraisal is by no means accurate. Currently my wife and I are on vacation until the beginning of April. I did not bring a copy of the appraisal along. I would gladly provide you with a copy of the appraisal when we return. The home is currently for sale.

1-12) Identify any communications, written or otherwise, you have had with units, officials, and/or representatives of local, state, and/or federal governments or agencies concerning the Project.

a) For any written communications, provide a copy of the communication;

December 6, 2017 email to Senator Rounds

I know congress is working on a tax bill that is generating a lot of press. I am very much concerned about our national debt; let us not leave a legacy of debt to our children and grandchildren.

One item that I feel it is time to do away with is the Production Tax Credit (PTC) for Industrial Wind Turbines. Over the last year there has been a lot of debate about wind turbines in Deuel County. It is very obvious that (despite what the developers say) these wind farms are not feasible without the PTC. The bottom line is that the tax payers are paying for a large amount of the initial cost in PTC and continue to subsidize the Wind Farms thru increases in our electric bills. I obtain electricity from two cooperatives; both identify the cost of solar and wind energy as a reason for rate increases. Yet the wind developers claim that wind will provide cost savings to the consumers.

Wind developers have repeatedly informed me that Wind Turbines do not affect property values. A 500 ft. wind turbine installed 1000 feet of your home does not affect property value? If there is no effect on property values, why have all three companies currently planning wind farms in Deuel County refused to provide any property value guaranties?

Representatives of one of the wind farm developers visited with my wife and I. They wanted us to sign a lease agreement. I asked them why, since we own a home on a lake and our lot is less than an acre in size. They told us it was to make sure we did not construct a tall structure on our property. That did not make much sense to me since our zoning already has height restrictions. We did not sign but they left a copy of an agreement with us. I later read the agreement over and what I found was rather disturbing. It would be nice to discuss the contents of the agreement with you and/or your staff. Have you had the opportunity to read one of these agreements? If not I would gladly provide you with a copy of the one given to me.

In closing I encourage you to consider doing away with the PTC or at the very least not extending it. I would appreciate the opportunity to discuss the lease agreement with you or your staff.

Sincerely

Jon Henslin

March 23, email to Josh Haeder

Josh,

I truly appreciate your call this morning. Attached is the first half of the lease agreement being used for the Deuel County wind farm. I will be sending the second half in another email due to the size of the document. I will try to obtain a copy of the Good Neighbor Agreement.

I left you a phone message asking if next Monday March 26 at 1:00 PM would work for you to meet with us at our home.

Looking forward to that meeting.

Jon Henslin

Quoting "Haeder, Joshua (Rounds)" <josh_haeder@rounds.senate.gov>:

Thanks for speaking with me, shoot over copy of contract to this email and I will review.

Thanks,

Josh Haeder

Northeast Director | Sen. Mike Rounds (R-SD)

March 24, 2018 email to Josh Haeder

Hi Josh,

We did send you a copy of the lease and easement agreement however it bounced back to us because the size was too large to be accepted by the senate server. I will break it down to fewer pages per attachment so hopefully it will go through this time.

We would like to meet with you on Monday at 1:00 PM if that doesn't work anytime on Monday would work or anytime Wednesday until 4:00 PM or anytime Thursday until 4:00 PM. We added these extra times due to the weather and the message bouncing back. Hope one of those works for you.

Jon

April 2, 2018, meeting with Josh Haeder

April 5, 2018, email to Josh Haeder

Hello Josh,

Josh, thank you for taking the time to meet with Nancy and I on Monday. I hope we didn't keep you too long. We would not want to interfere with your daughters' elephant rides!

You had requested some layouts of the Deuel Harvest North and south Wind Farms and they are attached. We will be sending an additional map that shows both project's footprints. We are sending it separately due to the size of the attachments.

The maps show the project footprints, turbine locations and residences (participating and non-participating). At the Special Excepting Public Hearing the Developer provided the County with three maps showing various possible turbine locations for each project North and South (the zoning regulations call for a map - singular). The Developer requested approval with the stipulation that they could change the number and location of the turbines in the final layout submitted for a building permit, as long as they met the Counties zoning regulations and stayed within the project footprint. The Special Exception was granted. We can discuss this further at our next meeting.

Could we schedule another meeting at our home on April 17th, 18th, 19th or 20th? We do have some other residents that would like to share their concerns. If possible plan for a two hour visit. We can furnish coffee and a veggie/fruit plate.

Again thank you for listening to our concerns.

Jon and Nancy Henslin

April 23, 2018, second meeting with Josh Haeder

April 5, 2018 email to Josh Haeder

Dear Josh Haeder,

Josh, I don't know how to put into words the enormous amount of appreciation that Nancy and I have for you taking the time to meet with us. I know the whole group that was here Monday shares that sentiment. It was refreshing to have someone sincerely listen to our concerns.

I know you heard from us that we are not against wind energy. If you had the time to listen to the entire video of the January 22, 2018 Public Hearing, regarding Invenergy's application for a Special Exception to construct two Wind Energy Systems (WES) in Deuel County; that fact would be evident. However, we are concerned about the effects of WES on health, property rights, and property values. We are also concerned about the approval process, funding, and overall plan (including cost vs benefit).

Wind Lease and Easement Agreement

Josh at our first meeting we reviewed a Wind Lease and Easement Agreement used by Invenergy. Attached you will find another Wind Lease and Easement Agreement that is being used in South Dakota by Crown Ridge Wind Energy Center LLC., an affiliate of NextEra Energy Resources, LLC. I did quickly read thru the agreement and found many items that were similar to those we addressed in the Invenergy Agreement. You can have your legal staff review it. I did wonder about the last sentence in 3.5 Exercise of Option, you may want to look at that.

Lighting

At the Monday meeting I gave you a handout on Lighting. I would like to explain that handout better. Number the sheets from 1 to 6 and the explanation is as follows.

Page 1, is a fact sheet I prepared regarding lighting for the WES projects that were approved at the January 22, 2018 Board of Adjustment Meeting.

Page 2, is the presentation that Nancy Henslin gave at the January 22, 2018 meeting.

Page 3, on this page the highlighted area is Section 504.5.e (Deuel Co. Zoning), which refers to exterior lighting. Also refer to item 5 on this page where it states "satisfactory provision and arrangement has been made concerning the following" (which includes exterior lighting and turbine lights are exterior lights).

Page 4, on this page the highlighted area is Section 1215.03.4 (Deuel Co. Zoning), which addresses FAA requirements.

Page 5, this page is copied from Invenergy's Special Exception permit application. The highlighted area refers to Section 504.5.e. The only exterior lighting addressed is lighting for their O&M Building.

Page 6, this page is copied from the Board of Adjustments' Findings of Fact for Invenergy's Special Exception. In its Findings of Fact the Board of Adjustment fails to even identify exterior lighting.

Comments: The constant blinking red turbine lights, cause light pollution and negatively impact the public's property value and quality of life. The technology to reduce this negative effect is readily available. The question is who is going to require it; County, State, or Federal? Our experience in Deuel County has been that it is not working at the County level even though the County has the authority and responsibility to address the lighting issue. The Developer (Invenergy) has not been willing to provide the technology and at the public hearing for the Special Exception provided false information regarding the Aircraft Detection Lighting System. It appears that the State or Federal government would be the most effective level for implementation. In Deuel County alone the number of wind turbines could increase from zero in 2010 to over 500+ in 2020 to over 1000+ in 2030. I for one, at night want to look at the heavens and see stars, planets, constellations and the moon on a black background.

Property Value

You were also given a handout on property value. As with lighting I would like to explain it better. Number the sheets from 1 to 9 and the explanation is as follows.

Page 1&2, these pages are taken from Deuel County's Zoning Ordinances and cover Purpose,

Special Exceptions and Power and Jurisdiction Relating to Special Exceptions.

Page 3&4, the top of page 3 discusses the purpose and intent of the zoning regulations. The important part here is: "The regulations are intended to preserve and protect existing property uses and values against adverse or unharmonious uses...". The remaining portion of page three and page four relate to effects of a Special Exception on adjoining properties and properties generally in the district. It documents the input we provided the Board of Adjustments at the January 22, 2018 Public Hearing. It also documents the response given by Invenergy.

Page 5, the area highlighted on this page refers to that portion of the county zoning that addresses the effects of the special exception (WES) on adjoining properties and properties generally in the district. The effects mentioned were economic, noise, glare, odor, or other effects. The Board of Adjustment is required to make written findings certifying that satisfactory provision and arrangement has been made concerning these effects. This was not done.

Page 6, the area highlighted was taken from Invenergy's special exception permit application. This section was to address section 504.5.b. It covered the off-street parking portion but completely eliminated the portion related to the effect of the WES on adjacent properties etc..

Page 7, the area highlighted is taken from the Board of Adjustment's Findings of Fact regarding 504.5.b.

Page 8 is an interesting letter put together by Brenda Taylor (Deuel County citizen). In it she documents actual cases where home owners in Deuel/Brookings Counties have had problems selling properties after wind turbines were constructed. The information from local relators is also interesting.

Page 10 is a copy of a letter I sent to the Clear Lake paper regarding property value guarantee. Comments: Do wind turbines effect property value? I am convinced the answer is yes. I have always heard that in real estate the rule is location, location, location. Realtors I have spoken with tell me that wind turbines have a negative impact on property values. Of course if one is purchasing just land with turbines on it and you obtain revenue off them that could be different. Most of the articles I have read state, there is no negative effect due to the presence of wind turbines, have been based upon Spatial Hedonic Analysis. It is interesting that Ben Hoen, the author of many of those reports, in an interview in 2010 stated "I think one of the things that often happens is that (wind) developers put our report forward and say look property values aren't affected, and that's not what we would say specifically. On the other hand, they have little ground to stand on if they say we won't guarantee that." It also appears to me in the Spatial Hedonic Analysis there are a lot of characteristics included for the homes in the study area, which is good. However, it appeared to me that turbine characteristics were not well defined. For example a one hundred foot tall turbine would not have the same effect as a 600 foot turbine at the same distance from a home. Also only the closest turbine distance was considered in the analysis. Obviously a home with one turbine within a mile will be less impacted than a home with 8 turbines in a mile. The amount of negative impact on a home's value increases rapidly as the distance to the turbine decreases. Wind Turbines do negatively affect property values.

