

Staff's First Data Request to Intervenor- Response

Staff, please be advised of the following:

- We have just hired attorney, David Ganje. Mr. Ganje only had his first phone conversation with us on Sunday April 14th, therefore he is still reviewing the application and papers. He is not finished reviewing. He will advise us on requests and data as soon as possible. We do not want to ignore your requests and are not trying to be disrespectful. He will advise us as soon as possible and we will supplement or correct this Reply if we should. Thank you.
- We as intervenors have been working together. Therefore, our responses to your first data request to the intervenors will be similar, and some responses identical.

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.

Response:

(Melissa and Patrick) No data requests have been submitted or received.

(Kristi, Amber and Allen) Copies are attached. Please be advised that although the intervenors have sent a letter asking the applicant to respond to all data requests of the intervenors, data requests still remain unanswered, and we have not accessed the

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.

Response:

(Allen) One item that I intend to personally testify regarding Health and Safety of the citizens.

(Melissa, Amber, Kristi and Patrick) I am unsure what I intend to personally testify on at this time as the application is incomplete and full of misrepresentation. What I intend to testify on will become more clear as we continue to review all of the information provided by the applicant.

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

Response: There are several aspects of the applicant's burden of proof that we intend to call a witness to testify on. This will become more clear once we are able to fully review all of the information that has recently been provided by the applicant after they were granted the extension on the Procedural Schedule. At this time, we believe the aspects that we may call witnesses to testify on may include, but is not limited to: property rights, geology, hydrology, health and safety, economics, real estate values, local law compliance, environmental impacts (including wildlife) and business ownership.

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.

Response: We the intervenors will understand this further as we come up to speed fully on the application and all of the supplemental information that has been submitted. We intend to support our recommendations with testimony and exhibits at the Evidentiary Hearing. At this time, we anticipate recommending, but not limited, to the following:

- 2 mile setback from all non-participating landowners. A waiver of this setback may be allowed, given the landowner and the applicant agree to the terms, and the full terms and agreement are reviewed by the PUC and approved. Citizens that are not participating with the project should not have to be exposed to the effects of the project. Although 2 miles will not prevent exposure from the project, it will create a more tolerable situation.
- 2 mile setback from the Waverly School. This will ensure children are protected from the disturbances of the project while in their learning environment.
- Increased setback from all public right-of-ways to a distance greater than: 1.5 * (the diameter of the blades plus the height of the turbine). This is the distance outlined in the GE technical document number GER4262, titled "Ice Shedding and Ice Throw-Risk and Mitigation".
- Limit construction, including traffic, to the hours of 7 am - 7 pm so that disruption to our home lives is reasonably limited.
- Notification of work areas, heavy road usage, road closures/anticipated congestion, noise, dust/particulate warnings, for residents posted online daily, also in local elevators so that citizens who live and work in the area can be informed about the disruption to their lives and take any steps possible to mitigate.

- Preconstruction noise, to include infrasound, analysis of non-participating properties, outside and inside the principle structure. Analysis to be conducted by a third party chosen and reported directly to the PUC.
- Noise monitoring, to include infrasound, during construction, operation, maintenance, decommissioning to record the applicant is in compliance. Monitoring to be completed by a third party selected and reported directly to the PUC.
- Air quality monitoring during construction and the months of May through October after construction is complete, throughout the life of the project.
- Require airplane detection system lighting be used immediately upon operation. Unnecessary lighting emits light pollution and further ruins our viewshed.
- Submit and follow a 3 year grassland reclamation plan for any pasture, grass and/or native undisturbed land that is disturbed during the construction of this project. The Coteau Prairie is an important aspect to the Earth's overall ecosystem, part of which is being destroyed by the approval of this project.
 - Provide a detailed weed control plan.
 - Provide seed mix details that will be used to reclaim the disturbance..
 - Write an annual report that is available to the public including photos of each location and a status of the reclamation progress.
- All oil or hazardous material spills during pre-construction, construction, maintenance, operation and decommissioning shall be reported to the PUC within 20 days in addition to any required reporting to the DENR.
- Require a containment basin with a perimeter at least 2 feet away from the base of the turbine. The basin shall be no less than 3 feet in depth, with a 1/4" or less metal mesh cover.
- All incidents of blade throw, shed, defragmentation, delamination shall be reported to the PUC within 20 days of the incident.
 - Report to PUC how each of the above issues will be rectified/mitigated and the anticipated time frame.
 - Submit a follow up report to the PUC outlining how the above issues were actually rectified/mitigated and if the anticipated time frame was met.
- All incidents of bodily injury occurring to anyone related to the project, through the construction, operation and decommissioning of the project, including vehicular accidents shall be reported to the PUC within 20 days of the incident. This report shall be available to the public
- All fires related to the project shall be reported to the PUC within 20 days of the incident. This report shall be available to the public
- Partner with the South Dakota DENR to implement and monitor test wells throughout the project which must be tested before any construction is

