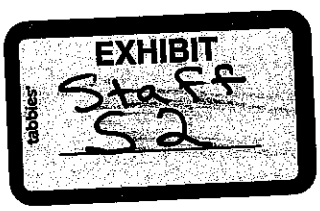
BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET EL18-026

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA, FOR THE PREVAILING WIND PARK PROJECT

Direct Testimony of David Lawrence
On Behalf of the Staff of the South Dakota Public Utilities Commission
September 10, 2018



Q: State your name and occupation.

A: My name is David Lawrence, and I am a real property appraiser.

Q: State your business address.

A: My business address is 4820 E. 57th Street, Sioux Falls, South Dakota.

Q: By whom are you currently employed?

A: I am a real property appraiser with DAL Appraisal & Land Services.

Q: Please state your educational and professional background.

A: I received a Bachelor of Business Administration from Western State University in Gunnison, Colorado. After completing a four-year degree, I worked in real estate development, site acquisition, and management for a nationally branded franchise system. My career transitioned to real property valuation, and I began work with the RJ Hobson Appraisal Firm. I continued my real property studies with the Appraisal Institute earning the MAI designation, the SRA designation, and the AI-RRS designation. After completing my designations with the Appraisal Institute, I continued my real property studies with the International Right of Way Association, earning the SR/WA designation. I am currently active in the Appraisal Institute, the International Right of Way Association and the Professional Appraisers Association of South Dakota.

Q: Can you briefly describe the requirements to be a real property appraiser in South Dakota?

A: The South Dakota Appraisal Certification Program has four types of license levels for performing valuation services: State-Registered Appraiser (entry level); State-Licensed Appraiser (mid-level licensure); State-Certified Residential Appraiser (highest level of residential certification); and the State-Certified General Appraiser (highest level of certification). The first three license levels have scope of practice limitations, with an emphasis on residential property. The State-Certified General Appraiser license is without limits to property type or complexity for an appraisal assignment. The residential license levels require holding an associate degree or higher from an accredited college. The State-Certified General Appraiser license requires a bachelor's degree or higher from an accredited college or university. Beyond the college or secondary education, each license level has specific appraisal education and experience requirements, national testing and peer work product review in conformance with the Uniform Standards of Professional Appraisal Practice (USPAP) and the laws of South Dakota.

Q: What level of appraisal credentials do you hold with the State of South Dakota?

A: I am a State-Certified General Appraiser.

Q: What work experience have you had that is relevant to your involvement in this project?

A: I have a wide range of appraisal experience across South Dakota and neighboring states including property types such as residential, commercial, ranch and farm. I've been fortunate in my appraisal career to have worked across the diverse market areas of South Dakota, including East and West River. Most of my appraisal experience is in right-of-way, linear and energy projects. As part of my practice, I provide appraisal services for damaged property and diminution value studies. These assignments have ranged from measuring the impacts of a high-voltage transmission line on residential property values, to analyzing the impacts of the 2011 Missouri River flood on residential and agricultural property values in Union County. In the last nine years, I've completed several studies analyzing the impacts of underground pipelines on agricultural land values in Montana, South Dakota, Minnesota, and Nebraska. I have extensive experience in South Dakota developing damage studies and their relationship to properties values. I've developed South Dakota impact studies on the Keystone Phase I, Keystone XL, NuStar, SDIP, Northern Border, Lewis & Clark, Magellan, Rockies Express, and MDU pipelines. Most recently, I completed research that analyzed the influences from the Buffalo Ridge Wind Farm on rural residential properties values in Brookings County, South Dakota. My experience with impact studies across the state has given me the knowledge and experience to correctly research and apply the methodology for credible analysis.

Q: Have you testified before the South Dakota Public Utilities Commission?

A: Yes. I have provided testimony in Docket EL18-003 for the Dakota Range Wind Project in Grant County and Codington County. I have also provided testimony in Docket EL17-055 for the Crocker Wind Farm in Clark County.

Q: On whose behalf was this testimony prepared?

A: This testimony was prepared on behalf of the Staff of the South Dakota Public Utilities Commission.

Q: What is the purpose of your testimony in this proceeding?

A: The purpose of my testimony is to (1) assist the Commission in understanding valuation principles and techniques and how they can be appropriately applied to estimate value impacts from the Prevailing Wind Park Project and (2) assist the Commission in understanding the information presented by Prevailing Wind Park in regards to potential value impacts on South Dakota real property.

Q: Are you aware of any studies that have been conducted in South Dakota that properly support and address the potential impacts of wind project, towers or turbines on real property value?

A: As of the effective date of my direct testimony, I'm not aware of any comprehensive study that properly addresses the potential value impacts, if any, on agricultural or residential properties in South Dakota from a wind farm, turbine, tower or wind project. I am aware of a preliminary study I completed for the Dakota

Range Wind Project in Docket EL18-003, in which the area of study was limited to only one of the fourteen counties in South Dakota impacted by a wind project. This research identified a sample population of seven rural residential properties in Brookings County that were analyzed to measure the effects on value from the presence of a wind tower, wind turbine or wind project. The scope of work, and results of my research are addressed in my testimony. I also am aware of a Market Impact Analysis prepared by Michael S. MaRous, MAI, CRE that uses the sale research from my Brookings County study, supplemented by sales data from Minnesota, Iowa, and Illinois, and assessor surveys from South Dakota, Iowa, Minnesota, Iowa and Illinois.

Q: What materials have you reviewed in this docket?

A: I have reviewed the Application, specifically the pre-filed testimony of Michael MaRous, including Exhibits 1 through 6, and Appendixes P & Q that address the property values study by Lawrence Berkeley National Laboratory (LBNL).

Q: Does Prevailing Wind Park's valuation expert, Mr. MaRous, meet the criteria to be a real property appraiser in South Dakota?

A: Yes. Mr. MaRous is a Credentialed South Dakota Certified General Real Estate Appraiser with permit No. 1467CG issued by the South Dakota Appraisal Certification Program. Mr. MaRous' qualifications show extensive appraisal experience with different property types including energy and wind projects, and competency in this type of appraisal work.

Q: Do the studies and testimony of the Applicant adequately reflect the potential impact to property values in the vicinity of the proposed Prevailing Wind Park Project?

A: The studies and testimony presented by Prevailing Wind Park provide a useful starting point to gauge the potential impacts that can be applied to rural properties in the subject market area for the Prevailing Winds Project; however, the studies presented have limitations that need to be considered for their applicability to the proposed project area.

First, the Market Impact Analysis only presents general market information from the Prevailing Winds Project area and the Southeast Agricultural Region to gauge the potential value impacts a wind project can have on real property values. While sales evidence can be challenging in the rural market areas, the Market Impact Analysis does not analyze the wind projects that are direct comparisons to the proposed project area. The Beethoven Wind Project with 43 turbines is located just to the north of the proposed project area and became operational in 2015. SD Wind Partners, Prairie Winds SD-1 and Prairie Winds are located to the northwest with 108 turbines and have been operating since 2011. The Wessington Springs Wind Project began operations in 2009 with 34 turbines and the Titan Wind Project, with 10 turbines, became operational in 2009; both are located north of the proposed project area. These existing South Dakota wind projects provide an excellent comparison for sales data, interview analysis with impacted property owners, and overall analysis of the effects of a wind project in the Southeast

Region of South Dakota. While I have not completed research in this market area for a study, I am aware of two sales that have occurred in proximity to a wind tower in the Southeast Region near the proposed project area that were not addressed in the updated Market Impact Analysis. Without data from these comparable wind projects, there is a gap in the research and the results of the data are not able to be compared to the Brookings County research and other data contained in the Market Impact Analysis for consistency analysis.

Second, most of the studies (Exhibits 2-6, Appendixes P & Q) present statistical analysis of a large, well-defined residential dataset from other market areas that are not necessarily comparable to South Dakota (Ontario, Canada; Rhode Island; Ridgetown, Canada; and Massachusetts).

Third, the studies presented as Exhibits 2 & 3, are developed to assist with Canadian assessment valuations for the purpose of taxation and are not necessarily applicable to South Dakota.

Q: Can you explain some of the limitations of a statistical study that uses the hedonic regression method that has been presented by Prevailing Wind Park in Exhibits 2-6, and Appendixes Q & P?

A: To estimate the value of real property using the hedonic mathematical equation, property characteristics or independent variables are identified that contribute to market value such as view, shape, topography, location, and utility. By including proximity or view of a wind energy project or wind tower as a variable in the regression, the appraiser can better estimate the negative or positive impact the

wind energy project or tower will have on the value of the property. The hedonic analysis has been an accepted methodology in the appraisal profession for years; however, it has limitations. One significant weakness of hedonic analysis was pointed out in the winter 2012 edition of the Appraisal Journal. In the article James Chalmers, PhD states, "(hedonic analysis)…*does not rule out the possibility that some individual properties are significantly affected nor provide any insight into the conditions shared by those individual properties that make them vulnerable to transmission line impacts."* In my experience with damages studies, I have found Chalmers' statement to be valid in analyzing properties affected by an energy project. To truly gauge a project's impact, the methodology needs to address more than just a mathematical analysis of a large data set from different market areas around the United States. The study needs to address a case-by-case analysis with sale evidence from specific and surrounding market areas that would be applicable to the impacted properties.

Q: Did Prevailing Wind Park provide this type of study with the Market Impact Analysis prepared by Mr. MaRous, as described above?

A: Yes, the Market Impact Analysis provides additional insight with case-by-case analysis in Iowa, Minnesota and Illinois. The Market Impact Analysis also includes sales research from Brookings County and concludes there was no market data indicating a measurable effect on property values in Brookings County from the presence of a wind project.

Q: Are the studies presented by Prevailing Wind Park relevant to the Prevailing Wind Park Project area?

A: Although there are limitations with the information presented, I find the data presented by Prevailing Wind Park to be a relevant starting point in evaluating the potential impact of a wind project, turbine or tower on property values in the project area for several reasons. First, the sales research I completed in Brookings County did not show a measurable effect on the selling prices of rural residential properties in proximity to a wind project. Second, the Brookings County research was consistent with the national peered-review studies; and third, the sales data, market analysis and interviews completed by Mr. MaRous were consistent with my preliminary research in Brookings County.

Q: Can you briefly describe the scope of work for your Brookings County study competed for the Dakota Range Wind Project in Docket EL18-003?