Invenergy has assured us that this project (discussed earlier) will not affect property values, which is not true. Our Board of Adjustment has approved the special exception for this project without providing written findings certifying that satisfactory provisions and arrangements have been made concerning these effects. Who will protect the property rights and values in South Dakota Counties? For us the county is not doing the job. Who should? It appears to me that it

would be a State or Federal issue. Another option would be the Counties/State providing training for County Zoning Officers/Boards/States Attorneys. Property values/rights are an important issue, with the large number of current and potential projects, timing is critical. Maybe a moratorium is a logical course of action.

Again Josh thank you for making time in your work schedule to visit our home and listen to all of our concerns.

Sincerely

Jon and Nancy Henslin

August 12 2018 text message to Josh Haeder

Good morning Josh, did you prepare any findings or get any legal opinions done on wind leases?
Jon and Nancy Henslin How is you campaign going?

October 16, 2018 presentation to the Deuel county Commissioners.

The two Deuel Harvest and the portion of Crowned Ridge in Deuel County have a projected cost of about 900 million dollars. The projects have a combined foot print of about 85 thousand acres which is over 20 percent of the land in Deuel County. The impact of these projects (positive and negative) will affect 100 percent of the county.

I am here today as a citizen of Deuel County to express my concerns about the Public Hearings that were held regarding the Special Exception Applications for these projects.

How effective have the hearing been?

Invenergy, NextEra and wind lease holders may feel the hearings were excellent.

Many who had concerns about the projects are probably disappointed.

Most Deuel County residents did not attend the hearing so would not have any comments on its effectiveness. I remember prior to the vote on the Invenergy application one of the board members stated regarding the application document: "I think you all have access to (pause) I'm not 100% sure, but if you want to see it(application) it is up at the zoning office. It's been published for a long time". I doubt that 1% of the voting members of Deuel County have read what was in the application. With all of Deuel County being affected by these two projects, more effort should have been put into educating Deuel County residents.

At the Public Hearing for Deuel Harvest, the number of speakers was limited to about 25, with each speaker allowed three-minutes. Which calculates to 90 seconds per project. At the Public Hearing for Crowned Ridge no limits were placed upon the number of speakers, however, a three-minute time limit was again used. Since there was a time limit imposed, many of the speakers were not able to communicate their whole concern, which is unfortunate. Some presenters brought along printed copies of their presentations and supporting data so that it could be reviewed by the Board, if the speaker were unable to complete their talk in the three minutes. In the case of Deuel Harvest Wind, providing printed copies was a waste of time for the board

voted on the Special Exception that evening. They had no time to consider the printed information provided.

One of the concerns that I had was flashing red lights. At the Public Hearing for Deuel Harvest, it was suggested that an Aircraft Detection Lighting System be used. When the Board asked Invenergy about the use of that system, Invenergy said that Aircraft Detection Lighting System was unproven technology, which is untrue.

When the Public Hearing was held for Crowned, the Board asked about the use of an Aircraft Detection Lighting System. NextEra indicated an Aircraft Detection Lighting System would require a two-step approach and that it would be a “departure from the intent” of a lighting system. Wrong on both accounts. The intent of the lighting system is to warn aircraft not provide constant flashing lights. The Aircraft Detection Lighting System provides the required aircraft warning. An Aircraft Detection Lighting System and a constant flashing lights system have the same approval process.

Any Wind Energy System developed in Deuel County or expanded in Deuel County should require an Aircraft Detection Lighting System. Since Invenergy provided incorrect information their Special Exception should be amended to include an Aircraft Detection Lighting System.

I am also concerned about property value impacts. Special Exception Application Documents prepared by Invenergy and NextEra do not address property value impacts on adjacent properties. The Board of Adjustments is specifically required to consider the property value impacts on adjacent properties.

Commissioner Steve Rhody allowed me to question Invenergy about property value impacts not being included in their Special Exception Permit application. Invenergy spoke but did not provide an answer to the question.

NextEra was asked about the effects of their project on property values – specifically regarding non-participants. Their response indicated there are no long-term negative impacts on home values. NextEra’s representative spoke of an extensive study consisting of 50,000 homes in 9 states and 27 counties that found no net negative or positive effects.

The extensive study referred to was done by the Lawrence Berkeley National Laboratory (LBNL). It is interesting that Ben Hoen, the primary author of the extensive report has said:

“I think one of the things that often happens is that (wind) developers put our report forward and say look property values are not affected, and that’s not what we would say specifically. On the other hand, they have little ground to stand on if they say we won’t guarantee that.”

That statement should ring a bell with you. During the Hearing held to update the Wind Energy System ordinances Gary Dejong told the Wind Energy System developers to: “Put their money where their mouth is” in regard to property value guarantees.

I have copies of a few papers that address problems related to the extensive study identified by Next Era. One of the authors Albert Wilson states “the Report should not be given serious consideration for any policy purposes. The underlying analytical methods cannot be shown to be

reliable or accurate”. Another article by Michael McCann states “Regardless of terminology or focus, the fact is that the raw data shows a post construction negative impact of 28% for homes less than 1-mile from turbines vs. homes in the 3-10-mile range”

The visual impact of wind turbines has been researched. It is interesting that the number of turbines visible and the distance to the turbines both affect property value. One research study (Yasin Sunak and Reinhard Madlener) identifies over 10% reduction in property value if eight or more turbines were visible.

The PUC hired David Lawrence, a South Dakota State-Certified General Appraiser. He was hired to determine if the studies and testimony of the applicant adequately reflect the potential impact to the value of properties in the vicinity of the proposed Crocker Wind Project. His answer was:

“It is my opinion that the studies and testimony do not provide adequate market evidence that can be applied to the subject area of the Crocker Wind Project.” Note these studies included the LBNL studies referenced by NextEra.

About a month later, David Lawrence was again hired by the PUC to review Dakota Range I and II. He was again asked the same question related to that project. His answer was:

“It is my opinion the studies and testimony presented by Dakota Range provide a good starting point; however, the studies presented have limitations that need to be considered for their applicability to South Dakota.” Note these studies included the LBNL studies referenced by NextEra.

David Lawrence believes; a comprehensive study from the market area of South Dakota will provide the evidence that is required to determine the potential impacts of a wind energy project on property values. The methodology that is applicable in this type of study is referred to as the case-by-case sales comparison approach which provides a more reliable alternative to the hedonic analysis.

I believe the comprehensive study identified by David Lawrence needs to be done immediately. Such a study would take about 6 months. The study would provide a reliable tool in South Dakota to assess impacts on property values. Any Special Exceptions approved prior to the completion of such a study needs to include a property value guarantee.

Getting back to the Public Hearings. The items I brought before the Board of Adjustment at the Deuel Harvest Public Meeting were not adequately addressed. Satisfactory provisions and arrangement should have been made for these issues. Others who tried to express their concerns in the 3 minutes provided, felt the same way. It appeared the public hearing for Deuel Harvest had been scripted ahead of time (possibly by First District). Our voices were heard, but very little was listened to.

Regarding the Crowned Ridge Hearing, 30+ speakers addressed the Board of Adjustments. Were any asked follow up questions? I hope that is not an indication that they were only heard

but not listened to. It is encouraging that the Board did not immediately vote on the Special Exception. Not voting will allow them time to consider the public input provided.

In closing:

The Special Exception process for large Wind Energy Systems can be very difficult. To move forward with these complicated projects, every “I” must be dotted and every “T” crossed. Doing it right will take time. The application needs to be gone thru line by line and if deficiencies are found, address them and if concerns are raised, solutions should be explored. We must remember that our requirements listed in the ordinances are minimum requirements and if needed, more strict measures may be taken. The Board must religiously adhere to the responsibilities given to them in the zoning regulations including those associated with Special Exceptions. The public should be well informed regarding projects of this magnitude. One or more public information meetings may be necessary. Public Hearings should be conducted in such a manner that the public feels their input is listened to and considered by the Board members. Enough time must be provided for the public to present their input.

January 22, 2018, presentations for the special exception public meeting.

Effects on Adjoining Properties

Deuel County Zoning states in section 504 the following:

Part B in this section refers to two separate items. One is off street parking and loading areas which Invenergy’s application addresses. However the second part of this ordinance refers to **the economic, noise, glare, odor or other effects of the special exception on adjoining properties and properties generally in the district.**

The economic, noise, glare, odor or other effects are those caused by the special exception which is the Wind Energy System (WES) not the off-street parking and loading areas. These items need to be addressed, especially the economic effects of the turbines on adjacent residences and businesses.

7.5 Permit Expiration

Deuel County Ordinance addresses the expiration of a Wind Energy System Special Exception Permit. It states: “the permit shall become void if no substantial construction has been completed within three (3) years of issuance.”

The Deuel Harvest Wind has requested that substantial construction be defined as ‘pouring a single foundation within the project footprint’. This definition is the definition used in SD Codified Law to define the “development of potential to produce energy”.

The two definitions are not interchangeable. For a large Wind Energy System (WES) the pouring of a single foundation does not seem to constitute substantial construction. Leaving the

wording as it currently reads in the zoning, retains control in the county and requires the permittee to show substantial progress. The county can always extend the permit if necessary.

In addition if Invenergy hold to the project schedule provided, construction will be completed in less than 2 years for the North Project and less than 3 years for the South Project.