commenced and then tested monthly during construction and annually thereafter for the life of the project. Results must be made available to the public. Well testing must be completed by a third party organization selected by the DENR. The project area is located in a shallow aquifer region and is therefore prone to contamination.

- Offer each non-participating landowner within 2 miles of the boundary footprint a free water well test for each water well on their property up to \$2,500 per landowner. This test shall cover but not limited to turbidity, particulars and bacteria. This must be completed before any construction is commenced and reimbursement shall be made by the applicant within 30 days of submission of the receipt to the PUC.
- No flicker shall be allowed to cross non-participating landowner's property line.
- 40 db(A) L10 to be measured, by a third party every year outside and inside non participating landowners homes within 2 miles of the boundary footprint and the Waverly School. During even numbered years the measurement shall be in the spring and fall for 14 days 24 hours continuous. During the odd numbered years the measurement shall be in the summer and winter for 14 days 24 hours continuously. The findings shall be reported to the PUC and published within 3 months of completion of the noise study in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD
- Noise not to exceed 40 db(A)L10 at the property line of a non-participating property, including but not limited to construction, maintenance, operation and decommissioning. This requirement shall be enforced in all areas within 2 miles of the project boundary footprint and within 2 miles of any haul road for the life of the project, cradle to grave.
- The PUC shall for the life of the project, cradle to grave, enforce the 40 db(A) L10 by requiring the removal of turbines and fines in excess of \$10,000 per incident, for equipment noise violations. The fine revenue shall be remanded to the affected property owner where the violation occurred.
- The applicant for the life of the project, cradle to grave, shall keep maintenance logs of every repair or replacement. The report shall include but not limited to the place of repair, maintenance or replacement, the date and time, the part number, the serial number, identify if the part is OEM and warranty information. This report shall be compiled quarterly and submitted to the PUC and available for public review
- The applicant shall develop a report concerning health, safety and welfare of living, working, recreating, and commuting in the turbine project. This report shall cover but not limited to infrasound, low frequency noise, community within

the project during construction, during icing conditions, ice throw, fire dangers including prairie fires caused by turbines, safety setbacks, a map of turbine locations and ID address for emergency responders, and the PUC phone number to register complaints. This report shall be for the life of the project be published annually each fall in Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD

- The PUC for the life of the project, shall require the applicant to monitor 24/7 and report the dust particulate matter, ozone and air carbon data for the life of the project. This report shall be compiled quarterly the findings shall be published within 3 months of completion of the dust particulate report in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD. The applicant admits there is soil disturbance, over 41 miles of new dirt roads, vehicles and equipment involved with this project.
- The applicant shall remove all turbines that do not meet the conditions of the local and state permits, rules and laws.
- If the PUC requires a liason, the liaison shall live in the Crowned Ridge LLC boundary.
- In the first week of May, by letter, the PUC shall survey the participating and non participating landowners within 2 miles of the project boundary footprint with 10 questions written by the intervenors
- The PUC shall require the applicant to remove and notify the participating landowners that the confidentiality agreement is nullified. This notice shall be sent by April 30th.
- The applicant shall develop a predator and rodent management plan.
- The applicant shall develop a plan to render and compile a report the birds and bats killed by turbines or equipment operated by or contracted for the applicant. This report shall contain but not limited to, time and date of discovery, the breed of bird, and the size. This report shall be reported annually and published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD.
- The PUC, for the life of the project, shall annually send out a survey to all participating and nonparticipating landowners within the project boundary footprint and within 2 miles of the project boundary footprint. The survey shall query but not limited to, perceptions of property value, quality of life, health concerns related to turbines, concerns about the turbines,
- The PUC shall not allow turbine shifts. At the March 20th PUC public input hearing Tyler Wilhelm stated the micro siting was complete and Mark Thompson

provided information that the Geotech and Seismic/Piezocone Penetration testing (CPT) engineering was done between May 2018 and January 2019.