A: In preparation for the Dakota Range hearing, I completed research in Brooking County to identify properties that have sold in proximity to a wind project, tower or turbine. My research identified thirteen arm's length transaction in Brookings County. Unfortunately, due to time constraints of the June hearing, I was not able to perform a complete case-by-case analysis for the thirteen sales identified. I did prioritize the residential sales BK1, BK2, BK3, BK4, BK5 and BK7. For these sales I performed a site inspection, interview analysis, and a sales analysis. The remaining sales were analyzed with site inspections and interviews. My field research and site inspections had particular emphasis on examining the proximity

of a wind tower and how the tower proximity relationship can influence rural properties. Inspections were done from the public roadway for sales BK1, BK2.5, BK6, BK7, BK9, BK10, BK11 and BK12. In five cases the property owner was present, and I was able to complete an on-site inspection with sales BK2, BK3, BK4, BK5, and BK8. I did not have time to drive to Jerauld County, and relied on high resolution aerial images for sale JD13 and a telephone participant interview. In addition to the BK sales, I visited several rural residential and agricultural properties in the market area influenced by a wind tower. These inspections allowed me to evaluate the influences a wind tower can have on the different property types in the market area of Brookings County. After completing the field work, the next step was to interview as many of the participants in the transaction as possible. I knew a buyer's name and address, and/or a broker involved with the transaction from preliminary research. Given the name and address, I was able to search for phone numbers. Unfortunately, finding a working phone number for participants is becoming more difficult, but I was able to talk with about twenty participants by phone or in person. The objective of the interview analysis was to verify terms of the sale and to inquire whether the sale and/or subsequent use of the property were in any way affected by the proximity of a wind tower. A set of scripted questions were asked in such a manner that no bias or preconceived notions were projected during the interview. Based on the recorded legal documents, site inspections, and information gathered, a detailed description of BK1, BK2, BK3, BK4, BK5 and BK7 was developed for the sales analysis. The next step was to develop data on property sales that were similar in time, location

and property type to each of the BK sales, but not in proximity to a wind tower. The methodology of the analysis is similar to the sales comparison approach in the appraisal process. To identify this research, I used the Brookings County MLS, Beacon and aerial images to confirm that each comparable sale was unaffected by a wind tower, turbine or wind project. Then each of these sales were summarized in terms of physical characteristics and qualitatively analyzed for differences. The uninfluenced sales were compared to the BK influenced sale for analysis. The final step was to analyze the information collected for each transaction and draw conclusions with respect to the effect, if any, of the proximity of the wind tower on the transaction or on use of the property. The summary of BK1, BK2, BK3, BK4, BK5 and BK7 can be found in Exhibit_DAL-2 of my direct testimony. As mentioned previously, I did not have sufficient time to complete a thorough analysis with each of the thirteen individual sales. My scope of work did not include: 1) a sales analysis for sales BK6, BK8, BK9, BK10, BK11, BK12 and JD13; 2) a site visit for JD13; 3) a review of the chain of title for each property ownership since the project first became operational; 4) a site visit and additional verification for the comparable sales identified with MLS; 5) an analysis of the history of the wind project(s) in Brookings County, such as installation date, tower characteristics, project capacity, project construction, operational history etc. and 6) supplemental research in the other thirteen South Dakota counties with operating wind projects.

Q: What are your general conclusions from the research you completed?

A: Based on my research within the Brookings County market, the evidence supports the presumption there have been no adverse effects on the selling price of rural residential properties in proximity to a wind tower, turbine or wind project. However, the interview and site analysis support the presumption that proximity to a wind tower could influence the property owner's bundles of rights, such as the right to quiet enjoyment. Given the responses from market participants, there is a relationship between the distance from a turbine and the effects on value perceived by individual property owners who live in proximity to wind towers. Wind tower noise is the number one reason cited by market participants for a perceived impact on value; however, the sales data suggests otherwise. More specifically, the Brookings County research for rural residential properties suggests: 1) there was no discernible adverse impact on the selling prices in Brookings County that could be supported for sales BK1, BK2, BK3, BK4, BK5 and BK7; 2) Interviews with buyers of properties near wind towers were unanimous to report the proximity of the wind tower did not influence the price they paid; 3) In six of six rural residential sales, the market data was consistent, even though the site inspection observed influences of noise and view obstructions within the property boundaries. Although I did not complete a sales analysis for the agricultural sales, the research supports the presumption there have been no adverse effects on the selling price of agricultural properties in proximity to and within the boundaries of the property with a wind tower. During the interview process, participants of agricultural properties were consistent to report the price paid was not affected by a wind tower

and in some cases reported a stronger price per acre when the wind payments transferred with the property. The most common issues farmers cited about wind towers is the limitation of aerial spraying, poor reclamation, and compaction issues after the installation of the towers, possible yield loss due to the inability to plant straight rows and the difficulties associated with working around the towers during planting and harvest. Without comparison of the sales evidence with the interview evidence, the agricultural analysis is determined to be inconclusive; however, all agricultural participants were consistent to report there was no adverse effect to the price paid because of the presence of a wind tower. The summary of my research is limited to Brookings County and supported by analyzing six rural residential sales, seven agricultural sales, and twenty market participant interviews.

Q: Do you have any additional comments regarding your findings from the Brookings County study?

A: I would caution the Commissioners or any reader of my Brooking County study that the research represents only a small representation of one of fourteen counties in South Dakota where there is an operating wind project. With an assignment of this nature, I would typically have a multi-county or tri-state research area with a sales population of at least fifteen sales for a case-by-case analysis (per property type) with participant interviews of more than thirty. While the research is consistent with the LBNL study and Mr. Marous' research, a pool of six rural residential and seven agricultural sales is a limited population upon which to

base conclusive results. Brookings County represents only seven percent of the study area that is available in South Dakota for research of the impacts of wind projects on real property values. Nevertheless, the research reported in my testimony provides a useful starting point from which to consider the facts of a particular situation and does not rule out that an individual property could be adversely impacted from the presence of a wind tower, turbine, or wind project.

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

A: 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.

Q: Does this conclude your testimony?

A: Yes.

Qualification & Resume
David A. Lawrence MAI SRA AI-RRS SR/WA

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Summary of Experience

David Lawrence is a designated member of the Appraisal Institute and the International Right of Way Association. Real property appraisal experience includes residential, commercial, land development, easement rights, retail, farm, ranch, and linear and infrastructure projects.

Licenses & Certifications

- South Dakota Certified General Real Property Appraiser – Certificate No. 1034
- South Dakota Real Estate Broker Associate – Certificate No. 14125
- Nebraska Certified General Real Property Appraiser – Certificate No. 2018004R
- Minnesota Certified General Real Property Appraiser – Certification No. 40499441

Appraisal and Real Estate Experience

2006 to Present
-Owner and President of DAL Appraisal & Land Services Inc., a real property consulting and valuation firm. Appraisal discipline includes real property with a focus on residential, commercial and agricultural property types.

2008 to 2012
-Real Property Appraiser with William D. Otto Spence Real Estate. Duties include research, development and reporting of appraisal reviews, market impact studies, damage issues and appraisals for Federal Land Acquisitions. (Principle: William D. Otto Spence MAI SR/WA CCIM MS)

2006 to 2015
-Real Property Appraiser with RJ Hobson Agency. Duties include research, development and reporting of residential, agricultural and commercial appraisal reports. (Principle: Bill Hobson, MAI retired 2015)

Education

B.A. Business Administration
Western State Colorado University

Professional Affiliations & Development

- Appraisal Institute SRA Designated Member – North Star Chapter Minneapolis
- Appraisal Institute MAI Designated Member – North Star Chapter Minneapolis
- Appraisal Institute Professional Development Program – Appraisal Litigation
- Appraisal Institute Professional Development Program –Conservation Easements
- Appraisal Institute – Leadership Development & Advisory Council 2014, 2015 & 2016 D.C.
- *Appraisal Institute – Candidate for AI-GRS Designation*
- FHA/HUD Approved Appraiser – FHA Connection ID MJH926
- Appraisal Institute Member – North Star Chapter 2006 to Present
- IRWA – International Right of Way Association Member – 2007 to Present
- IRWA – International Right of Way SR/WA Designated Member
- PAASD – Professional Association of Appraisers of South Dakota Member
- PAASD – Elected Board Member 2008 to Present. President 2014.
- IRWA – Chapter 72 Regional Pipeline Committee – 2012 to 2014
- RASE – Sioux Empire Association of Realtors – Member 2006 to Present
- Realtor Associate – National Association of Realtors – Member 2006 to Present

Professional Education and Development

Pro Ed Professional Education

- Fundamentals of Appraisal
- Sales Comparison Approach for Single Family
- Cost Approach for Single Family
- Income Approach for Small Income Properties
- Uniform Standards of Professional Practice & Ethics
- Residential Report Writing

Appraisal Foundation

- 15 Hour National USPAP
- State Investigator Training Level II
- State Investigator Training Level III
- 2018 USPAP Update Course
- USPAP Instructor Certification Course

Appraisal Institute

- 400G Certified General Highest & Best Use
- 401G Certified General Sales Comparison Approach
- 402G Certified General Cost Approach
- 403G Certified General Income Part I
- 404G Certified General Income Part II
- 405G Certified General Report Writing and Case Studies
- 300GR Real Estate Finance, Statistic, and Valuation Modeling
- Business Practice & Ethics
- Residential Market Analysis & Highest and Best Use

- Residential Report Writing and Case Studies
- Residential Site Valuation & Cost Approach
- Residential Sales Comparison Approach and Income Approaches
- 601RED Advanced Residential Applications and Case Studies Part I
- 604RED Advanced Residential Report Writing Part II
- 806 Introduction to FHA Appraising
- 802 REO Appraisal: Appraisal of Residential Property Foreclosure
- 715GRE Condemnation Appraising: Principles & Applications
- Uniform Appraisal Standards for Federal Land Acquisitions
- Appraising Distressed Commercial Real Estate
- 510 Advanced Sales Comparison and Cost Approach
- 540 Advanced Writing and Valuation Analysis
- 700 GRE The Appraiser as an Expert Witness: Preparations & Testimony
- 705 GRE Litigation Appraising: Specialized Topics & Applications
- 510 Advanced Income Capitalization
- 550 Advanced Applications
- The Lending World in Crisis
- Real Estate Damage Economics and Statistics
- Complex Litigation Appraisal Case Studies
- Gas Station Valuation: Real, Property, and Intangible Aspects
- Regression Analysis
- UAD After Affects: Efficiency vs. Obligation
- Residential Review Theory
- Valuation of Conservation Easements
- IRS Valuation of Donated Real Estate & Conservation Easements
- Using Spreadsheet Programs in Real Estate Appraisals
- General Review Theory
- Do's and Don'ts of Litigation Support
- Uniform Appraisal Standards of Federal Land Acquisition 2014
- Using Technology to Measure and Support Assignment Results
- Wind Turbine Effects on Value
- Contamination and the Valuation Process
- FHA Appraising for Valuation Professional
- Effective Report Writing
- Yellow Book Changes (USFLA) Overview for Appraisers
- Case Studies in Complex Valuation
- Subject Matter Expert Round Table

Ted Whitmer

- Advanced Comprehensive Workshop
- Attacking & Defending in Appraisal Litigation

Professional Appraisers Association of South Dakota – PAASD

- What Every Certified Appraiser Needs to Know
- Training Course for Supervising Appraisers
- Fannie Mae UAD Compliance
- Builder Cost in Residential Construction
- Loss Prevention for Real Estate Appraisers
- Appraisal Desk & Field Review Form Reports
- Training Course for Supervising Appraisers
- Building Design & Construction
- Fannie Mae's Form Reports & the UAD
- Appraising Rural Residential Homes
- Intro to Partial Rights and Damages Issues in Condemnation

International Right of Way Association

- 104 Practice for the ROW Professional
- 200 Principle of Real Estate Negotiations
- 409 Easement Valuation
- 203 Alternate Dispute Resolution
- 803 Eminent Domain Law
- 403 Reviewing Appraisals in Eminent Domain
- 800 Principle of Real Estate Law
- 205 Bargaining Negotiations
- 801 United State Land Titles
- 700 Intro to Property Management
- 400 Appraisal of Real Property
- 900 Principles of Real Estate Engineering
- Lessons Learned on Linear Projects
- ROW Options on Native American Lands
- Complex ROW Scheduling and Cost Estimating
- Valuation of 1800 miles of Railroad ROW
- Environmental Issues with Transmission Lines
- 802 Legal Aspects of Easements
- 600 Environmental Awareness

Federal Highway Administration

- Appraisal Review for Federal-Aid Highway Programs
- Appraisal for Federal-Aid Highway Programs

Rural Residential Transaction Summary Table						
Transaction Reference	**Property Type**	**Physical Evidence of Effects**	**Interview Evidence of Effects**	**Sales Evidence of Effects**	**Consistency of Sale Evidence with Interview Evidence**	**Overall Conclusion**
BK1	Rural Residential	Yes	None	None	Consistent	No measurable effects
BK2	Rural Residential	Yes	None	None	Consistent	No measurable effects
BK3	Rural Residential	Yes	None	None	Consistent	No measurable effects
BK4	Rural Residential	Yes	None	None	Consistent	No measurable effects
BK5	Rural Residential	*None*	None	None	Consistent	No measurable effects
BK7	Rural Residential	Yes	None	None	Consistent	No measurable effects