Decommissioning Plan

Deuel County Zoning states in part: the decommissioning plan shall include the permittee post a bond or other adequate security sufficient to pay the entire cost of the decommissioning process.

Deuel Harvest states in their application regarding the decommissioning process the following. To avoid duplication and potential conflicts in obligations Deuel Harvest requests that the county defer to and accept the SDPUC's final decision on financial assurance.

However the SD Energy Facility Siting Rules states the following regarding decommissioning of Wind Energy Facilities (20:10:22:33:01)

Decommissioning of wind energy facilities -- Funding for removal of facilities. The applicant shall provide a plan regarding the action to be taken upon the decommissioning and removal of the wind energy facilities. Estimates of monetary costs and the site condition after decommissioning shall be included in the plan. The commission **may require** a bond, guarantee, insurance, or other requirement to provide funding for the decommissioning and removal of a wind energy facility. The commission shall consider the size of the facility, the location of the facility, and the financial condition of the applicant when determining **whether to require some type of funding**. The same criteria shall be used **to determine the amount of any required funding.**"

As stated earlier Invenergy has requested in order to avoid duplication and potential conflicts in obligations, Deuel Harvest requests that the County defer to and accept the SDPUC's final decision on financial assurance. However by so doing the County may not receive the adequate security that our ordinance requires. The ordinance states: The decommissioning plan shall include the requirements that Permittee post a bond or other adequate security sufficient **to pay the entire cost** of the decommission process.

Invenergy's request does not assure adequate security nor full cost of the decommission process; therefore it would not be prudent to grant this request.

Lighting

The Deuel Harvest Special Exception Permit Application contains information on lighting.

I would like to submit the following regarding the lighting of turbines.

Last year North Dakota signed into law a bill which requires "Light-Mitigating Technology Systems" on Wind Energy Systems (WES) capable of producing more than 500 kW of electricity. The system first proposed was an Aircraft Detection Lighting System (ADLS). In December of 2015, FAA introduced standards for ADLS. The first FAA approved commercial

operation of an ADLS was installed in Wyoming NY. The Wyoming NY installation was very effective. An article about this installation stated “Since we turned the system on in Wyoming, we regularly see nights where the lights are off 99% of the time.”

What will Deuel County look like in 5-10 years? If Wind Energy Systems (WES) continue to expand in the county, and additional phases add more and more turbines within the footprints of existing Wind Energy Systems (WES), we will no longer have the prairie view that was so familiar to indigenous peoples and our forefathers. The landscape will be a metal forest of turbines. However, at night, if the Aircraft Detection Lighting Systems (ADLS) is installed, we may be able to enjoy the same view of the stars that those who were here before us marveled at years ago.

I believe that if a public meeting had been held on these two projects and our citizens (participating and non-participating) had been allowed to freely express their views on this subject, the vast majority would have requested the red lights remain dark and only flash when an aircraft is detected.

We encourage the Board of Adjustment to require that all turbines in Deuel County have Aircraft Detection Lighting System (ADLS) technology. This technology should be part of the initial construction not delayed to be incorporated at a later date.

And

b) For any unwritten communications, provide the date of the communication, the persons involved, and the subject matter of the communication.

January 2019, met with Adam Behnke, Conservation Officer (SD Game Fish and Parks), subject matter bald eagle nest.

September 18, 2018, voice message from Jennifer Hieb regarding response from Senator Rounds regarding PTC.

January 2019, phone call with Josh Haeder regarding legal opinions on wind leases.

1-13) With respect to your statements at the January 24, 2019, public input hearing, state all facts that support the statements you made and produce copies of all documents that support statements you made.

All statements should be supported in the information provided to the PUC. One exception is the article related to Suicide. That article can be found at:

<https://docs.wind-watch.org/Zou-suicide-2017-Oct.pdf>

Dated this 26th day of February 2019.

By /s/ Jon Henslin

Jon Henslin

1020 Lake Alice Drive

Clear Lake, South Dakota

jnhenslin@itcmilbank.com

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**

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**STAFF'S FIRST SET OF DATA
REQUESTS TO INTERVENORS**

EL18-053

Below, please find Staff's FirstSet of Data Requests to Intervenor. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

1-1) Provide copies of all data requests submitted to or by you and copies of all responses provided to those data requests. Provide this information to date and on an ongoing basis.

1-2) Refer to SDCL 49-41B-22.

a. Please specify particular aspect/s of the applicant's burden that you intend to personally testify on.

Turbine placement that will threaten the social and economic condition of inhabitants and expected inhabitants in the siting area.

Turbine placement near environmentally sensitive areas.

b. Please specify particular aspect/s of the applicant's burden of proof that you intend to call a witness to testify on.

None at this time.

1-3) Refer to SDCL 49-41B-25. Identify any "terms, conditions, or modifications of the construction, operation, or maintenance" that you would recommend the Commission order. Please provide support and explanation for any recommendations.

a. Specifically, what mitigation efforts would you like to see taken if this Project is constructed.

I recommend the Commission to order the applicant to adhere to the 2-mile buffer given to the eagle nests outside of the project area to be the same for the eagle nest that has been monitored the past two years, north of Lake Alice a half mile.

I recommend the Commission to review the placement of turbines that are in close proximity of bird movement corridors and concentrated bird and/or bat use areas. Set back of 1 mile to these areas.

I recommend the Commission to study the impact that turbine placement will have on future development of non-participating landowners. Currently, if the project was completed to today, future development on my property at the old homestead would

be within the setback established in the Deuel County Ordinance B2004-01 Section 1215.03 Section 2a. Distance from existing Non-Participating residence and businesses shall be not less than four times the height of the wind turbine. Distance from existing Participating residences, business and public buildings shall be not less than fifteen hundred feet. Non-Participating property owners shall have the right to waive the respective setback requirements. I want the setback from the building site to be what the county ordinance reads. My property is located Glenwood Township T-116-N, R 48 Sec. 34

I recommend the Commission to reevaluate turbine placements next to ecological sensitive areas and give them a 2 mile setback.

I recommend the commission to review turbine placements next to non participants and give them a setback of 1 mile from their property line to protect their rights.

No further support or explanation at this time.

- 1-4) Please list with specificity the witnesses that you intend to call. Please include name, address, phone number, credentials and area of expertise.

None at this time

- 1-5) Do you intend to take depositions? If so, of whom?

None at this time

EL18-053 - 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 First Set of DR

Heath Stone

1-2) 803 Lac Qui Parle St. Gary SD 57237

1-3) Personal Property- Glenwood Township T-116-N, R 48 Sec. 34
Stones Conservation Partnership LLP-Glenwood Township T-116-N, R48 Sec. 34,35
No habitable buildings

1-4) No residence

1-5) South Dakota Pheasant Hunts is a licensed preserve that operates its business on the property listed above. This is the main source of income derived from the property. My family enjoys the property for its peace and quietness and plentiful wildlife that inhabit the area. Outdoor recreation, education and preservation of habitat are the main focus of the property. Every fall hunters come and enjoy pheasant hunting on our property. Food plots are planted in the spring and haying some portions of the property is done late summer.

1-6) I have an abandoned building site located near Turbine 103. Future plans are to build a home at the site. There are several deer stands located on the property listed above. The property hosts a variety of wildlife and crucial habitat for grassland bird species that need big blocks of grass to thrive. The property has a diverse community of native fauna that provides habitat for all wildlife and insects.

1-7) As mentioned above, there is an old building site on our property we want to build a house on in the future. Turbine 103 would be within the set back distance of non-participating residences in the Deuel County ordinance. Turbines 103, 109, 110, 111 are in close proximity to the property and will cause uncertainty to our pheasant hunting operation and put our clients at risk if a turbine malfunctions. The turbines close to the property will have a negative impact on the pheasant population since pheasants avoid the areas near the turbines.

Throughout the project several turbines are located near permanent wetlands that are staging areas for waterfowl in the spring and fall migrations and vital for local waterfowl that use these waters to rear their broods. Turbine 6,13, 14, 63,64, 85, 86, 95, 96, 101, 102, 109-115, 118, 119, 120, 121 all pose a direct threat to waterfowl coming and going from these bodies of waters. Waterfowl are sensitive to tall structures next to wetlands and will cause them to avoid them all together.

Turbines throughout the project are located too close to ecological sensitive areas.

1-8) Turbines near non-participating property lines should have a setback of 1 mile. Turbine 103 is restricting future development on my property and turbines 109, 110, and 111 pose a direct threat to our pheasant operation. Turbines 6, 13, 14, 63, 64, 85, 86, 95, 96, 101, 102, 109-115, 118, 119, 120, 121 shall have a setback of 1 mile due to their close proximity to these wetlands that are vital for waterfowl to utilize these bodies of water for brood rearing, roosting and staging.

1-9) I have a B.S. in Wildlife and Fisheries Sciences. I am a conservationist. I have acquired my professional expertise by reading and studying papers and documents to better our habitat, wildlife populations and pheasant operation on our property.

1-10) None at this time.

1-11) None at this time

1-12) Gary Jaeger (County Commissioner)-unwritten, Present-Gary and I, discussion took place about the wind farms that were moving into the area. I voiced my concerns for wildlife and setbacks. Do not remember the date.

Lynn Pederson (County Commissioner)-unwritten, Present-Lynn and I, discussion took place about the wind farms that were moving in to the area. I voiced my concerns for wildlife and setbacks. Do not remember the date.