- The applicant, for the life of the project, shall monitor and report on changes in soil health including but not limited to changes in organic matter, vegetation, moisture, microbes, burying insects, and mammals. This report shall be compiled annually and shall be reported annually and published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD
- The applicant shall provide a cradle to grave carbon footprint report for this project.
- The applicant, for the life of the project, shall quarterly monitor and report all stray voltage including but not limited to stray voltage dispersed into the ground. This report shall be published within 30 days Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD
- The applicant is to commit to an end date to the project. This date is to be submitted to the PUC and made public before construction is to begin.
- Offer each non-participating landowner within 2 miles of the boundary footprint reimbursement of a pre-construction property appraisal up to \$2,500 per landowner. This offer shall be completed before any construction is completed and reimbursement must be made by the applicant within 30 days of submission of the receipt to the PUC.
- An annual report published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD which includes a report of the following information:
 - Tax revenue versus predictions for each entity: County, Township and School district.
 - Actual power production versus predictions.
 - Electric prices experienced by citizens versus electric prices at the start of the project.
 - The amount of net negative energy used from the grid and the price cost per kilowatt and total cost per turbine the applicant paid for it.
 - School enrollment numbers at Waverly School versus at the start of the project.
 - A survey of all landowners that is completed by a third party selected by the PUC, with the results being sent directly from the survey company to the PUC. The questions on the survey shall include:

- Do you feel your quality of life has been impacted as a result of the wind project, Crowned Ridge I? If yes, has it been impacted for the better or worse?
- Do you believe the community has been impacted as a result of the wind project, Crowned Ridge I? If yes, has it been impacted for the better or worse?

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

Response: We as intervenors are still reviewing the latest information provided by the applicant. Information was provided only on April 9th and 10th. As a result, we have not been able to identify appropriate witnesses. This information will become more available as we, the intervenors, process all of the late information.

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

Response: Our attorney will be advising us further on this topic after his review of the application, testimonies and data request responses.

1-6) Please identify every concern you have with the proposed project that you intend to address at the evidentiary hearing. For each concern identified, please provide support for the concern.

Response: This will become more clear once we are able to fully review all of the information that has recently been provided by the applicant. The application was incomplete and included many points of misinformation, which is making it quite difficult to understand. At this time, we believe the aspects that we may call witnesses to testify on may include, but is not limited to: property rights, geology, hydrology, health and safety, economics, real estate values, local law compliance, environmental impacts (including wildlife) and business ownership.



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



Gary Hanson, Chairman
Chris Nelson, Vice Chairman
Kristie Fiegen, Commissioner



PUBLIC UTILITIES COMMISSION

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Consumer Hotline
1-800-332-1782

Email
puc@state.sd.us

VIA EMAIL

March 26, 2019

Mr. Brian Walsh
Environmental Scientist Manager, Ground Water Quality
SD DENR
Joe Foss Building
523 E Capitol
Pierre, SD 57501

Subject: Request for DENR Comment on Deuel Harvest North Wind Farm

Dear Mr. Walsh,

The South Dakota Public Utilities Commission Staff (PUC Staff) is reviewing a wind farm siting application for the Deuel Harvest North wind farm, located in Deuel County SD. Several concerned residents with homes near the project area intervened in the docket to raise their concerns before the Commission for consideration. One of the concerns raised by these individuals is the impact that wind farm construction and operation may have on aquifers and springs.

Concerns raised regarding aquifers and springs include the following:

- 1) the potential adverse impacts to the environment due to oil and chemical spills used during wind turbine construction or operation;
- 2) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs due to the concrete in wind turbine foundations;
- 3) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during construction of the project;
- 4) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during wind turbine operation as a result of ground vibration; and
- 5) the request for a hydrogeological study to demonstrate that aquifers/springs will not be adversely impacted by the construction or operation of the project.

Through this letter, PUC Staff is reaching out the Department of Environment and Natural Resources (DENR) for comment on the concerns listed above. Specifically, PUC Staff would like the DENR to provide an opinion on the concerns and identify if, in the DENR's opinion, the requested hydrogeological study is necessary to understand potential impacts to aquifers/springs as a result of wind turbine construction and operation.