****Turbines were not in operation during the site visit of BK5. Winds light and variable. ****

Ag Transaction Summary Table						
Transaction Reference	**Property Type**	**Physical Evidence of Effects**	**Interview Evidence of Effects**	**Sales Evidence of Effects**	**Consistency of Sale Evidence with Interview Evidence**	**Overall Conclusion**
BK2.5	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK6	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK8	AG/Res	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK9	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK10	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK11	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
BK12	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview
JD13	AG	None	None	**Not Developed**	Inconclusive	None apparent per interview

****Sales analysis not developed due to time constraints****

Interview Summary Table			
Interview Reference	**Property Type**	**Participant**	**Interview Summary Comments**
BK1	Residential	Broker	Can be noisy. Limits potential buyers . Doesn't seem to affect price.
BK2	Residential	Buyer	Did not affect purchase decision. Don't like the noise. Flicker effect certain times of the day. Blade broke and threw fragments near the house. Sounds like a continual swooshing sound when it's windy.
BK2 BK2.5	Res/AG	Seller	Satisfied with price. Could feel vibrations inside the house. Glad not to be living near wind towers. Had to give up a wind lease option to sell the house.
BK2.5	AG	Buyer	No affect on purchase price of BK2.5. Own & lease farmland with wind towers. Live in proximity to wind towers. Noisy. Poor reclamation after construction of towers; compaction & loss of yields. Difficult to farm around towers. Currently have farmland under contract with towers.
BK3	Residential	Broker	Some buyers won't look at home near wind towers. However, there is demand for acreages in the market and it doesn't seem to affect the price.
BK3	Residential	Buyer	The towers sound like jet planes when you are working in the yard. But paid the same, even though they don't like the noise.
BK4	Residential	Buyer	Some noise, but doesn't bother me. Paid the same. Happy with purchase.
BK4	Residential	Seller	Got tired of the annoying noise. Decided to sell. We thought it would effect the value; but it didn't matter to the buyer. Glad to not be living next to wind towers.
BK4	Residential	Broker	Though sellers initally expressed concerns about the turbines affecting the price, it took only four months to sell a high-end rural home. Agent doesn't think there was any effect on the price.
BK5	Residential	Broker	Really noisy. Distracts some buyers. Limited acreages in the market. Doesn't seem to be a negative effect on the price. Distance from Brookings is more of a concern to buyers than the wind towers.
BK5	Residential	Buyer	Can be noisy, but didn't matter to us when we purchased the home. Paid the same. No issues.
BK6	AG	Broker	Sales and manages properties with wind towers. Doesn't seem to affect the price or ability to get market rents. There are issues with towers. Can't aerial spray. Breaks up the land; can't plant straight rows. Some guys like them; some don't. It really comes down to a personal decision.
BK7	Residential	Buyer	No affect on value. Property value has increased. Proximity to towers doesn't matter. Little bit of noise when working in the yard. No affect to animals. No concerns or issues.
BK8	AG	Buyer	No issues or concerns. Cattle don't care about the noise. Purchased the land on a CFD and paid market price with towers located on the quarter and no wind payment. No difference in price to me.

Interview Summary Table (continued)			
Interview Reference	**Property Type**	**Participant**	**Interview Summary Comments**
BK9	AG	Buyer	Has over 47 towers located on various ground. Lives near towers, too. Issues with lightning strikes and shattered blades. The company does not clean up well. Good wind payments. Have some towers that pay $12,000/year. Increases land value with wind payments. No affect with land without payments. People who complain are not getting the payments. Just purchased another 152 acres with a wind tower with no payment. Doesn't affect the price as long as you can farm it and there are no affects with yields.
BK12	AG	Broker	Managed auction with wind payments from two towers. Pasture land sold to adjoining land owner. Wind payments $12,373 per year. Property sold in 2018 for $616,000. Wind payments alone are approximately a 2% return and you still can lease or use the property. Believes sale price was positively influenced by the wind payments. No issues with pasture land; have had some issues with tillable ground. Can't plant straight rows, no aerial spraying and can't hunt around the towers. You can hear them run if you are near a tower. Payments offset the hassles with towers.
JD13	AG	Broker	Managed a pasture land auction with towers. Wind lease with 43 years remaining and a 1% annual increase. Land sold for a 10%-15% premium according to auctioneer. Some restrictions because of the towers. You can't shoot around them. Noisy and limits aerial applications.
BKGH	Residential	Seller	Trying to sell a house within the proposed project area. Currently listed on MLS. Had an offer on the property, but believes the disclosure of the proposed wind project near the property ended the deal.
BKDJ	Residential	Owner	Built retirement home prior to the wind project. Towers within 1,000 ft of property on all sides. Noisy. Shadow and flicker effect during certain times of the day. Have to deal with constant noise. Some days louder than others, depending of direction on the wind. Believes the towers are effecting his ability to sell the property.
BKBB	Residential	Owner	Purchased home prior to the wind project. There are periods of the day when there is a shadow effect depending on the angle of the sun. Best way to describe it is like a camera flash. The curtains in the house have to be closed during the flicker times. The flash scares the horses. The red lights, light up the night sky and destroy star gazing. The house was listed for sale and most potential buyers drove away when they saw how close the towers are to the house. The wind company over promised and under delievered.

SALES ANALYSIS BK1	SALE No.	BK1
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	8 Acres
Improvements:	2003 Ranch modular design
Finished Area:	2,356 S.F. GLA, 300 S.F. Lower Level
Garage:	Attached 2-Stall
Features:	Treed shelter belt. (2) Pole buildings 40x96 & 34x50
Access:	Gravel road linkage

Sales Analysis Data:

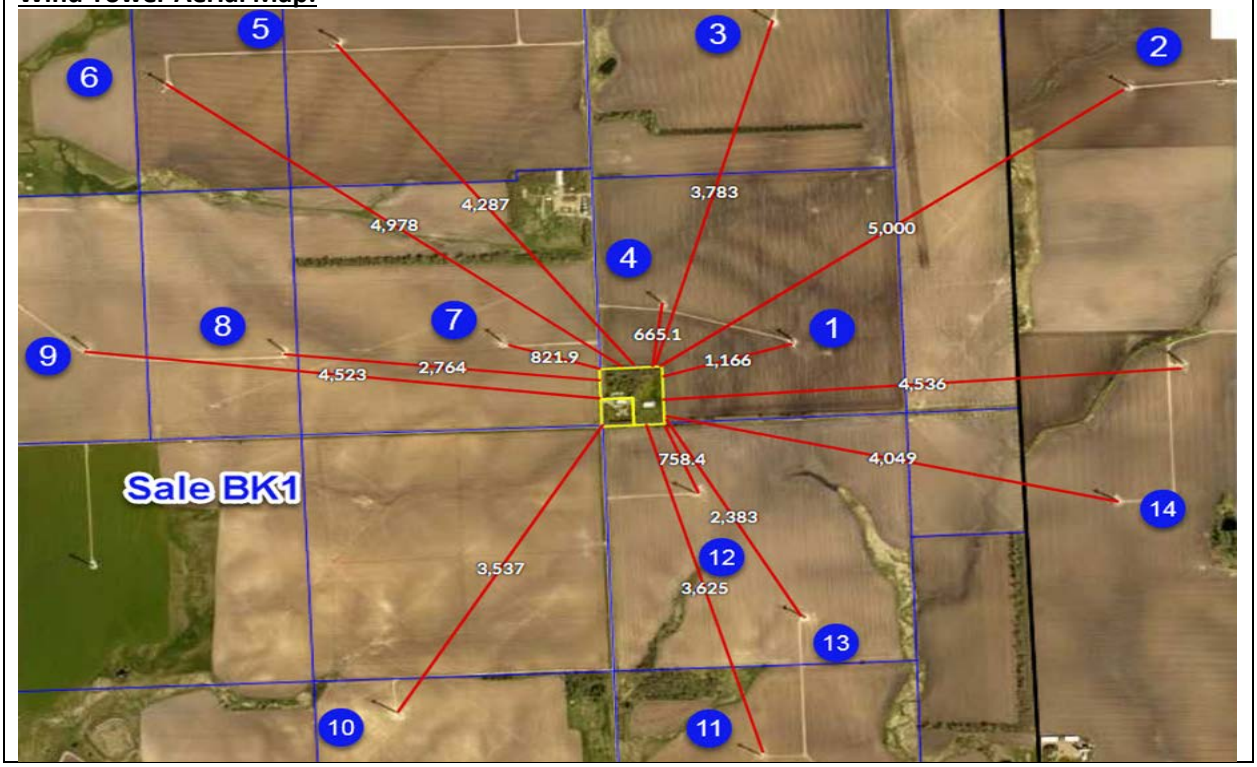
Date of Sale:	January 28, 2016
Market Exposure:	MLS
Listing Price:	$218,000
Sale Price:	$183,000
Verification:	Deed; Beacon; Interview with Broker
Type:	Arm's Length Sale
DOM:	153

Wind Project:

Project:	Buffalo Ridge
Turbine Type:	Gamesa G87 2.0 MW
Hub Height/Rotor Diameter:	78/87 meters
Height from Ground:	399 feet
Wind Tower Property Notes:	Encompassed by 14 wind turbines circling the property. Tower #1 1,200 +/- feet to the east. Tower #2 5,000 +/- feet to the northeast. Tower #3 3,800 +/- feet to the north. Tower #4 665 +/- feet to the north. Tower #5 4,300 +/- feet to the northwest. Tower #6 5,000 +/-

feet to the northwest. Tower #7 800 +/- feet west. Tower #8 2,700 +/- feet west. Tower #9 4,500 +/- feet southwest. Tower #10 3,500 +/- feet southwest. Tower #11 3,600 +/- feet southeast. Tower #12 750 +/- feet southeast. Tower #13 2,400 +/- feet southeast. Tower #14 4,000 +/- feet southeast.

Wind Tower Aerial Map:



Appreciation Analysis:

(Influenced by Tower) Sale 1 Bk1:	October 30, 2009	$166,000
(Influenced by Tower) Sale 2 BK1:	January 28, 2016	$183,000
	6.24 Years	$23,000
BK1 Appreciation:	**$3,685/Year**	**1.64%/Year**
(Uninfluenced) Sale 1 486th:	December 7, 2004	$133,000
(Uninfluenced) Sale 2 486th:	October 11, 2013	$145,000
	9.25 Years	$12,000
486th Appreciation:	**$1,298/Year**	**.98%/Year**
(Uninfluenced) Sale 213th:	August 10, 2013	$266,000
(Uninfluenced) Sale 213th:	May 24, 2018	$290,903
	4.62 Years	$24,906
213th Appreciation:	**$5,390/Year**	**2.02%/Year**

Conclusion:	Sale BK1 has market appreciation within the range of the market sales that are not influenced by a wind tower, turbine or wind project.

Site Analysis:

Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	Operational & blade noise present during site visit.