1-13) A) Personal Property- Glenwood Township T-116-N, R 48 Sec. 34

B) Stones Conservation Partnership LLP-Glenwood Township T-116-N, R48 Sec. 34,35

C) As stated above

EL18-053 In the matter of Application of Deuel Harvest Wind Energy LLC for a permit of a Wind Energy Facility andn a 345-kv Transmission Line in Deuel County

Applicant First Set of Data Requests

Will Stone

1-2) 18203 486th Ave. Gary, SD 57237

1-3) STONES ADD IN SW ¼ N660' W990' NW ¼ SE1/4 STR 35-116-48; SE ¼ LESS BLK 2 HUNT SUB STR 34-116-48; NE ¼ LESS BLK 1 HUNT SUB STR 34-115-48 No buildings on property.

1-5) Land is used as pheasant hunting licensed preserve, where hunters come from every state to enjoy hunting pheasants that we provide. We have spent a life time grooming this land for the pheasant hunting. Some haying and grazing take place.

1-6) We have hunters on our property any time from September 1 to March 31 for the purpose of hunting pheasants. Hunters are out on the property during all weather conditions which may include times there would be ice build up on the wind tower blades that could be thrown on our property putting them in danger. Hunters also comment on how quiet and serene it is, noise from wind towers would compromise that. Many species of native birds nest on property as well as migratory birds, including eagles and hawks and monarch butterflies. Migratory birds use our wetlands as resting areas during spring and fall migrations. Deer also inhabit our acres.

1-7) I am concerned it will effect nesting habits and most wildlife will migrate out of area. I am concerned of unconstitutionally imposing a safety zone on our property and on public right of ways and noise the wind towers create and the economic effects the turbines could have on our hunting business. If our veteran hunters quit coming because of the noise and loss of open views we will lose primary source of income for the property.

1-8) The elimination turbines 109, 110, 111 . Relocating turbines 103 and 112 2000' from our business acres. Relocating turbines 51,52,64,72,A73,A74,A75,82,84,98,1122 and 123 so they do not impose a safety zone in public right of ways.

1-9) Have studied volumes documents and testimony on wind watch websites and online recording of actual zoning boards and county and city commissions.

1-10) none at this time.

1-11) Loss hunters would impact value of the land to us. It will negatively impact our value by destroying our view of the Coteau hills and our sunrises and sunsets and moon at nights. There is no way it will not affect value.

1-12) I have had communications with all zoning board member and county commissioners but did not document contacts with them. Written comments are a matter of public record in commission meeting minutes.

1-13) Commercial pheasant hunting season is from September 1 to March 31. Hunters also use land for dog training which can take place year round on property. Property is identified in 1-3 above.

1-14) No

1-15) a)

The mention of one of four preserves in my testimony before PUC was just to establish that we have been in business for 35 years as a preserve but have been serving hunters for 63 years.

b) Turbines 103, 109, and 111 unconstitutionally put a safety zone on hunting acres on our property.

c) Turbines 103, 109, and 111 will unconstitutionally impose about a 1000' safety zone on the NW corner and North border line of our preserve acres.

d) see attachment

e) see attachment

f) According to Vesta and Nordex manuals safety zone setbacks these turbines are imposing safety zones on right of ways where school buses travel, people drive, jog and ride bike

g) I can't prove income will decrease, wind company can't prove it won't, but if it does decrease who compensates us. Wind company would not put a clause in contract offered to us, to guarantee compensation of difference if preserve's gross income dropped below current level.

If this application is for a new private shooting preserve permit, you are also required to submit a plan of operation and outline the preserve boundaries on the enclosed plat map. Please include a FSA (SCS) type aerial photo showing perimeters of the proposed shooting preserve. For preserve renewals with acre or boundary changes, please outline the preserve on the enclosed plat map.

The following plat map represents an area of 16 sections. Each of the larger squares (thick border) represents one section of land (640 acres); the smallest squares represent 40 acres. Please outline the boundaries of your shooting preserve area and shade in that portion. Label the section(s), making sure that your sketch conforms to the legal description of the area you are applying for.

NAME OF APPLICANT *SOUTH DAKOTA PHEASANT HUNTS*
WILLIAM STONE
DEUEL CO.

40A.	

Each small box = 40 A.

These 4 boxes = 160 A.

T-16N R-47-48W

Township Directory
 Section Location

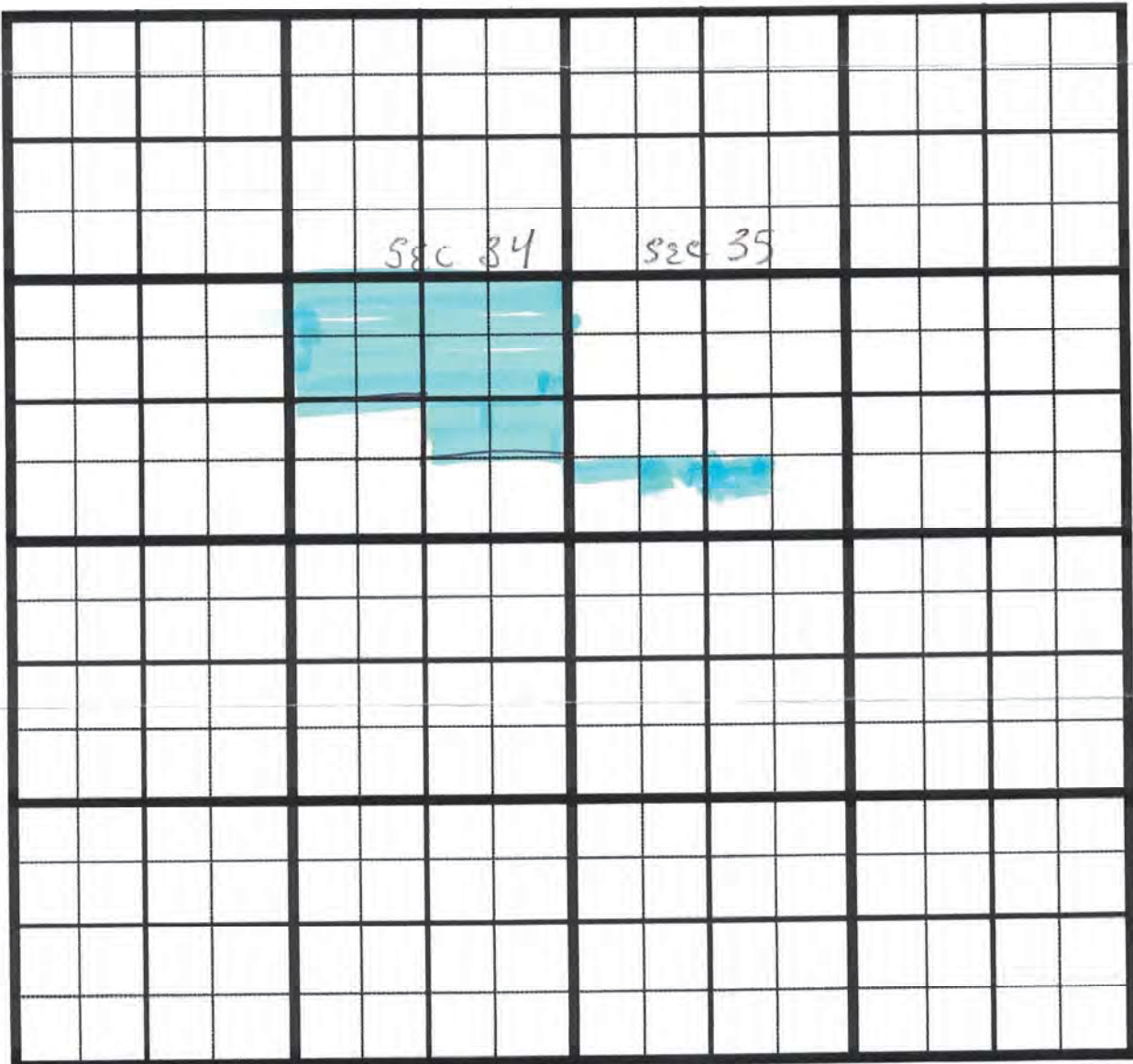
Circle Section(s) in Preserve

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36



NORTH

**W
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**E
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T**

Scale in miles

0

1

SOUTH

3

4

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**

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**CHRISTINA KILBY'S RESPONSES
TO STAFF'S FIRST SET OF DATA
REQUESTS TO INTERVENORS**

EL18-053

Below, please find Intervenor Christina Kilby's Responses to Staff's First Set of Data Requests.

- 1-1) Provide copies of all data requests submitted to or by you and copies of all responses provided to those data requests. Provide this information to date and on an ongoing basis.

These will be provided.

- 1-2) Refer to SDCL 49-41B-22.

- a. Please specify particular aspect/s of the applicant's burden that you intend to personally testify on.

I intend to personally testify that:

- 1) Deuel Harvest is unable to meet its burden of proving it will comply with all applicable laws and rules;**
- 2) Deuel Harvest cannot meet its burden of proving that the facility will not pose a threat of serious injury to the environment, economic conditions of inhabitants; and**
- 3) Deuel Harvest cannot meet its burden of proving that the facility will not substantially impair the health, safety, and welfare of the inhabitants.**

There is significant evidence, evidence that continues to build about the harms caused by industrial wind turbines: harms from the noise, infrasound, sleep deprivation, dangers of ice throw and fire.

Deuel Harvest must prove that the project will not substantially impair health, safety, and welfare, or pose a threat of serious injury. It is not the Intervenor's burden to prove harm from the project. Deuel Harvest must present scientifically sound evidence proving that turbines and the noise and infrasound they produce will not substantially impair the health, safety, and welfare of the inhabitants, nor pose a threat of serious injury to the

environment, and economic conditions of inhabitants. I do not believe Deuel Harvest will be able to meet its burden.

See attached studies and reports served simultaneously. More may follow.

- b) Please specify particular aspect/s of the applicant's burden of proof that you intend to call a witness to testify on.

Unknown at this time.