Sincerely,

Darren Kearney
Utility Analyst
SD PUC

Cc: Jon Thurber, Amanda Reiss, Kristen Edwards

003491



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

March 29, 2019

Mr. Darin Kearney
Public Utilities Commission
500 E Capitol
Pierre, SD 57501

Subject: Response to PUC's Request for DENR Comment on Deuel Harvest North Wind Farm

Dear Mr. Kearney:

The following is the Department of Environment and Natural Resource's response to the questions contained in your March 26, 2019 letter to Brian Walsh, with the DENR's Ground Water Quality Program.

PUC Questions followed by DENR's response:

- 1) the potential adverse impacts to the environment due to oil and chemical spills used during wind turbine construction or operation;
 - a. *The Department of Environment and Natural Resources has rules and regulations (SDCL 34A-12 and ARSD 74:34:01) which require the reporting, assessment and cleanup of oil and chemical spills that may occur during the construction or operation of wind farms.*
 - b. *Previously reported oil spills from operating wind farms have been minor and were easily addressed. Based upon the quantity of oil and chemicals present at these sites, it does not appear that these sites pose a significant oil or chemical risk to ground water.*
- 2) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs due to the concrete in wind turbine foundations;

The department does not consider a concrete foundation to be a source of ground water contamination. Foundations will not be constructed in any major aquifer.

- 3) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during construction of the project;

Based upon the depth and spacing of the concrete wind turbine foundations and the depth of the aquifer, construction of the wind farm will not contaminate or cause disruption of ground water flow, nor a disturbance of the aquifer underlying the site.

- 4) the potential for the project to contaminate, disrupt the flow, or disturb aquifers/springs during wind turbine operation as a result of ground vibration; and

Based upon the depth of the aquifer and spacing of the wind turbines, vibrations from the towers will not contaminate and are unlikely to cause disruption of ground water flow, nor a disturbance of the aquifer underlying the site.

- 5) the request for a hydrogeological study to demonstrate that aquifers/springs will not be adversely impacted by the construction or operation of the project.

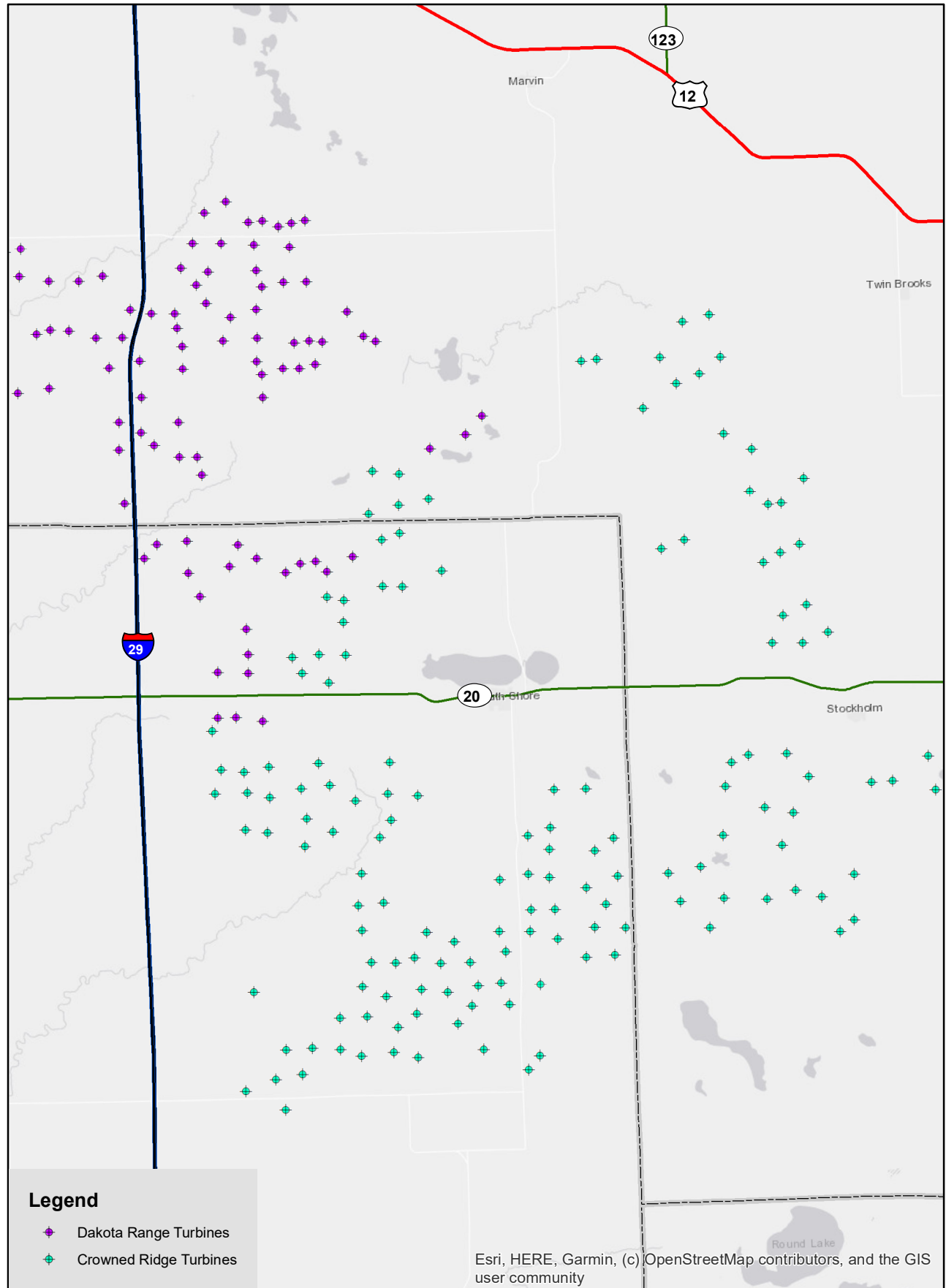
Previous geological studies performed by DENR and the United States Geological Survey to map the ground water resources have shown that the major aquifer in this area is greater than 100 feet deep. Therefore, the construction and operation of the wind farm will not impact the major aquifer under this wind farm.