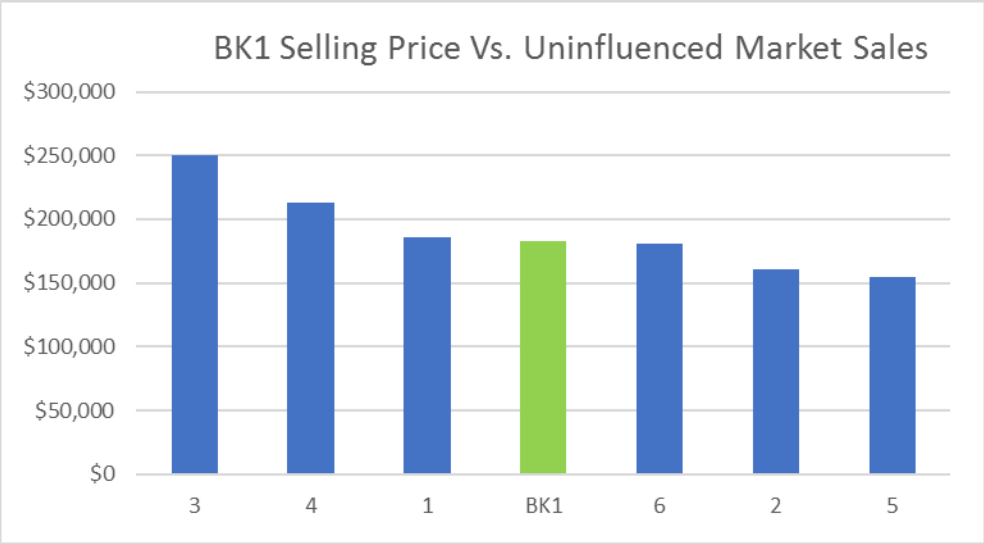
Interview Analysis:

Interview Conducted by:	David Lawrence
Party Interviewed:	Broker
Interview Date:	May 28, 2018

Interview Notes with Broker:	This is the second time the broker has sold the property. The property sold within 150 days. The broker made sure to include pictures of the wind towers in the photos so potential buyers would be aware of the proximity. The broker stated that some potential buyers did not like the proximity of the wind turbines, while other potential buyers didn't care. There were more issues with the manufactured home design than concern for the wind towers. Broker stated the buyers liked the majestic beauty of the towers and there was no detrimental effect on the selling price because of the proximity of the wind towers.

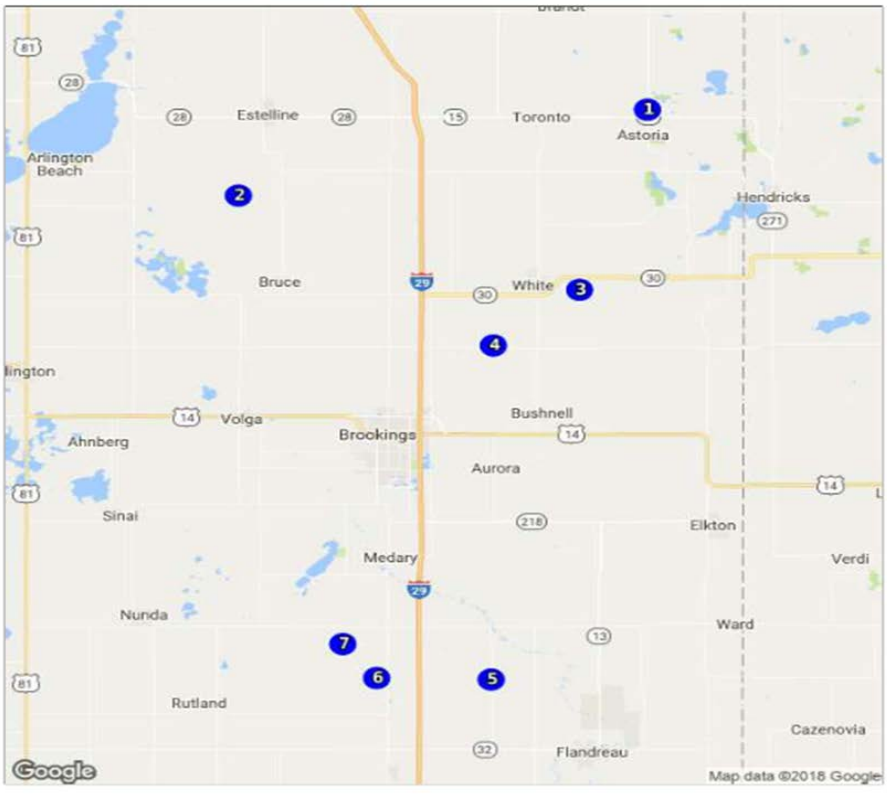
Interview Notes with Buyer:	The owner was not available during the site visit. I left a voice mail message; the owner did not return my phone call.

Market Sales Analysis:



Sales Analysis BK1									
Sale No.	Location	Sale Date	Price	Year/E.A.	GLA	Acres	Style	Outbuildings	Overall Analysis
BK1	**Elkton**	**2016**	**$183,000**	**2003**	**2,356**	**8**	**Ranch**	**Pole Buildings**	
1	Astoria	2015	$186,000	1910	1,472	14	Story1/2	Outbuildings	**Comparable**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Superior(-)*	*Similar (=)*	*Similar(=)*	
2	Bruce	2015	$161,000	1952	1,134	6.44	Ranch	1-car garage	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Similar(=)*	*Similar(=)*	*Inferior (+)*	
3	White	2015	$250,000	2010	1,518	22.48	Ranch	Barn/Guest House	**Superior**
			Adjustments:	*Superior(-)*	*Inferior (+)*	*Superior(-)*	*Similar(=)*	*Superior(-)*	
4	Aurora	2016	$213,000	1910	1,140	12.37	Story 1/2	Pole Building/Barn	**Comparable**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Superior(-)*	*Similar(=)*	*Similar(=)*	
5	Colman	2015	$155,000	1979	1,568	3.13	Ranch	Quonset/Garage	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Inferior(+)*	*Similar(=)*	*Inferior(+)*	
6	*Colman*	*2015*	*$180,400*	*1961*	*2,240*	*10*	*Ranch*	*Barn/Outbuildings*	**Comparable**
			Adjustments:	*Similar(=)*	*Similar(=)*	*Similar(=)*	*Similar(=)*	*Similar(=)*	

Sale Location Map:



Legend	
1. 19367 483RD AVE, Astoria, SD 57213(13-122)	5. 22603 476th Ave., Flandreau, SD 57028(14-156)
2. 19851 464th Avenue, Bruce, SD 57220(15-394)	6. 47023 226th Street, Colman, SD 57071(15-368)
3. 20383 480TH AVE, White, SD 57276(15-434)	7. 22409 468th Avenue, Colman, SD 57017(15-39)
4. 47594 207th St, Aurora, SD 57002(16-467)	

Market Sales Analysis Conclusion:	Seven sales are from the market without the influence of a wind tower. All transactions have similar highest and best use and are bracketed by the market sales. Sales one, four and six have stronger similarities for comparison and bracket the range of BK1. The market evidence suggests the selling price was not affected by the proximity of the wind towers.

Overall Conclusion:	An interview analysis, site observation, and sales analysis were completed for BK1. The research and data suggest the proximity of the wind towers did not influence the selling price. Sale BK1 sold in 2009 and then resold in 2016 with a market appreciation rate within the range of other uninfluenced sales not in the proximity of a wind tower. Even though there are visual & noise effects observed during the site visit, the interview and market data suggest the proximity of the wind towers has not negatively influenced sale BK1.

SALES ANALYSIS BK2		
	SALE No.	BK2
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	10 Acres
Improvements:	1998 Story 1/2 design
Finished Area:	1,850 S.F. GLA, 1,004 S.F. Lower Level
Garage:	Attached 1-Stall
Features:	Treed shelter belt. Shed, storage building & hobby building
Access:	Paved highway linkage

Sales Analysis Data:

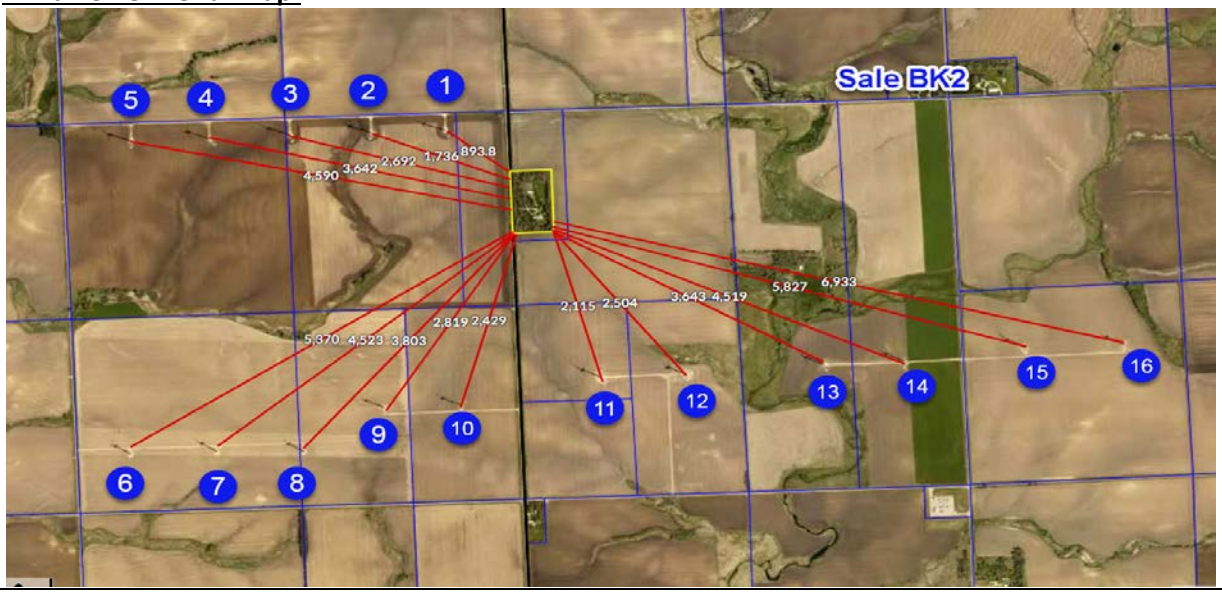
Date of Sale:	March 14, 2011
Market Exposure:	MLS
Listing Price:	$339,000
Sale Price:	$235,000
Verification:	Deed; Beacon; Interview with Buyer & Seller
Type:	Arm's Length Sale

Wind Project:

Project:	Buffalo Ridge
Turbine Type:	Gamesa G87 2.0 MW
Hub Height/Rotor Diameter:	78/87 meters
Height From Ground:	399 feet
Property & Wind Tower Notes:	Encompassed by 16 wind turbines. Tower #1 890 +/- feet northwest. Tower #2 1,700 +/- feet northwest. Tower #3 2,700 +/- feet northwest. Tower #4 3,600 +/- feet northwest. Tower #5 4,600 +/- feet northwest. Tower #6 5,400 +/- feet southwest. Tower #7 4,500 +/- feet southwest. Tower #8 3,800 +/- feet southwest. Tower #9 2,800 +/- feet southwest. Tower #10 2,400 +/- feet south. Tower #11 2,100 +/- feet southeast.

	Tower #12 2,500 +/- feet southeast. Tower #13 3,600 +/- feet southeast. Tower #14 4,500 +/- feet. Tower #15 5,800 +/- feet southeast. Tower #16 7,000 +/- feet southeast.

Wind Tower Aerial Map:



Site Analysis:

Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	Operational & blade noise present during site visit.