- 1-3) Refer to SDCL 49-41B-25. Identify any “terms, conditions, or modifications of the construction, operation, or maintenance” that you would recommend the Commission order. Please provide support and explanation for any recommendations.

I ask that setbacks for non-participating landowners be set at two miles with the option of a waiver. This is because of the characteristics of and problems caused by infrasound that turbines are known to produce.

As an alternative to two-mile setbacks, sound levels should not be allowed to exceed any level that can cause sleep disturbance, annoyance, or stress. Nonparticipating landowners should not be forced to sacrifice their enjoyment, comfort, or health for the profits of the applicant.

I feel Deuel Harvest should be required to pay for independent testing of sound and infrasound at all residences both prior to construction, and again when the project is fully operational to ensure compliance.

I feel upon any reliable complaint made to a PUC liason, Deuel Harvest should be required to shut down the possibly offending turbine until an independent test done at Deuel Harvest’s expense can prove no violation exists.

I ask that I be allowed to modify these requests later as I become of aware of new information.

- a. Specifically, what mitigation efforts would you like to see taken if this Project is constructed.

I believe the only effective solution to the problems created by turbines is setbacks sufficient to prevent the loss of enjoyment of the property. I believe property owners have the right to the quiet enjoyment of all of their property, so setbacks should be from property lines. I do not think landowners should have to sacrifice the enjoyment of their property to maximize profits to Invenergy. Mitigation is not sufficient. Long term and continuous harassment and health effects from noise, flicker and infrasound is unjustified and a serious harm. It should not be allowed.

- 1-4) Please list with specificity the witnesses that you intend to call. Please include name, address, phone number, credentials and area of expertise.

Unknown at this time.

Do you intend to take depositions? If so, of whom?

Unknown at this time, but it is unlikely because of time constraints.

Dated this 26th day of February 2019.

/S/ Christina Kilby
Christina Kilby
Intervenor
112 Geneva Blvd.
Burnsville, MN 55306
christinaLkilby@yahoo.com



600 East Capitol Avenue | Pierre, SD 57501 P605.773.3361 F605.773.5683

Office of the Secretary

October 13, 2017

RECEIVED
OCT 13 2017
SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

Public Utilities Commission Staff
SD Public Utilities Commission
Capitol Building, 1st floor
500 East Capitol Avenue
Pierre, SD 57501-5070

Re: PUC Docket EL17-028 - In the Matter of the Application by Crocker Wind Farm, LLC for a Permit of a Wind Energy Facility and a 345 kV Transmission Line in Clark County, South Dakota, for Crocker Wind Farm

Dear PUC Staff:

The South Dakota Department of Health has been requested to comment on the potential health impacts associated with wind facilities. Based on the studies we have reviewed to date, the South Dakota Department of Health has not taken a formal position on the issue of wind turbines and human health. A number of state public health agencies have studied the issue, including the Massachusetts Department of Public Health¹ and the Minnesota Department of Health². These studies generally conclude that there is insufficient evidence to establish a significant risk to human health. Annoyance and quality of life are the most common complaints associated with wind turbines, and the studies indicate that those issues may be minimized by incorporating best practices into the planning guidelines.

Sincerely,

A handwritten signature in cursive script that reads 'Kim Malsam-Rysdon'.

Kim Malsam-Rysdon
Secretary of Health

¹ <http://www.mass.gov/eea/docs/dep/energy/wind/turbine-impact-study.pdf>

² www.health.state.mn.us/divs/eh/hazardous/topics/windturbines.pdf

Decommissioning Conditions

1. At least 60 days prior to commencement of commercial operation, Applicant shall file an escrow agreement with the Commission for Commission approval that provides a decommissioning escrow account. The escrow agreement shall incorporate the following requirements:
 - a) The escrow account is funded by the turbine owner annually at a rate of \$5,000 per turbine per year for the first 30 years, commencing no later than the commercial operation date.
 - b) Beginning in year ten following commercial operation of the project and each fifth year thereafter, the turbine owner shall submit to the Commission an estimated decommissioning date, if established, and estimated decommissioning costs and salvage values. Based on the verification of the information in the filing the Commission may determine that funds in escrow are sufficient to cover the costs of decommissioning and that no additional deposits are required. The Commission also may determine that additional funding is required and may require additional funding equal to the estimated amount needed for decommissioning.
 - c) All revenues earned by the account shall remain in the account.
 - d) An account statement shall be provided annually to the Commission and become a public record in this docket.
 - e) The escrow account obligations will be those of Deuel Harvest and the escrow agreement shall include terms providing that the agreement binds Deuel Harvest's successors, transferees, and assigns. A sale of project assets shall include the associated Permit that requires Commission approval per SDCL § 49-41B-29.
 - f) The escrow account agent shall have an office located in South Dakota.
 - g) The escrow agreement shall be subject to the laws of South Dakota and any disputes regarding the agreement shall be venued in South Dakota.
 - h) To minimize the risk that the escrow account would be subject to foreclosure, lien, judgment, or bankruptcy, the escrow agreement will be structured to reflect the follow factors:
 - 1) That Deuel Harvest agreed to the creation of the escrow account;
 - 2) Deuel Harvest exercises no (or the least amount possible of) control over the escrow;
 - 3) The initial source of the escrow;
 - 4) The nature of the funds put into the escrow;
 - 5) The recipient of its remainder (if any);
 - 6) The target of all its benefit; and

- 7) The purpose and its creation.
 - i) Account funds are to be paid to the project owner at the time of decommissioning, to be paid out as decommissioning costs are incurred and paid.
 - j) If the project owner fails to execute the decommissioning requirement found in section 40 of the Conditions, the account is payable to the landowner who owns the land on which associated project facilities are located as the landowner incurs and pays decommissioning costs.
- 2. If Applicant is purchased by a utility rate regulated by the Commission, the purchasing utility will assume financial responsibility for decommissioning and provide funding for the decommissioning and removal of the Project. As a regulated electric utility, the projected financial cost of decommissioning will be reviewed when the purchasing utility requests recovery of the Project investment and associated decommissioning cost from customers in a rate proceeding. The Commission may review and adjust the Project decommissioning cost recovered from customers in subsequent rate proceedings using the most current information available regarding decommissioning.

**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**

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**STAFF’S SECOND SET OF DATA
REQUESTS TO CHRISTINA KILBY**

EL18-053

Below, please find Staff’s Second Set of Data Requests to Ms. Christina Kilby. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

- 2-1) Referring to the response of Christina Kilby to Staff Data Request 1-3, you state “I ask that setbacks for non-participating landowners be set at two miles with the option of a waiver. This is because of the characteristics of and problems caused by infrasound that turbines are known to produce.”
- a) Please provide documentation that supports a two mile setback is appropriate to alleviate problems caused by infrasound.
 - b) Is the recommended setback from the residence or property line?
- 2-2) Referring to the response of Christina Kilby to Staff Data Request 1-3, you state “As an alternative to two-mile setbacks, sound levels should not be allowed to exceed any level that can cause sleep disturbance, annoyance, or stress. Nonparticipating landowners should not be forced to sacrifice their enjoyment, comfort, or health for the profits of the applicant.”
- a) What is your recommendation for the sound level to avoid sleep disturbance for non-participating landowners? Please provide any documentation to support the recommendation.
 - b) What is your recommendation for the sound level to avoid annoyance for non-participating landowners? Please provide any documentation to support the recommendation.
 - c) What is your recommendation for the sound level to avoid stress for non-participating landowners? Please provide any documentation to support the recommendation.
- 2-3) Referring to the response of Christina Kilby to Staff Data Request 1-3, you state “I feel upon any reliable complaint made to a PUC liason, Deuel Harvest should be required to shut down the possibly offending turbine until an independent test done at Deuel Harvest’s expense can prove no violation exists.”
- a) In the last four wind energy facility dockets (Dockets, EL17-055, EL18-003, EL18-026, and EL18-046), the public liason condition stated “the public liason services

- shall terminate 90 days after the Project commences commercial operations, unless the appointment is extended by order of the Commission.” What is your recommendation for the duration of service for a public liason?
- b) Is it lawful to require the shut down of a possibly offending turbine until an independent test can prove no permit violation exists? Please explain why a permit violation would not need to be ruled on by the Commission before a turbine be required to shut down.
 - c) Regarding the PUC liason, please explain why the PUC complaint process established by administrative rule will not be able to address the potential permit violations during operations.
- 2-4) Referring to the response of Christina Kilby to Staff Data Request 1-3(a), you state “Long term and continuous harassment and health effects from noise, flicker and infrasound is unjustified and a serious harm.” Is your position that shadow flicker causes health effects? If yes, please explain in detail and provide any supporting documentation.
- 2-5) Referring to the response of Christina Kilby to Applicant Data Request 1-7, you state “The size, number and location of turbines in close proximity to our property will destroy the peace, and quiet we currently enjoy at the property. The size, number, and location of the turbines in close proximity will prevent the safe use and enjoyment of the property, because of shadow flicker, noise, infrasound, and risk of ice throw, component liberation and fire.”
- a) Please explain and describe the risk of ice throw stated above. Please provide documentation to support the response. Do you have a setback recommendation for ice throw? Please support such recommendation with documentation.
 - b) Please explain and describe component liberation stated above. Please provide documentation to support the response. Do you have a setback recommendation for component liberation? Please support such recommendation with documentation.
- 2-6) Referring to the response of Christina Kilby to Applicant Data Request 1-7, you state “I am concerned about disturbance from the construction and operation of the turbines polluting the aquifer and other bodies of water.”
- a) Please describe and explain the disturbance from the construction and operation of the turbines that would pollute the aquifer and other bodies of water.
 - b) Please provide documentation that supports the claim that the construction and operation of wind energy facilities pollute aquifers and other bodies of water.
- 2-7) Referring to the response of Christina Kilby to Applicant Data Request 1-8, you state “Because of the distance infrasound can travel, I request a two-mile setback for non-participating landowners, with the option of a waiver.” How far can infrasound travel? Please provide documentation to support the claim.