Sincerely,



Kim McIntosh, Administrator
Ground Water Quality Program
Department of Environment and Natural Resources

Exhibit_DK-7: Crowned Ridge and Dakota Range Wind Turbines



0 1.25 2.5 5 Miles



Exhibit DK-8: Intervenor's Recommended Permit Conditions

Intervenor Conditions	Staff Agree	Staff Response
1. 2-mile setback from all non-participating landowners. A waiver of this setback may be allowed, given the landowner and the applicant agree to the terms, and the full terms and agreement are reviewed by the PUC and approved. Citizens that are not participating with the project should not have to be exposed to the effects of the project. Although 2 miles will not prevent exposure from the project, it will create a more tolerable situation.	No	See testimony of Darren Kearney.
2. 2-mile setback from the Waverly School. This will ensure children are protected from the disturbances of the project while in their learning environment.	No	See testimony of Darren Kearney.
3. Increased setback from all public rights-of-way to a distance greater than: $1.5 \times$ (the diameter of the blades plus the height of the turbine). This is the distance outlined in the GE technical document number GER4262, titled "Ice Shedding and Ice Throw-Risk and Mitigation".	Maybe	See testimony of Darren Kearney.
4. Limit construction, including traffic, to the hours of 7 am - 7 pm so that disruption to our home lives is reasonably limited.	Maybe	Staff needs to better understand the basis for this request.
5. Notification of work areas, heavy road usage, road closures/anticipated congestion, noise, dust/particulate warnings, for residents posted online daily, also in local elevators so that citizens who live and work in the area can be informed about the disruption to their lives and take any steps possible to mitigate.	No	Staff does not support posting the requested information online daily. Staff advocates for properly marking road closures and communicating closures with the appropriate local officials and emergency responders.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