Interview Analysis:

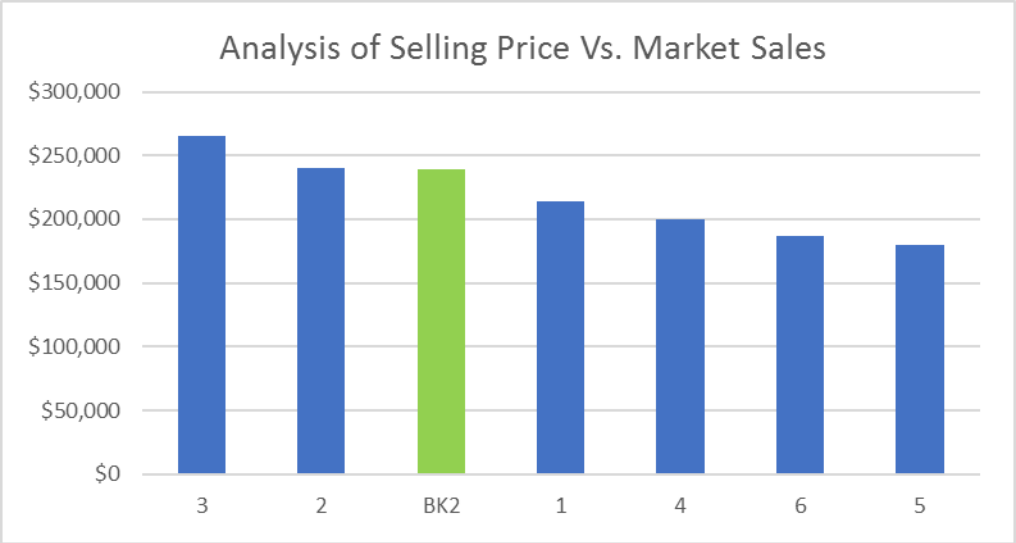
Interview Conducted by:	David Lawrence
Party Interviewed:	Buyer & Seller
Interview Date Buyer:	May 28, 2018
Interview Date Seller:	April 11, 2018

Interview Notes with Buyer:	The home was purchased with the assistance of a real estate agent. Towers were in place at the time of purchase. Turbines surrounding the property didn't affect purchase decision or price paid; although they would prefer not to have them. Some flicker effect and noise. Haven't noticed any health effects. When they purchased the home, there was an encumbrance on the title for a wind easement they had to work with the seller to clean up before closing.

Interview Notes with Seller:	(Interview performed by Northern Plains Appraisal) Sellers desired their privacy and would only allow an interview with NPA. Seller stated when they sold the house, they couldn't get the listing price of $339,000, the price was lowered and sold it for what they could. They also owned the adjoining land around the home. The buyer did not

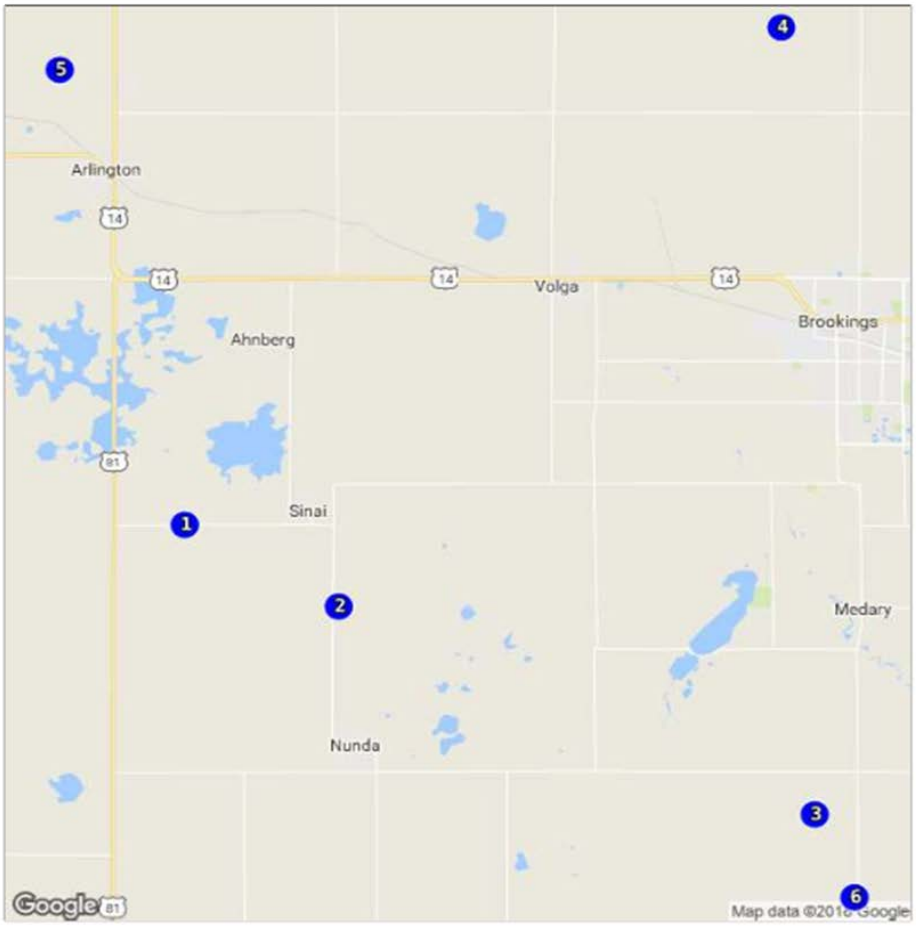
	want any wind towers near the house and therefore had a condition of sale not to sign a wind lease. Seller stated it was difficult to find a buyer, but they were satisfied with the purchase price. Seller stated you could feel the vibrations in the air and towers create issues with the body. They are glad they do not live around wind towers.

Market Sales Analysis:



Sales Analysis BK2									
Sale No.	**Location**	**Sale Date**	**Price**	**Year/E.A.**	**GLA**	**Acres**	**Style**	**Outbuildings**	**Overall Analysis**
BK2	**Toronto**	**2011**	**$239,000**	**1998**	**1,850**	**10**	**Story 1/2**	**Shed/Storage Bld**	
1	Arlington	2009	$214,000	2007	1,748	13	Ranch	Barn/Shed/2car	**Comparable**
			Adjustments:	*Similar(=)*	*Similar(=)*	*Similar(=)*	*Similar (=)*	*Similar(=)*	
2	Volga	2012	$240,000	1983	1,784	4.5	Ranch	Shed/Pole	**Comparable**
			Adjustments:	*Similar(=)*	*Similar(=)*	*Inferior(+)*	*Similar(=)*	*Similar(=)*	
3	Colman	2009	$265,000	2006	1,500	9.88	Ranch	Barn/2Car/Shed	**Superior**
			Adjustments:	*Superior (-)*	*Inferior (+)*	*Similar(=)*	*Similar(=)*	*Superior(-)*	
4	Brookings	2011	$200,000	1949	1,344	9.75	Story1/2	Barn/Shed	**Inferior**
			Adjustments:	*Inferior(+)*	*Inferior (+)*	*Similar(=)*	*Similar (=)*	*Similar(=)*	
5	Arlington	2011	$180,000	1917	1,510	11.79	Story1/2	2cGarage/Sheds	**Inferior**
			Adjustments:	*Inferior(+)*	*Inferior(+)*	*Similar(=)*	*Similar(=)*	*Similar(=)*	
6	*Volga*	*2011*	*$187,000*	*1954*	*1,491*	*5*	*Story1/2*	*Outbuildings*	**Inferior**
			Adjustments:	*Inferior(+)*	*Inferior(+)*	*Inferior (+)*	*Similar(=)*	*Similar(=)*	

Sale Location Map:



Legend	
1. 45674 217th St, Arlington, SD 57002(09-653)	4. 46922 205TH ST, Brookings, SD 57006(11-219)
2. 45916 219TH ST, Volga, SD 57071(12-313)	5. 45279 206TH ST, Arlington, SD 57212(11-307)
3. 22406 470th Ave, Colman, SD 57017(09-852)	6. 22609 471ST AVE, Colman, SD 57017(11-511)

Market Sales Analysis Conclusion:	The analysis uses six sales from the Brookings market with similar highest and best use. All sales are without the influence of a wind tower in proximity to the property. Sales one and two are the most similar sales and bracket the selling price of the subject. The remaining sales provide further market support of the selling range of market substitutes. After analyzing the elements of comparison, sale BK2 is within the range of the uninfluenced market sales. The data suggests the wind towers did not negatively influence the selling price.

Overall Conclusion:	An interview analysis, site visit, and sales analysis have been completed for BK2. During the site visit, wind tower noise was present on the on the property. The buyer interview indicated this was not a factor during

	the buying process. There are inconsistencies between the seller interview and the buyer interview; however, the sales data and the buyer's interview comments are consistent. The evidence suggests the proximity of the wind towers did not negatively influence the purchase price.

SALES ANALYSIS BK3		
	SALE No.	BK3
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	14.28 Acres
Improvements:	1918 Story 1/2 design
Finished Area:	2,208 S.F. GLA
Garage:	Attached 2-Stall
Features:	Treed shelter belt. Shed, storage building
Access:	Paved highway linkage

Sales Analysis Data:

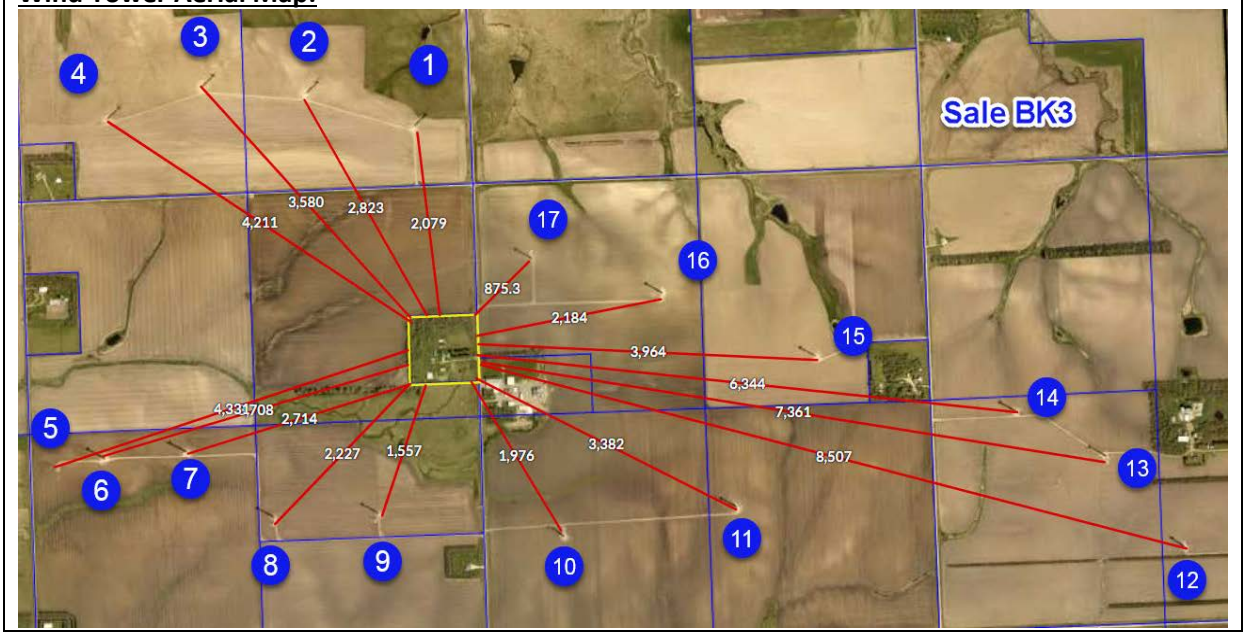
Date of Sale:	December 06, 2011
Market Exposure:	MLS
Listing Price:	$189,000
Sale Price:	$175,000
Verification:	Deed; Beacon; Interview with Buyer & Agent
Type:	Arm's Length Sale

Wind Project:

Project:	Buffalo Ridge
Turbine Type:	Gamesa G87 2.0 MW
Hub Height/Rotor Diameter	78/87 meters
Height From Ground:	399 feet
Wind Tower Property Notes:	Tower # 1 2,000 +/- feet north. Tower #2 2,800 +/- feet northwest. Tower #3 3,600 +/- feet northwest. Tower #4 4,200 feet +/- northwest. Tower #5 4,300 +/- feet southwest. Tower #6 3,700 +/- feet southwest. Tower #7 2,700 +/- southwest. Tower #8 2,200 +/- feet southwest. Tower #9 1,500 +/- feet south. Tower #10 1,900 +/- feet southeast.