2-8) Referring to the response of Christina Kilby to Applicant Data Request 1-11, you state “I believe the market value of all residences located in and around the project will decrease. I do not believe anyone would choose to live near an industrial wind project if given a choice, especially if wanting to live in a quiet rural area. I know the project will negatively affect the value of our family property. No formal appraisals have been done that I am aware of at this time. But the property will no longer have the desired characteristics it has now.”

- a) Are you aware of any market sales near a wind tower that supports that assertion that the market value of all residences located in and around wind turbines will decrease? If yes, please provide all information you are aware of, including address, of the market transaction.
- b) Do you think the market value of a participating landowner will decrease, even if the wind turbine lease payments are transferred in the property sale? Please explain and provide any evidence you have.

Dated this 4th day of March 2019.

Amanda M. Reiss

Amanda M. Reiss
Kristen Edwards
Staff Attorneys
South Dakota Public Utilities Commission
500 East Capitol Ave.
Pierre, SD 57501

**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**

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**STAFF’S SECOND SET OF DATA
REQUESTS TO GARRET HOMAN**

EL18-053

Below, please find Staff’s Second Set of Data Requests to Mr. Garret Homan. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

2-1) Referring to the response of Garret Homan to Staff Data Request 1-3(1): Does FAA order JO 7400.2L and 14 CFR 77 apply to private-use airstrips? If no, please explain why it is appropriate to apply these standards to private-use airstrips for safety purposes.

2-2) Referring to the response of Garret Homan to Staff Data Request 1-3(2):

- a) Please provide the “safety manual” recommendation for ice throw as it applies to the turbines proposed in this Application?
- b) Have you requested the safety manual from the Applicant through discovery?

2-3) Referring to the response of Garret Homan to Staff Data Request 1-3(3):

- a) Regarding the “state-managed 24-7 hotline and response department”, please explain why the PUC complaint process established by administrative rule will not be able to address the concerns listed.
- b) Regarding the “safety issues (such as oil leaks and other pollution, ...)”:
 - i. Please describe the specific “other pollution” you are referring to in the response, and explain what aspects of the construction, operation, and maintenance of a wind energy facility would cause the pollution.
 - ii. Please provide documentation that supports the claim that wind energy facilities causes the other pollution identified in 1-3)b)i).
- c) Regarding the “ground water contamination”:
 - i. Please describe the specific ground water contamination you are referring to in the response, and explain what aspects of the construction, operation, and maintenance of a wind energy facility would cause the pollution.
 - ii. Please provide documentation that supports the claim that wind energy facilities cause the ground water contamination identified in 1-3)c)i).

- 2-4) Referring to the response of Garret Homan to the Applicant Data Request 1-9, you cited a recommendation for ice throw that the German Wind Institute made in 1999. Is this recommendation applicable to the turbines proposed in this 2018 filing? Please explain.
- 2-5) Referring to the response of Garret Homan to the Applicant Data Request 1-11, you asserted that “the project will negatively affect the property value of my parents’ property, both monetary and the intrinsic value.” Are you aware of any market sales near a wind tower that supports that assertion? If yes, please provide all information you are aware of, including address, of the market transaction.
- 2-6) Referring to the response of Garret Homan to the Applicant Data Request 1-13, you stated that you “look forward to flying much more often in the future because of the availability of our airstrip.” Please explain the advantages and benefits of using a private airstrip compared to the local public airstrips. In other words, how is the private airstrip going to allow you fly more often in the future than current available options?
- 2-7) Referring to the response of Garret Homan to the Applicant Data Request 1-18:
- a) Please provide a copy of the Special Exception Permit from Deuel County.
 - b) Did you request the setbacks as described in the response of Garret Homan to the Applicant Data Request 1-8 as part of the Special Exception Permit? What setbacks were granted by Deuel County for the private airstrip?
- 2-8) Did you receive a letter from the FAA titled “Notice of Airport Airspace Analysis Determination Establish Private Use Airport” similar to letter available via the following link: <https://puc.sd.gov/commission/dockets/electric/2017/el17-055/testimony/crocker/Rebuttal/Morrisexhibit1.PDF> ? If yes, please provide.
- 2-9) Are you aware of any state governmental agency in other states that is regulating setbacks from private airstrips? If yes, please provide with supporting documentation.

Dated this 4th day of March 2019.

Amanda M. Reiss

Amanda M. Reiss
Kristen Edwards
Staff Attorneys
South Dakota Public Utilities Commission
500 East Capitol Ave.
Pierre, SD 57501

**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**

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**STAFF’S SECOND SET OF DATA
REQUESTS TO HEATH STONE**

EL18-053

Below, please find Staff’s Second Set of Data Requests to Mr. Heath Stone. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

- 2-1) Referring to the response of Heath Stone to Staff Data Request 1-3, you recommend the following mitigation measure: “I recommend the Commission to order the applicant to adhere to the 2-mile buffer given to the eagle nests outside of the project area to be the same for the eagle nest that has been monitored the past two years, north of Lake Alice a half mile.”
- a) Please explain the basis for the two-mile buffer for the bald eagle nest north of Lake Alice, and provide documentation to support the recommendation.
 - b) In the Applicant Supplemental Testimony of Andrea Giampoli, Ms. Giampoli stated Deuel Harvest will voluntarily apply an 800-meter (2,625 feet) setback from the nest to the nearest turbine based on the South Dakota Bald Eagle Management Plan. Do you believe this setback is unreasonable? If yes, please explain and provide support.
- 2-2) Referring to the response of Heath Stone to Staff Data Request 1-3, you requested the following mitigation measure: “I recommend the Commission to review the placement of turbines that are in close proximity of bird movement corridors and concentrated bird and/or bat use areas. Set back of 1 mile to these areas. Provide property value guarantees for nonparticipants in the siting area.”
- a) Please define “bird movement corridors” and “concentrated bird and/or bat use areas.”
 - b) Please provide a map that identified these corridors and areas within the Project area and up to 1 mile outside the project area.
 - c) Please explain the basis for a 1-mile set back from these corridors and areas, and include supporting documentation.
 - d) Are you aware if the referenced corridors or areas are defined by other agencies in and around other wind energy facilities? If yes, please provide.

- 2-3) Referring to the response of Heath Stone to Staff Data Request 1-3, you requested the following mitigation measure: “I recommend the Commission to study the impact that turbine placement will have on future development of non-participating landowners. Currently, if the project was completed to today, future development on my property at the old homestead would be within the setback established in the Deuel County Ordinance B2004-01 Section 1215.03 Section 2a.”
- a) What would the study requested assess? Please provide specific details.
 - b) Have you requested the Company implement a voluntary setback from the old homestead consistent with the Deuel County Ordinance B2004-01 Section 1215.03 Section 2a? If yes, please provide the Company’s rational for not implementing the setback.
- 2-4) Referring to the response of Heath Stone to Staff Data Request 1-3, you requested the following mitigation measure: “I recommend the Commission to reevaluate turbine placements next to ecological sensitive areas and give them a 2 mile setback.”
- a) Are you aware of agencies that have defined an “ecological sensitive area” in and around other wind energy facilities? If yes, please provide supporting documentation with setback information. If no, please provide your definition with supporting documentation.
 - b) How many ecological sensitive areas are in and around the Deuel Harvest North Wind Farm? Please provide support for your answer.
 - c) Please explain the basis for the 2-mile setback recommendation.
- 2-5) Referring to the response of Heath Stone to Staff Data Request 1-3, you requested the following mitigation measure: “I recommend the commission to review turbine replacements next to non-participating landowners and give them a setback of 4 times the height of a tower.”
- a) Is the setback from the property line or residence? Please provide support for the recommendation.
 - b) If the setback is from the residence, please explain how the setback is different than Deuel County Ordinance B2004-01 Section 1215.03 Section 2a.

Dated this 4th day of March 2019.

Amanda M. Reiss

Amanda M. Reiss
Kristen Edwards
Staff Attorneys
South Dakota Public Utilities Commission
500 East Capitol Ave.
Pierre, SD 57501

**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**

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**STAFF’S SECOND SET OF DATA
REQUESTS TO JOHN HOMAN**

EL18-053

Below, please find Staff’s Second Set of Data Requests to Mr. John Homan. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

- 2-1) Referring to the response of John Homan to Staff Data Request 1-2, you state the “Applicant has the burden of proof that the project will not have negative impacts on...”.
- a) Please provide the statutes or rules that support the claim that the Applicant has to show the project will not have *negative impacts*.
- b) The South Dakota legislature established the Applicants burden of proof in SDCL 49-41B-22, which uses the following terms:
- “not pose a threat of serious injury”;
 - “not substantially impair the health”; and
 - “not unduly interfere with the orderly development of the region”.

Are these the standards of negative impacts you were referring to? Please explain.

- 2-2) Referring to the response of John Homan to Staff Data Request 1-2, you state “The effect of the project on Monighan Creek and its drainages, and the concern for the springs that feed it”.
- a) What specific concerns do you have regarding the effect(s) identified above? Please describe in detail.
- b) Please provide documentation that supports the claim that wind energy facilities cause the impact identified in 2-2)a).
- 2-3) Referring to the response of John Homan to Staff Data Request 1-2, you state “The concern for the safe usage of our landing strip, Homan Field, which is permitted and FAA approved.”
- a) Does the FAA approval authorize any setback provisions for safety? If no, which governmental agency is responsible for setbacks from the private air strips?
- b) By permitted, do you mean by Deuel County? If no, please provide the permitting agency? Please also provide a copy of the permit.