6. Preconstruction noise, to include infrasound, analysis of non-participating properties, outside and inside the principle structure. Analysis to be conducted by a third party chosen and reported directly to the PUC.	No	See the testimony of David Hessler and Darren Kearney.
7. Noise monitoring, to include infrasound, during construction, operation, maintenance, decommissioning to record the applicant is in compliance. Monitoring to be completed by a third party selected and reported directly to the PUC.	No	See the testimony of David Hessler and Darren Kearney.
8. Air quality monitoring during construction and the months of May through October after construction is complete, throughout the life of the project.	No	Staff does not support this condition based on the information included in the Application. Long term air quality impacts are not expected.
9. Require airplane detection system lighting be used immediately upon operation. Unnecessary lighting emits light pollution and further ruins our viewshed.	Yes	Staff is supportive of an ADLS condition for the project. However, Staff will recommend a condition that allows for flexibility should the FAA not approve the use of an ADLS for the project.
10. Submit and follow a 3-year grassland reclamation plan for any pasture, grass and/or native undisturbed land that is disturbed during the construction of this project. The Coteau Prairie is an important aspect to the Earth's overall ecosystem, part of which is being destroyed by the approval of this project. <ul style="list-style-type: none"> a. Provide a detailed weed control plan. b. Provide seed mix details that will be used to reclaim the disturbance. c. Write an annual report that is available to the public including photos of each location and a status of the reclamation progress. 	No	Staff does not support this condition as proposed. Staff will advocate for a condition that requires using a seed mix recommended by the Natural Resource Conservation Service and approved by the landowner. Further, Staff will advocate for a condition that that the Applicant work with land management agencies to determine a plan to control noxious weeds. Since all turbines are on private landowners that voluntarily participated, Staff finds no need for a formal grassland reclamation plan.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

11. All oil or hazardous material spills during pre-construction, construction, maintenance, operation and decommissioning shall be reported to the PUC within 20 days in addition to any required reporting to the DENR.	No	Staff does not support this condition. Oil spills are reported to the DENR pursuant to state law and the DENR makes that information publicly available.
12. Require a containment basin with a perimeter at least 2 feet away from the base of the turbine. The basin shall be no less than 3 feet in depth, with a 1/4" or less metal mesh cover.	No	Staff does not support this condition based on the information provided in the Application and industry practice for designing wind turbines.
13. All incidents of blade throw, shed, defragmentation, delamination shall be reported to the PUC within 20 days of the incident. a. Report to PUC how each of the above issues will be rectified/mitigated and the anticipated time frame. b. Submit a follow up report to the PUC outlining how the above issues were actually rectified/mitigated and if the anticipated time frame was met.	Maybe	Staff is willing to consider a condition on reporting these types of incidents to the Commission. However, Staff is not supportive of subparts a) and b) since Staff does not know what rectified/mitigated is intended to cover.
14. All incidents of bodily injury occurring to anyone related to the project, through the construction, operation and decommissioning of the project, including vehicular accidents shall be reported to the PUC within 20 days of the incident. This report shall be available to the public	Maybe	Staff is willing to consider this type of condition if further narrowed in scope. "Bodily injury" is a broad term.
15. All fires related to the project shall be reported to the PUC within 20 days of the incident. This report shall be available to the public	Yes	Staff is supportive of this condition.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

16. Partner with the South Dakota DENR to implement and monitor test wells throughout the project which must be tested before any construction is commenced and then tested monthly during construction and annually thereafter for the life of the project. Results must be made available to the public. Well testing must be completed by a third-party organization selected by the DENR. The project area is located in a shallow aquifer region and is therefore prone to contamination.	No	Staff is not supportive of this condition based on DENR's letter found in Exhibit DK-6.
17. Offer each non-participating landowner within 2 miles of the boundary footprint a free water well test for each water well on their property up to \$2,500 per landowner. This test shall cover but not limited to turbidity, particulars and bacteria. This must be completed before any construction is commenced and reimbursement shall be made by the applicant within 30 days of submission of the receipt to the PUC.	No	Staff is not supportive of this condition based on DENR's letter found in Exhibit DK-6.
18. No flicker shall be allowed to cross non-participating landowner's property line.	No	Staff is not supportive of this condition. Currently, Staff supports a shadow flicker limit of 30 hrs/year at the residence, which is consistent with county requirements. If evidence is provided demonstrating the need for a different limit, Staff will consider it.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

<p>19. 40 db(A) L10 to be measured, by a third party every year outside and inside non-participating landowners' homes within 2 miles of the boundary footprint and the Waverly School. During even numbered years the measurement shall be in the spring and fall for 14 days 24 hours continuous. During the odd numbered years the measurement shall be in the summer and winter for 14 days 24 hours continuously. The findings shall be reported to the PUC and published within 3 months of completion of the noise study in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD</p>	<p>No</p>	<p>See the testimony of David Hessler and Darren Kearney.</p>
<p>20. Noise not to exceed 40 db(A)L10 at the property line of a non-participating property, including but not limited to construction, maintenance, operation and decommissioning. This requirement shall be enforced in all areas within 2 miles of the project boundary footprint and within 2 miles of any haul road for the life of the project, cradle to grave.</p>	<p>No</p>	<p>See the testimony of David Hessler and Darren Kearney.</p>
<p>21. The PUC shall for the life of the project, cradle to grave, enforce the 40 db(A) L10 by requiring the removal of turbines and fines in excess of \$10,000 per incident, for equipment noise violations. The fine revenue shall be remanded to the affected property owner where the violation occurred.</p>	<p>No</p>	<p>Staff is not supportive of specifying the specific method to address noise violations and advocates to give future Commissions flexibility to address the issue as necessary.</p>