	Tower #11 3,400 +/- feet southeast. Tower #12 8,500 +/- southeast. Tower #13 7,400 +/- feet southeast. Tower #14 6,400 +/- feet east. Tower #15 4,000 +/- feet east. Tower #16 2,100 +/- northeast. Tower #17 875 +/- feet northeast.

Wind Tower Aerial Map:



Site Analysis:

Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	Operational & blade noise present during site visit.

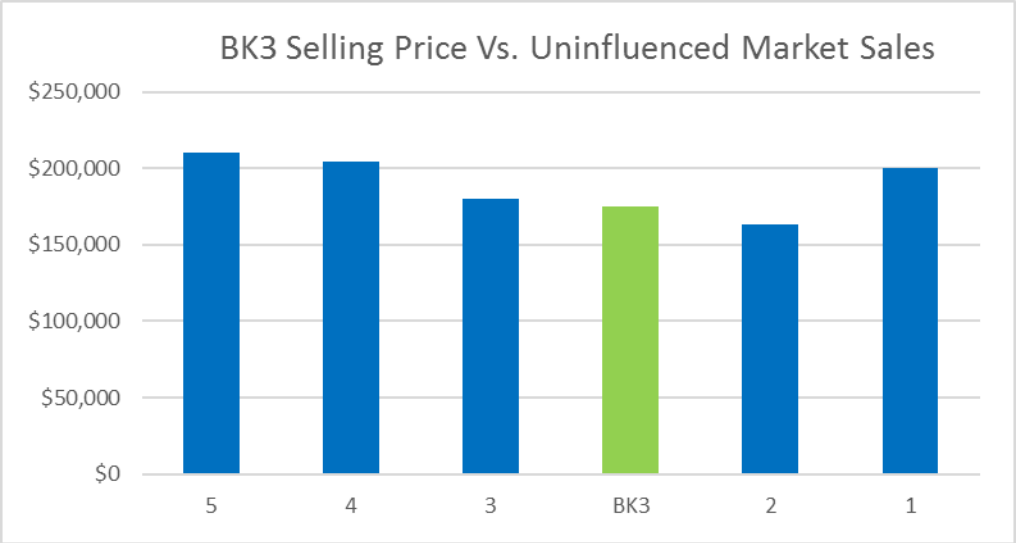
Interview Analysis:

Interview Conducted by:	David Lawrence
Party Interviewed:	Buyer & Agent
Interview Date:	May 23, 2018 (Buyer) May 28, 2018 (Agent)

Interview Notes with Buyer:	The buyer was interested in the property because of the proximity to work. When the agent showed the property, the wind towers were not a factor in their purchase decision. Paid the same even though they do not like the noise and could see the towers from the house. Buyer stated the wind towers could be loud when you are working in the yard.

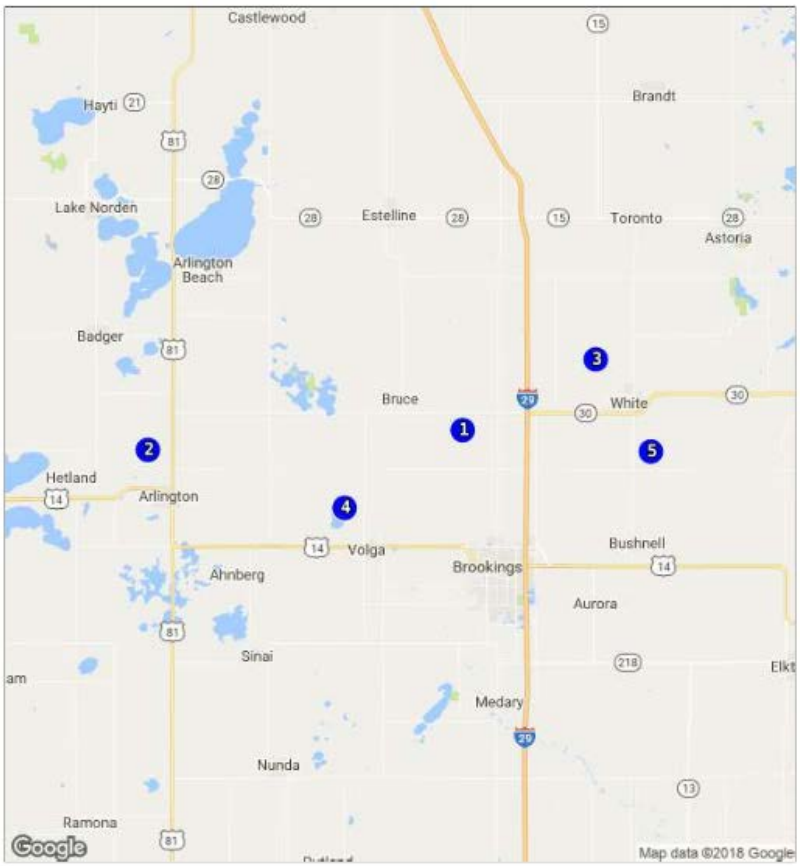
Interview Notes with Agent:	There is high demand for acreages in the Brookings market. Most buyers do not care about the wind towers. Buyers are looking for the features of an acreage. Although there have been potential buyers, some buyers refuse to look at a property near wind towers. The price seems unaffected by properties I've sold near wind towers.

Market Sales Analysis:



Sales Analysis BK3									
Sale No.	Location	Sale Date	Price	Year/E.A.	GLA	Acres	Style	Outbuildings	Overall Analysis
BK3	**Elkton**	**2011**	**$175,000**	**1918**	**2,208**	**14.28**	**Story 1/2**	**Shed/Storage Bld**	
1	Brookings	2011	$200,000	1949	1,344	9.75	Story1/2	Barn/Shed	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Inferior(+)*	*Similar (=)*	*Similar(=)*	
2	White	2009	$163,000	1910	1,762	3.84	Story 1/2	Barn/Shed	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Inferior(+)*	*Similar (=)*	*Similar(=)*	
3	Arlington	2011	$180,000	1917	1,510	11.79	Story1/2	2cGarage/Sheds	**Comparable**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Similar(=)*	*Similar(=)*	*Similar(=)*	
4	Volga	2011	$204,000	1910	2,294	12.65	Story1/2	Barn/Shed/2car	**Comparable**
			Adjustments:	*Similar(=)*	*Superior(-)*	*Similar(=)*	*Similar (=)*	*Similar(=)*	
5	White	2012	$210,500	1938	2,405	17.12	Story1/2	Shed/Pole	**Superior**
			Adjustments:	*Similar(=)*	*Superior(-)*	*Superior(-)*	*Similar(=)*	*Similar(=)*	

Sale Location Map:



Legend
1. 46922 205TH ST, Brookings, SD 57006(11-219)
2. 45279 206TH ST, Arlington, SD 57212(11-307)
3. 47612 201ST ST, White, SD 57276(09-474)
4. 46306 209TH ST, Volga, SD 57071(11-436)
5. 20608 479th Ave., White, SD 57276(12-315)

Market Sales Analysis Conclusion:	Five sales are analyzed in the sales grid from the market area. All sales are uninfluenced by the proximity of a wind tower. Sales one and two are inferior sales and bracket the lower end of the range. Sale five is superior and brackets the higher end of the range. Sales three and four have stronger similarities. After considering the differences in the elements of comparison, the market evidence indicates the selling price was not negatively influenced by the proximity of the wind towers.

Overall Conclusion:	An interview analysis, site visit and sales analysis has been completed for BK3. Although the buyer commented about the noise and view obstructions, the market evidence is consistent with the interview comments. The evidence suggests the overall purchase price was not negatively influenced by the proximity of the wind tower.

SALES ANALYSIS BK4		
	SALE No.	BK4
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	13 Acres
Improvements:	1989 Story ½
Finished Area:	2,728 SF GLA; 4500 SF Finished (Updated)
Garage:	Attached 3-Stall
Features:	Treed shelter belt. 50x112 & 160x120 Commercial Building
Access:	Gravel road linkage; paved driveway

Sales Analysis Data:

Date of Sale:	November 21, 2013
Market Exposure:	MLS
Listing Price:	$569,000
Sale Price:	$530,000
Verification:	Deed; Beacon; Interview with buyer, seller & agent
Type:	Arm's Length Sale
DOM:	117 days

Wind Project:

Project:	Buffalo Ridge
Turbine Type:	Gamesa G87 2.0 MW
Hub Height/Rotor Diameter:	78/87 meters
Height From Ground:	399 feet.
Property & Wind Tower Notes:	Tower #1 10,500 +/- feet east. Tower #2 9,200 +/- feet east. Tower #3 7,700 +/- feet southeast. Tower #4 6,500 +/- feet southeast. Tower #5 5,400 +/- feet southeast. Tower #6 4,100 +/- feet southeast. Tower #7

	3,100 +/- feet southeast. Tower #8 2,400 +/- feet southeast. Tower #9 1,800 +/- feet south, southeast.

Wind Tower Aerial Map:

Site Analysis:

Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	Operational & blade noise present during site visit.

Interview Analysis:

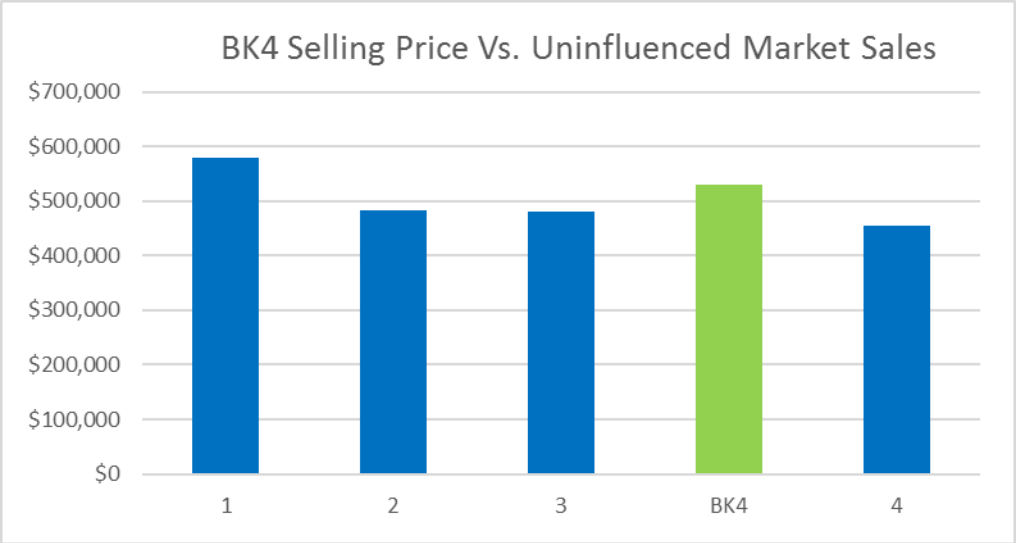
Interview Conducted by:	David Lawrence
Party Interviewed:	Buyer, Seller & Agent
Interview Date Buyer:	May 23, 2018
Interview Date Seller:	May 24, 2018
Interview Date Agent:	May 29, 2018

Interview Notes with Buyer:	Proximity to wind turbines didn't make a difference in the purchase. Paid the same. Purchased property because it had a perfect setup with a remodeled house and two metal buildings. Towers are south of the house, so it doesn't affect the view from the house. The towers make noise and you can hear them in the yard. Doesn't matter, happy with the purchase.

Interview Notes with Seller:	We moved because we were sick and tired of the wind tower noise. We thought it would matter when we sold, but a buyer purchased the house and never mentioned the wind towers. Didn't have any issues with closing or the appraisal. We are happy not to be living next to a wind tower.