- c) Did the permitting agency grant any setbacks from the private air strips? If yes, please provide.
- 2-4) Are you aware of any governmental agency in other states that is regulating setbacks from private airstrips? If yes, please provide supporting documentation.
- 2-5) Referring to the response of John Homan to Staff Data Request 1-2, you state “Also the negative effect it would have on the property value, the value that is attributed to the use of the property as well as the monetary value.” Are you aware of any market sales near a wind tower that supports that assertion? If yes, please provide all information you are aware of, including address, of the market transaction.
- 2-6) Referring to the response of John Homan to Staff Data Request 1-3, you state “I would like to have the applicant provide an independent geological and hydrology study of the project area within a minimum distance of two miles of Monighan Creek, and within a two mile distance from our property boundaries. It is critical since Monighan Creek is a spring-fed, free flowing creek and our property contains 4 spring-fed dams that could be impacted by contamination from the process of construction and the long term damage that could be caused by the impacts of these massive turbine foundations and the ground vibrations caused by the operations of the towers.”
- a) Regarding the request for an independent geological study:
- i. What would the independent geological study assess around Monighan Creek and your property?
 - ii. Explain how the areas you want assessed in 2-6)a)i) impact Monighan Creek and your property.
 - iii. What South Dakota statute or rule are you basing the study request on?
 - iv. Who would you recommend hiring to conduct this study?
 - v. Are you aware of any other wind energy facilities that have submitted a study that you request? If yes, please provide.
 - vi. Please submit any studies you are aware of that perform the assessment requested so the Commission can have an example to analyze.
- b) Regarding the request for an independent hydrological study:
- i. What would the independent hydrological study assess around Monighan Creek and your property?
 - ii. Explain how the areas you want assessed in 2-6)b)i) impact Monighan Creek and your property.
 - iii. What South Dakota statute or rule are you basing the study request on?
 - iv. Who would you recommend hiring to conduct this study?
 - v. Are you aware of any other wind energy facilities that have submitted a study that you request? If yes, please provide.
 - vi. Please submit any studies you are aware of that perform the assessment requested so the Commission can have an example to analyze.

- c) What contamination from the process of construction are you concerned about?
Please describe in detail. Please provide documentation that supports the claim that wind energy facilities construction causes the contamination identified.
 - d) Regarding the “long term damage that could be caused by the impacts of these massive turbine foundations”:
 - i. What specific concerns do you have regarding the damage that could be caused by turbine foundations? Please describe in detail.
 - ii. Please provide documentation that supports the claim that wind energy facilities construction causes the damage identified in 2-6)d)i).
 - e) Regarding the “ground vibration caused by the operations of the towers”:
 - i. What specific concerns do you have regarding the ground vibrations caused by the operations of the towers? Please describe in detail.
 - ii. Please provide documentation that supports the claim that wind energy facilities vibrations from operation causes the concerns identified in 2-6)e)i).
- 2-7) Referring to the response of John Homan to Staff Data Request 1-3, you state “I would like the applicant to show locations of all aquifers and the depths to those aquifers. We request an aquifer study and report to be submitted with their application.”
- a) What would the aquifer study assess?
 - b) Explain how the areas you want assessed in 2-7)a)i) impact Monighan Creek and your property.
 - c) What South Dakota statute or rule are you basing the study request on?
 - d) Are you aware of any other wind energy facilities that have submitted a study that you request? If yes, please provide.
 - e) Please submit any studies you are aware of that perform the assessment requested.
- 2-8) Referring to the response of John Homan to Staff Data Request 1-3A(1), you state “That the towers be set back a minimum of 2 miles from environmentally sensitive areas, sensitive because of the concentration of wildlife and forested and riparian areas”:
- a) Are you aware of any agency that has defined an “environmentally sensitive area” in and around other wind energy facilities? If yes, please provide supporting documentation with setback information.
 - b) Please provide your definition of an environmentally sensitive area, with supporting documentation.
 - c) How many environmentally sensitive areas are in and around the Deuel Harvest North Wind Farm? Please provide support for your answer.
 - d) Please explain the basis for the 2-mile setback recommendation and provide any supporting documentation.

- 2-9) Referring to the response of John Homan to Staff Data Request 1-3A(2), you state “One and one half mile setbacks from non-participating residences, especially in the case of multiple residences in concentrated areas.”
- a) Please explain the basis for a one and one half mile setback from non-participating residences and provide any supporting documentation.
 - b) Please define “multiple residences in concentrated areas,” and explain why that definition should be treated differently than a singular non-participating residence.
- 2-10) Referring to the response of John Homan to Staff Data Request 1-3A(3) regarding non-participating property line setbacks, please explain the basis for a one half mile setback and provide any supporting documentation.
- 2-11) Referring to the response of John Homan to Staff Data Request 1-3A(4) regarding shadow flicker, please explain why shadow flicker should be conditioned at the property line rather than a residence.
- 2-12) Referring to the response of John Homan to Staff Data Request 1-3A(9) regarding the setback from Homan Field, are you relying on the testimony of Garret Homan to support that recommendation? If no, please provide the basis for your recommendation and any supporting documentation.
- 2-13) Referring to the response of John Homan to Staff Data Request 1-3A(10) regarding the setback from all public road and right-of-ways for safety concerns:
- a) Please provide the documentation associated with ice throw that supports a 1,500 foot setback as requested.
 - b) Are there other safety concerns that support a 1,500 foot setback? If yes, please describe in detail, and provide any supporting documentation that supports the setback distance.

Dated this 4th day of March 2019.

Amanda M. Reiss

Amanda M. Reiss
Kristen Edwards
Staff Attorneys
South Dakota Public Utilities Commission
500 East Capitol Ave.
Pierre, SD 57501

**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**

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**STAFF'S SECOND SET OF DATA
REQUESTS TO JON HENSLIN**

EL18-053

Below, please find Staff's Second Set of Data Requests to Mr. Jon Henslin. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

- 2-1) Referring to the response of Jon Henslin to Applicant Data Request 1-11, you state "I am concerned that this project will negatively impact my property." Are you aware of any market sales that supports the assertion that there is adverse effects on the selling price of rural residential properties in proximity to a wind turbine? If yes, please provide all information you are aware of, including address, of the market transaction.
- 2-2) Referring to the response of Jon Henslin to Applicant Data Request 1-8, you requested the following mitigation measure: "Provide property value guarantees for nonparticipants in the siting area."
- a) Can you provide any examples of how a property value guarantee has been implemented for any other wind energy facilities? If yes, please provide supporting documentation.
- b) In response to a request for a property value guarantee condition for the Prevailing Wind Park permit (Docket EL18-026), Commission Staff witness David Lawrence stated the following:

"While I understand the goal of a property value guarantee, I have concerns about how to properly manage the valuation process for consistent results before the project and after the installation of the wind project. Many variables can influence the criteria to establish value or to reestablish value at a later date. For example, who is qualified to provide a value opinion? What will be the scope of work for establishing the market value before, and the market value after the installation of the wind project? How will changes in a property's condition such as a well-maintained property versus a poorly maintained property be measured for value differences in contrast to the operational date of the wind project? I

would be more supportive of the idea of a property value guarantee if there were a way to consistently define and measure the valuation process for a property's market value in proximity to a wind project.”

Please provide responses to the questions and concerns posed by David Lawrence in Docket EL18-026 regarding a property value guarantee.

- 2-3) Referring to the response of Jon Henslin to Applicant Data Request 1-8, you requested the following mitigation measure: “Provide two-mile radius safety zone for all bald eagle nests, including the nest identified at the PUC public hearing held in Clear Lake on this project.”
- a) Please explain the basis for the two-mile radius safety zone for all bald eagle nests, and provide documentation to support the recommendation.
 - b) In the Applicant Supplemental Testimony of Andrea Giampoli, Ms. Giampoli stated Deuel Harvest will voluntarily apply an 800-meter (2,625 feet) setback from the nest to the nearest turbine based on the South Dakota Bald Eagle Management Plan. Do you believe this setback is unreasonable? If yes, please explain and provide support.

Dated this 4th day of March 2019.

Amanda M. Reiss

Amanda M. Reiss
Kristen Edwards
Staff Attorneys
South Dakota Public Utilities Commission
500 East Capitol Ave.
Pierre, SD 57501

**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**

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**STAFF’S SECOND SET OF DATA
REQUESTS TO WILL STONE**

EL18-053

Below, please find Staff’s Second Set of Data Requests to Mr. Will Stone. Please submit responses within 10 business days, or promptly contact Staff to discuss an alternative arrangement.

- 2-1) Referring to the response of Will Stone to Applicant Data Request 1-7, you state “I am concerned it will effect nesting habits and most wildlife will migrate out of area.” Please provide documentation to support this concern.
- 2-2) Referring to the response of Will Stone to Applicant Data Request 1-7, you state “I am concerned of unconstitutionally imposing a safety zone on our property and on public right of ways”
 - a) Please provide a recommendation for a safety zone, and provide documentation to support the recommendation.
 - b) Please provide the safety zone for the specific turbines proposed in this filing. If you do not have this information, have you requested this information from the Applicant in this proceeding?
- 2-3) Referring to the response of Will Stone to Applicant Data Request 1-7, you state ““I am concerned of the economic effects the turbines could have on our hunting business.”:
 - a) Do you have signed affidavits from hunters indicating they will quit coming because of the wind energy facility? Does the affidavit state the reason they will stop coming?
 - b) Do you have receipts that show how much each pheasant hunter spent at the preserve? Can you provide a detailed calculation based on these receipts on how much income you forecast losing as a result of this proposed facility? If so, please provide confidentially.
- 2-4) Referring to the response of Will Stone to Applicant Data Request 1-8, you state “The elimination turbines 109, 110, 111. Relocating turbines 103 and 112 2000' from our business acres. Relocating turbines 51, 52, 64, 72, A73, A74, A75, 82, 84, 98, 1122 and 123 so they do not impose a safety zone in public right of ways.”