Exhibit DK-8: Intervenor's Recommended Permit Conditions

<p>22. The applicant for the life of the project, cradle to grave, shall keep maintenance logs of every repair or replacement. The report shall include but not limited to the place of repair, maintenance or replacement, the date and time, the part number, the serial number, identify if the part is OEM and warranty information. This report shall be compiled quarterly and submitted to the PUC and available for public review</p>	<p>No</p>	<p>Staff does not support this condition since it is unknown what statute or rule the intervenors believe this information is required to be provided to the Commission under. Staff needs to better understand what this condition is trying to address.</p>
<p>23. The applicant shall develop a report concerning health, safety and welfare of living, working, recreating, and commuting in the turbine project. This report shall cover but not limited to infrasound, low frequency noise, community within the project during construction, during icing conditions, ice throw, fire dangers including prairie fires caused by turbines, safety setbacks, a map of turbine locations and ID address for emergency responders, and the PUC phone number to register complaints. This report shall be for the life of the project be published annually each fall in Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD</p>	<p>No</p>	<p>Staff does not support this condition based on the expected impacts identified in the Application and Applicant's testimony.</p>
<p>24. The PUC for the life of the project, shall require the applicant to monitor 24/7 and report the dust particulate matter, ozone and air carbon data for the life of the project. This report shall be compiled quarterly the findings shall be published within 3 months of completion of the dust particulate report in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD. The applicant admits there is soil disturbance, over 41 miles of new dirt roads, vehicles and equipment involved with this project.</p>	<p>No</p>	<p>Staff does not support this condition based on the expected impacts identified in the Application and Applicant's testimony.</p>

Exhibit DK-8: Intervenor's Recommended Permit Conditions

25. The applicant shall remove all turbines that do not meet the conditions of the local and state permits, rules and laws.	Yes	Staff is supportive of removing any turbines not compliant with permits, rules, or laws.
26. If the PUC requires a liaison, the liaison shall live in the Crowned Ridge LLC boundary.	No	Based on Staff's experience, a public liaison does not need to reside in the area to properly respond to concerns that may arise.
27. In the first week of May, by letter, the PUC shall survey the participating and non-participating landowners within 2 miles of the project boundary footprint with 10 questions written by the intervenors	No	Staff finds a survey is not necessary since the PUC's process is open to the public for comment and participation.
28. The PUC shall require the applicant to remove and notify the participating landowners that the confidentiality agreement is nullified. This notice shall be sent by April 30th.	No	The commission does not have the authority to direct what two parties include in a private contract.
29. The applicant shall develop a predator and rodent management plan.	No	Staff does not support this condition based on the expected impacts identified in the Application.
30. The applicant shall develop a plan to render and compile a report the birds and bats killed by turbines or equipment operated by or contracted for the applicant. This report shall contain but not limited to, time and date of discovery, the breed of bird, and the size. This report shall be reported annually and published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD.	No	Staff will advocate for a condition requiring 2-years of post-construction avian mortality monitoring as has been required for past wind farms.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

31. The PUC, for the life of the project, shall annually send out a survey to all participating and nonparticipating landowners within the project boundary footprint and within 2 miles of the project boundary footprint. The survey shall query but not limited to, perceptions of property value, quality of life, health concerns related to turbines, concerns about the turbines,	No	Staff is not supportive of this condition. All individuals in the project area can utilize the Commission's complaint process if issues arise.
32. The PUC shall not allow turbine shifts. At the March 20th PUC public input hearing Tyler Wilhelm stated the micrositng was complete and Mark Thompson provided information that the Geotech and Seismic/Piezocone Penetration testing (CPT) engineering was done between May 2018 and January 2019.	No	Staff is not supportive of this condition. Staff will continue to advocate for a condition that allows up to a 250 ft change in turbine location without Commission approval. Any shift greater than 250 ft would be a material deviation and require Commission approval.
33. The applicant, for the life of the project, shall monitor and report on changes in soil health including but not limited to changes in organic matter, vegetation, moisture, microbes, burying insects, and mammals. This report shall be compiled annually and shall be reported annually and published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD	No	Staff does not support this condition based on the expected impacts identified in the Application and Applicant's testimony.
34. The applicant shall provide a cradle to grave carbon footprint report for this project.	No	Staff does not support this condition based on the expected impacts identified in the Application and Applicant's testimony.
35. The applicant, for the life of the project, shall quarterly monitor and report all stray voltage including but not limited to stray voltage dispersed into the ground. This report shall be published within 30 days Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD	No	Staff does not support this condition based on the expected impacts identified in the Application and Applicant's testimony.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