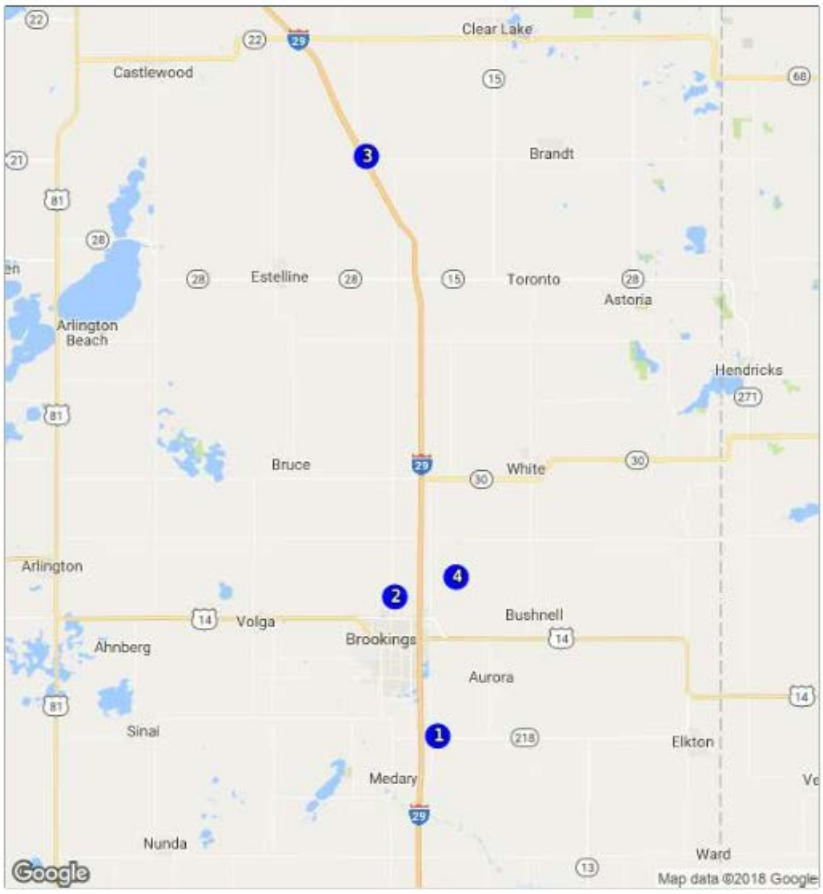
Interview Notes with Agent:	Although the sellers initially expressed concerns about the turbines, and it took four months to sell the property, the agent does not think there was any real effect with potential buyers and she did not hear that from any other realtors regarding this property. The home is an executive home and the market is smaller in that price range according to the agent.

Market Sales Analysis:



Sales Analysis BK4									
Sale No.	**Location**	**Sale Date**	**Price**	**Year/E.A.**	**GLA**	**Acres**	**Style**	**Outbuildings**	**Overall Analysis**
BK4	**Elkton**	**2013**	**$530,000**	**1989**	**2,728**	**13**	**Story 1/2**	**(2) Metal Buildings**	
1	Brookings	2016	$578,264	1920	3,365	39.87	Story1/2	Barn/Shed	**Superior**
			Adjustments:	*Inferior(+)*	*Superior(-)*	*Superior(-)*	*Similar (=)*	*Similar(=)*	
2	Brookings	2015	$482,500	2007	1,726	5	Ranch	Metal Building	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Inferior(+)*	*Similar (=)*	*Inferior(+)*	
3	Esteline	2016	$480,000	2003	2,651	4.99	Story1/2	Metal Buildings	**Inferior**
			Adjustments:	*Similar(=)*	*Similar(=)*	*Inferior(+)*	*Similar(=)*	*Similar(=)*	
4	Aurora	2010	$455,000	1890	3,342	15	Story1/2	Barn/Shed/2car	**Inferior**
			Adjustments:	*Inferior(+)*	*Superior(-)*	*Similar(=)*	*Similar (=)*	*Inferior(+)*	

Sale Location Map:



Legend
1. 47358 SD Highway 324, Brookings, SD 57006(16-276)
2. 1320 W 30TH ST, Brookings, SD 57006(14-381)
3. 46958 188TH ST, Estelline, SD 57234(15-251)
4. 47437 209th St, Aurora, SD 57002(10-196)

Market Sales Analysis Conclusion:	No sales could be found to bracket the selling price within the time of the transaction date; therefore, the sales search was expanded into 2017. Only one sale was found prior to the selling date in 2010. Sales one, two, and three occurred after the selling date in 2015 and 2016 and located near the city of Brookings. According the MLS data, BK4 was the highest sale price in 2013. The sale evidence suggests the selling price was not influenced by the proximity of the wind towers.

Overall Conclusion:	An interview analysis, site visit and sales analysis has been completed for BK4. The buyer's comments are consistent with the sales evidence. All evidence suggests the sale price was not affected by the proximity of the wind towers.

SALES ANALYSIS BK5		
	SALE No.	BK5
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	6.95 Acres
Improvements:	1936 Two-Story Design
Finished Area:	2,160 SF GLA. Basement 864 S.F.
Garage:	Attached 1-Stall
Features:	Treed shelter belt. Shed, storage building. Detached 1-Stall
Access:	Gravel linkage

Sales Analysis Data

Date of Sale:	March 26, 2014
Market Exposure:	MLS
Listing Price:	$219,000
Sale Price:	$190,000 (Previous sale 2010 $215,000)
Verification:	Deed; Beacon; Interview with Buyer
Type:	Arm's Length Sale

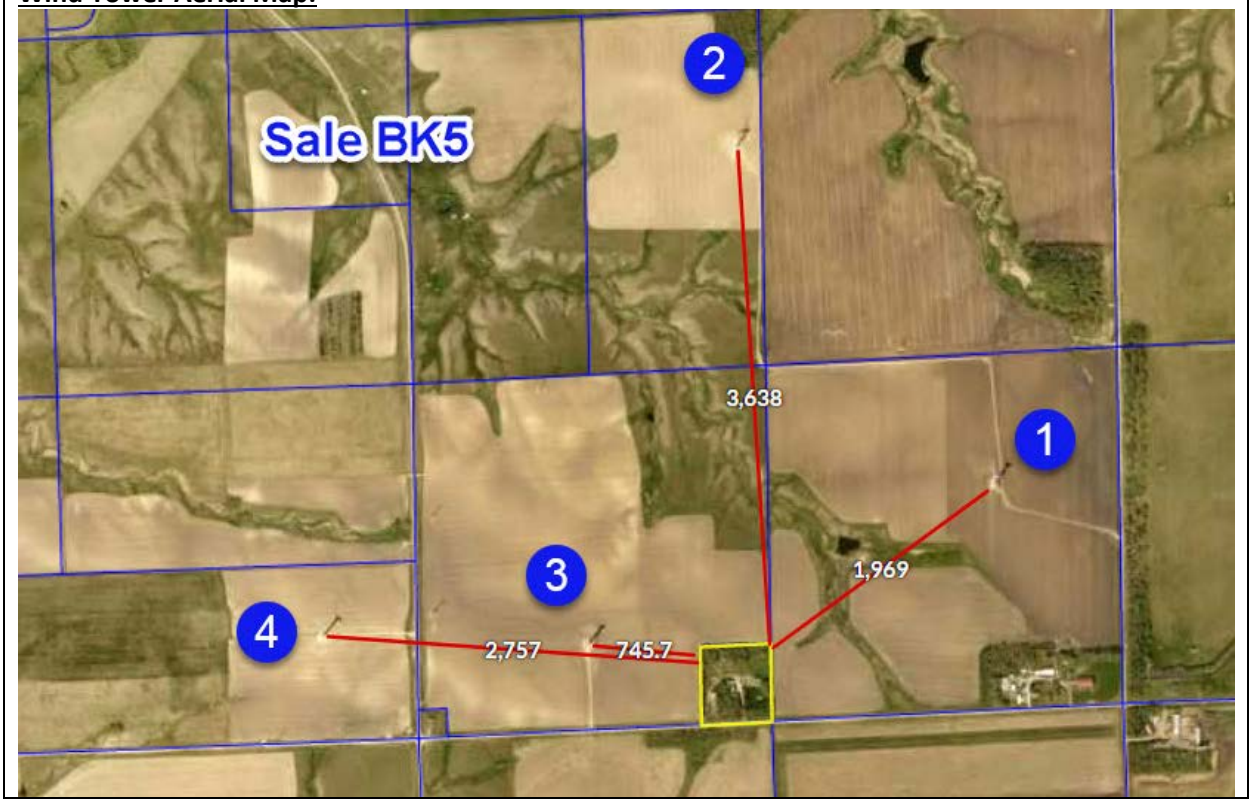
Wind Project:

Project:	Buffalo Ridge
Turbine Type:	Gamesa G87 2.0 MW
Hub Height/Rotor Diameter:	78/87 meters
Height From Ground:	399 feet
Property & Wind Tower Notes:	Four turbines located east, north and west. Tower #1 2,000 +/- feet northeast. Tower #2 3,600 +/- feet north. Tower #3 745 +/- feet west. Tower #4 2,700 +/- feet west.

Site Analysis:

Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	None at time of site visit. (no wind present)

Wind Tower Aerial Map:



Interview Analysis:

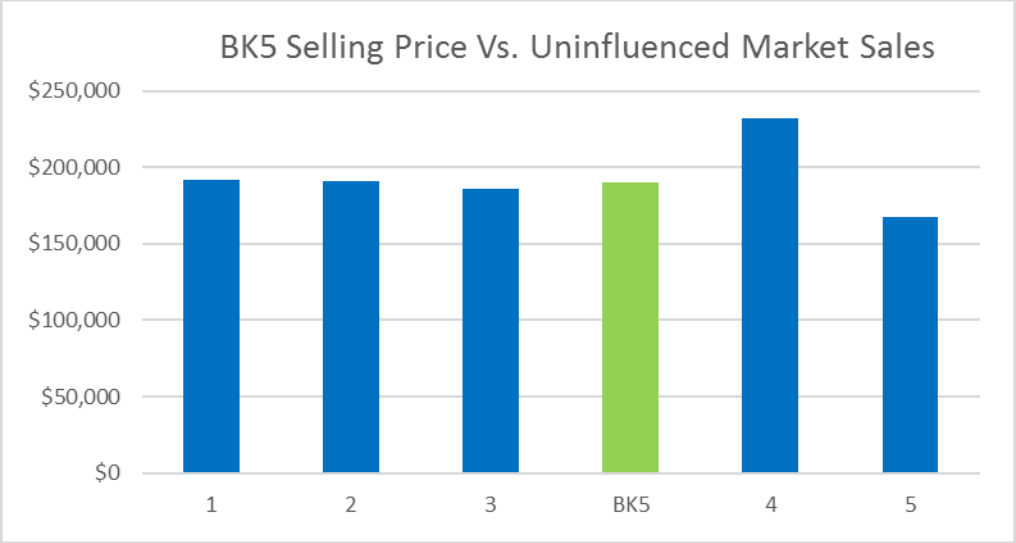
Interview Conducted by:	David Lawrence
Party Interviewed:	Buyer
Party Interviewed:	Agent
Interview Date:	May 23, 2018 (Buyer) May 30,2018 (Agent)

Interview Notes with Buyer:	Property was listed for 3 years and seller had two previous offers fall through; seller was living alone and motivated to sell. Made a good deal. Wind towers can be noisy but didn't matter to us when we bought the home. Really no issues, besides the noise. Doesn't seem to bother wild life, deer come in the yard while the turbines are running.