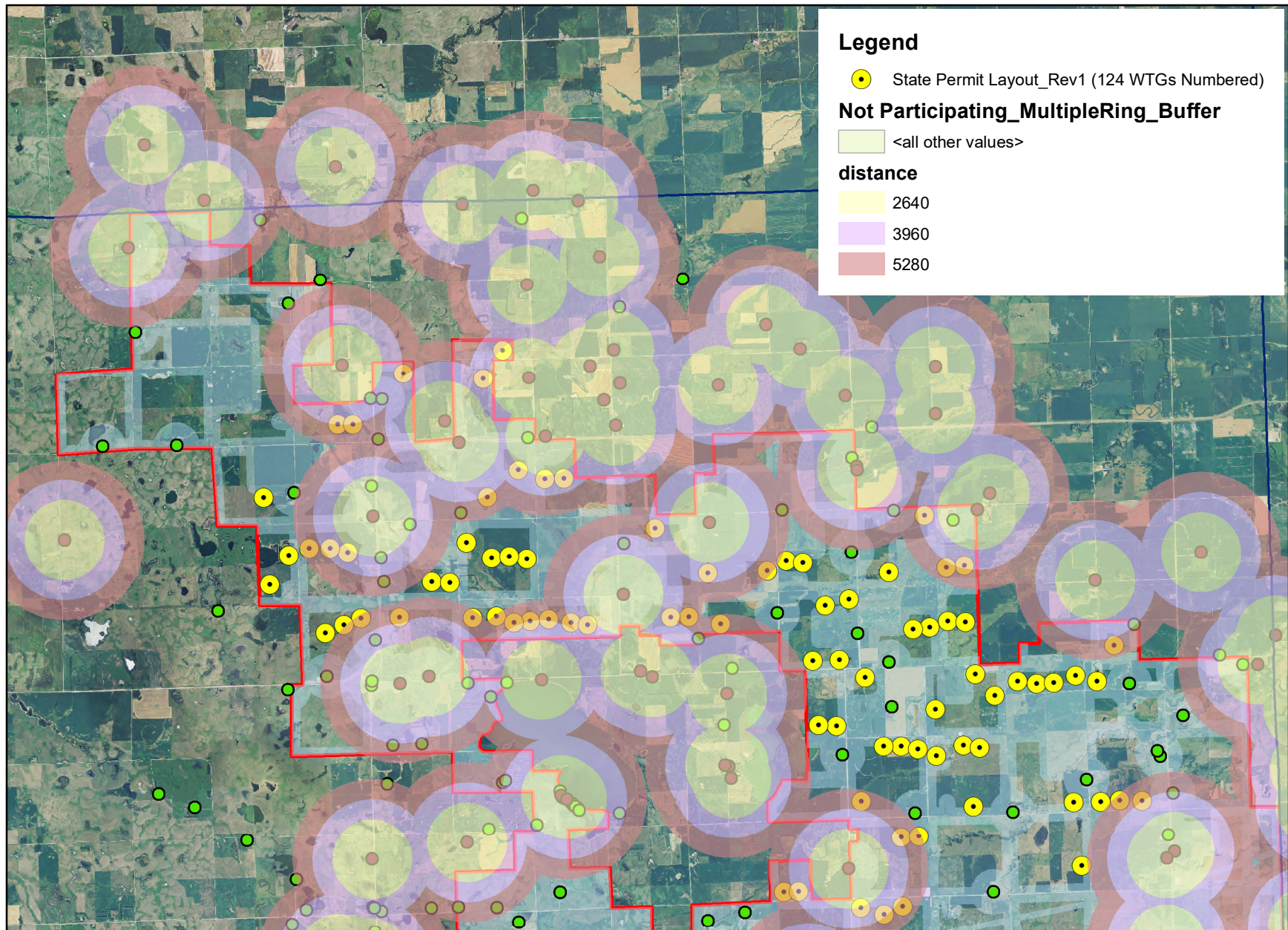
- a) Please explain the basis for removing turbines 109, 110, and 111, and provide supporting documentation.
 - b) Regarding relocating turbines 103 and 112 2,000 feet from your business acres, please provide the basis for the 2,000 feet move and provide supporting documentation.
 - c) Regarding relocating turbines 51, 52, 64, 72, A73, A74, A75, 82, 84, 98, 1122, and 123:
 - i. Regarding turbine 1122, was that a typographical error? If yes, please correct.
 - ii. Please explain the basis for relocating those turbines based on the safety zone, and provide documentation to support your recommendation.
 - iii. Regarding relocating turbines, SDCL 49-41B-36 states that the Commission has not been delegated authority from the legislature to designate or mandate the location of a wind energy facility. Is your proposal consistent with SDCL 49-41B-36? Please explain.
- 2-5) Referring to the response of Will Stone to Applicant Data Request 1-11, you state “Loss hunters would impact value of the land to us. It will negatively impact our value by destroying our view of the Coteau hills and our sunrises and sunsets and moon at nights. There is no way it will not affect value.” Are you aware of any market sales near a wind tower that supports that assertion? If yes, please provide all information you are aware of, including address, of the market transaction.
- 2-6) Referring to the response of Will Stone to Applicant Data Request 1-15g, you state “can't prove income will decrease, wind company can't prove it won't, but if it does decrease who compensates us. Wind company would not put a clause in contract offered to us, to guarantee compensation of difference if preserve's gross income dropped below current level”. Can you provide any examples of how a gross income guarantee has been implemented for any other wind energy facilities as requested above? If yes, please provide supporting documentation.

Dated this 5th day of March 2019.

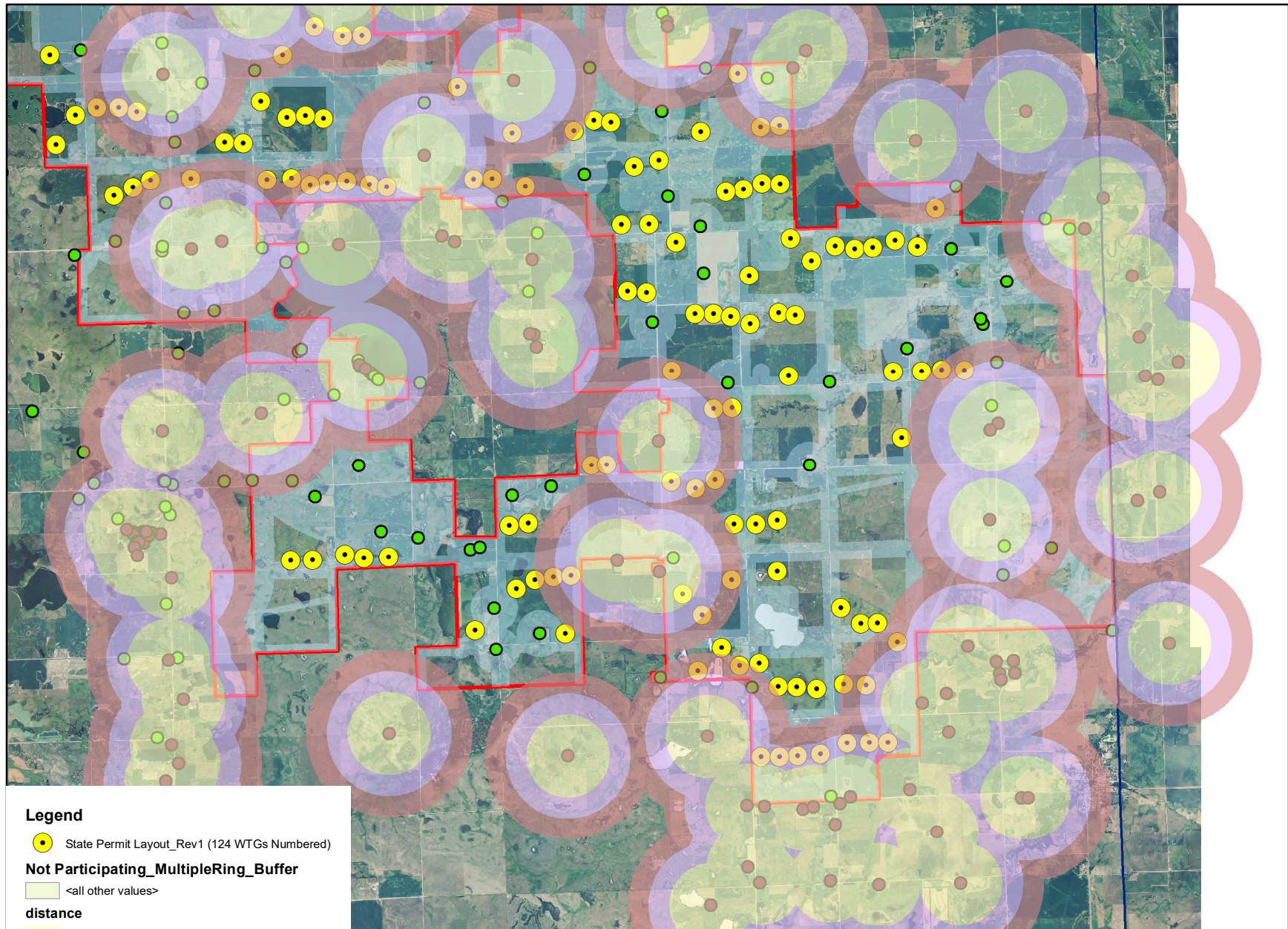


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Non-Participating Residence Setback Scenario Map (Distance in Feet)



Non-Participating Residence Setback Scenario Map (Distance in Feet)



Legend

● State Permit Layout_Rev1 (124 WTGs Numbered)

Not Participating_MultipleRing_Buffer

<all other values>

distance

2640

3960

5280

SetbacksInProjectArea