36. The applicant is to commit to an end date to the project. This date is to be submitted to the PUC and made public before construction is to begin.	No	Staff does not support this condition since an option for the project owner is to repower wind turbines if there is still demand for the energy.
37. Offer each non-participating landowner within 2 miles of the boundary footprint reimbursement of a pre-construction property appraisal up to \$2,500 per landowner. This offer shall be completed before any construction is completed and reimbursement must be made by the applicant within 30 days of submission of the receipt to the PUC.	No	Staff does not support this condition based on the fact that no evidence has yet been provided that shows an impact to property values.

Exhibit DK-8: Intervenor's Recommended Permit Conditions

<p>38. An annual report published in the following public publications, for the life of the project: Public Opinion newspaper in Watertown, SD, South Shore Gazette in South Shore, SD and the Grant County Review in Milbank, SD which includes a report of the following information:</p> <ul style="list-style-type: none"> a. Tax revenue versus predictions for each entity: County, Township and School district. b. Actual power production versus predictions. c. Electric prices experienced by citizens versus electric prices at the start of the project. d. The amount of net negative energy used from the grid and the price cost per kilowatt and total cost per turbine the applicant paid for it. e. School enrollment numbers at Waverly School versus at the start of the project. f. A survey of all landowners that is completed by a third party selected by the PUC, with the results being sent directly from the survey company to the PUC. The questions on the survey shall include: <ul style="list-style-type: none"> i. Do you feel your quality of life has been impacted as a result of the wind project, Crowned Ridge I? If yes, has it been impacted for the better or worse? ii. Do you believe the community has been impacted as a result of the wind project, Crowned Ridge I? If yes, has it been impacted for the better or worse? 	<p>No</p>	<p>Staff is not supportive of this condition. Regarding subpart a) and e), tax information and school enrollment numbers are likely publicly available. Regarding subpart b), c), and d), power production, power consumption, and electric prices would not be relevant to ongoing permit compliance should a permit be issued by the Commission. Regarding subpart f), Staff is not supportive of this requirement since it would not be relevant to ongoing compliance with a permit should one be issued by the Commission.</p>
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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

**IN THE MATTER OF THE APPLICATION BY)
CROWNED RIDGE WIND, LLC FOR A PERMIT)
OF A WIND ENERGY FACILITY IN GRANT)
AND CODINGTON COUNTIES)
)**

CERTIFICATE OF SERVICE

EL19-003

I hereby certify that true and correct copies of the following:

- Prefiled Direct Testimony of Darren Kearney
 - Exhibit_DK-1
 - Exhibit_DK-2 (Public)
 - Exhibit_DK-3
 - Exhibit_DK-4
 - Exhibit_DK-5
 - Exhibit_DK-6
 - Exhibit_DK-7
 - Exhibit_DK-8
- Prefiled Direct Testimony of Paige Olson
 - Exhibit_PO-1
- Prefiled Direct Testimony of David Hessler
 - Exhibit_DMH-1
 - Exhibit_DMH-2
- Pre-filed Direct Testimony of Tom Kirschenmann
 - Exhibit_TK-1
 - Exhibit_TK-2
 - Exhibit_TK-3

and Certificate of Service were served electronically on the 10th day of May 2019, addressed to those parties listed on the service list.

Exhibit_DK-2 (Confidential) was serviced electronically to the following on the 10th day of May 2019:

Mr. Miles Schumacher – representing Crowned Ridge Wind, LLC
Lynn, Jackson, Shultz and Lebrun, PC
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Sioux Falls, SD 57104
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/s/ Kristen N. Edwards
Kristen N. Edwards
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