Interview Notes with Agent:	There are limited acreages within the Brookings market and if the property is in good condition with the features of an acreage, it sells. Lots of buyers looking for acreages. The price was reduced (BK5) because of a dysfunctional floor plan and seller motivations. The floor

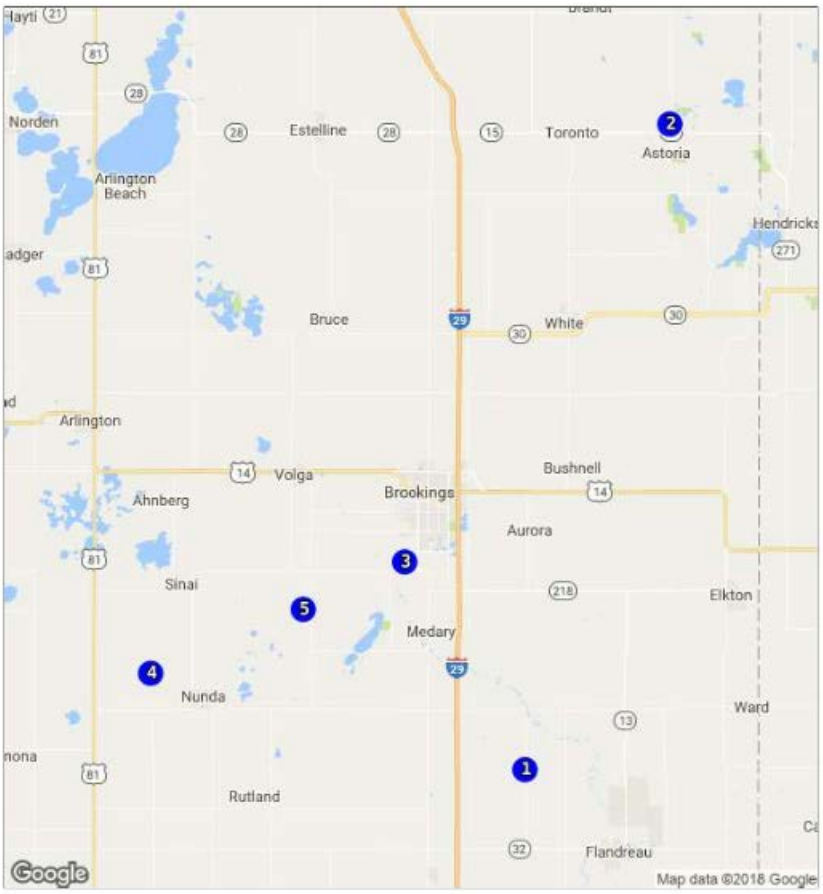
	plan eliminated older buyers. Steep stairs. Old house and new house addition with weird layout. During the open house, buyers did not comment about the proximity of the wind towers, even though you can hear them in the yard. Distance from Brookings is what effects the price with acreages, not wind towers. If a property is past the 15-mile mark, price drops considerably. Price/distance relationship. Closer to Brookings prices increase. Acreage buyers are young people with kids. Lots of work to maintain an acreage. If it is too far from town, less buyers. No negative effects on purchase price from wind towers. Buyers did not seem to comment or raise concerns.

Market Sales Analysis:



Sales Analysis BK5									
Sale No.	Location	Sale Date	Price	Year/E.A.	GLA	Acres	Style	Outbuildings	Overall Analysis
BK5	**Elkton**	**2014**	**$190,000**	**1936**	**2,160**	**6.95**	**Story 1/2**	**Shed/Storage Bld**	
1	Flandreau	2014	$191,900	1880	1,950	8.95	Story1/2	Barn/Shed	**Comparable**
			Adjustments:	*Similar(=)*	*Similar(=)*	*Similar(=)*	*Similar (=)*	*Similar(=)*	
2	Volga	2015	$190,600	1918	1,680	15	Story 1/2	Barn/Shed	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Superior(-)*	*Similar (=)*	*Inferior(-)*	
3	Astoria	2014	$186,000	1910	1,472	14	Story1/2	Outbuildings	**Comparable**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Superior(-)*	*Similar(=)*	*Similar(=)*	
4	Brookings	2013	$232,000	1912	2,075	30.59	Story1/2	Barn/Shed/2car	**Superior**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Superior(-)*	*Similar (=)*	*Superior(-)*	
5	Nunda	2013	$167,900	1922	1,198	14.63	Story1/2	Shed/Barn/Metal	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Superior(-)*	*Similar(=)*	*Superior(-)*	

Sale Location Map:



Legend
1. 22603 476th Ave., Flandreau, SD 57028(14-156)
2. 19367 483RD AVE, Astoria, SD 57213(13-122)
3. 612 Wicklow Ln, Brookings, SD 57006(13-312)
4. 22125 457th Ave., Nunda, SD 57050(13-147)
5. 46464 218TH ST, Volga, SD 57071(14-579)

Market Sales Analysis Conclusion:	Five sales uninfluenced by the proximity of wind towers are used for the analysis. The sales have similar highest and best use as acreages in the Brookings rural market. Sale BK5 is bracketed by the market sales. Sales two and five are inferior sales. Sale four is a superior sale. Sales one and three are the most similar. The market evidence suggests the selling price of BK5 was not influenced by the proximity of the wind towers.

Overall Conclusion:	An interview analysis, site visit, and sales analysis have been completed for sale BK5. The buyer's comments indicated the purchase price was influenced by seller motivations and not by the presence of the wind towers. The market data is consistent with the interview analysis and suggests the proximity of the wind towers did not negatively influence the selling price of BK5

SALES ANALYSIS BK7		
	SALE No.	BK7
	STATE	South Dakota
	COUNTY	Brookings

Property Characteristics:

Highest & Best Use:	Rural Acreage
Land Size:	13.35 Acres
Improvements:	1992 Ranch
Finished Area:	1680 SF GLA; 1680 L.L.
Garage:	Attached 2-Stall
Features:	Treed shelter belt. Metal outbuilding
Access:	Gravel road linkage

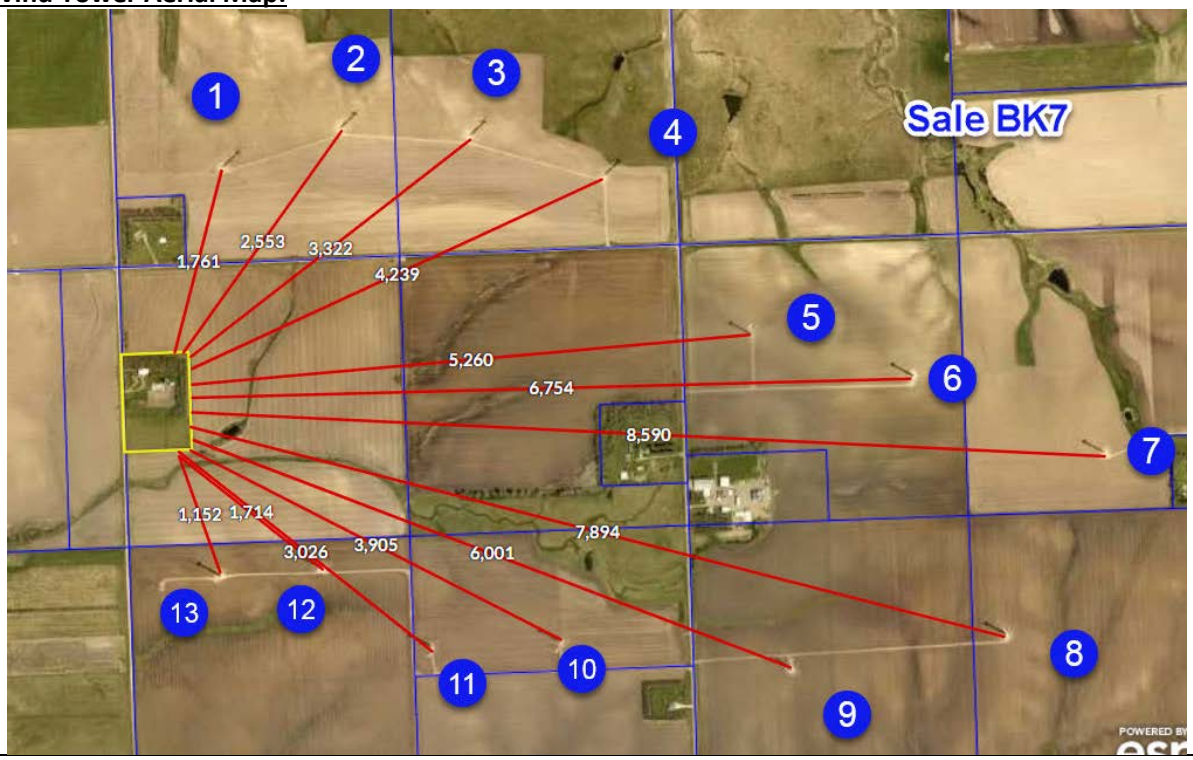
Sales Analysis Data:

Date of Sale:	August 4, 2010
Market Exposure:	Word of mouth
Sale Price:	$180,000
Verification:	Deed; Beacon; Interview with Buyer
Type:	Arm's Length Sale (estate sale, purchased based on appraisal)

Wind Project:

Project:	Buffalo Ridge
Hub Height/Rotor Diameter:	78/87 meters
Height from Ground:	399 feet
Wind Tower Property Notes:	Thirteen wind turbines surround the property. Tower #1 1,800 +/- feet north. Tower #2 2,500 +/- feet northeast. Tower #3 3,300 +/- feet northeast. Tower #4 4,200 +/- feet northeast. Tower #5 5,200 +/- feet northeast. Tower #6 6,700 +/- feet east. Tower #7 8,500 +/- feet east. Tower #8 7,900 +/- feet southeast. Tower #9 6,000 +/- feet southeast. Tower #10 3,900 +/- feet southeast. Tower #11 3,000 +/- feet southeast. Tower #12 1,700 +/- feet southeast. Tower #13 1,100 +/- feet south

Wind Tower Aerial Map:



Site Analysis:

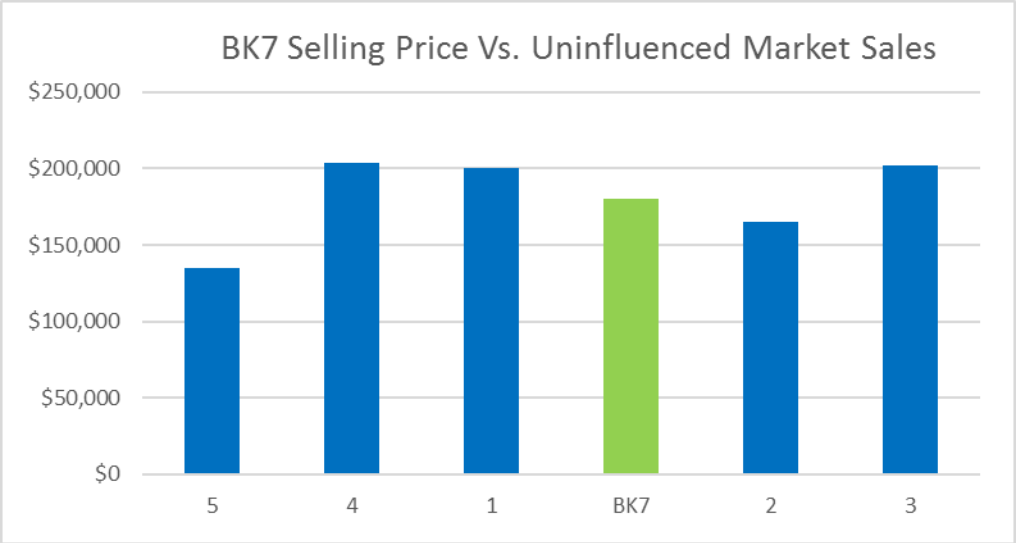
Site Visit Conducted by:	David Lawrence
Site Visit Date:	May 23, 2018
View Obstruction:	Wind towers within view of residence
Noise Analysis:	Operational & blade noise present during site visit.

Interview Analysis:

Interview Conducted by:	David Lawrence
Party Interview:	Buyer
Interview Date Buyer:	May 30, 2018

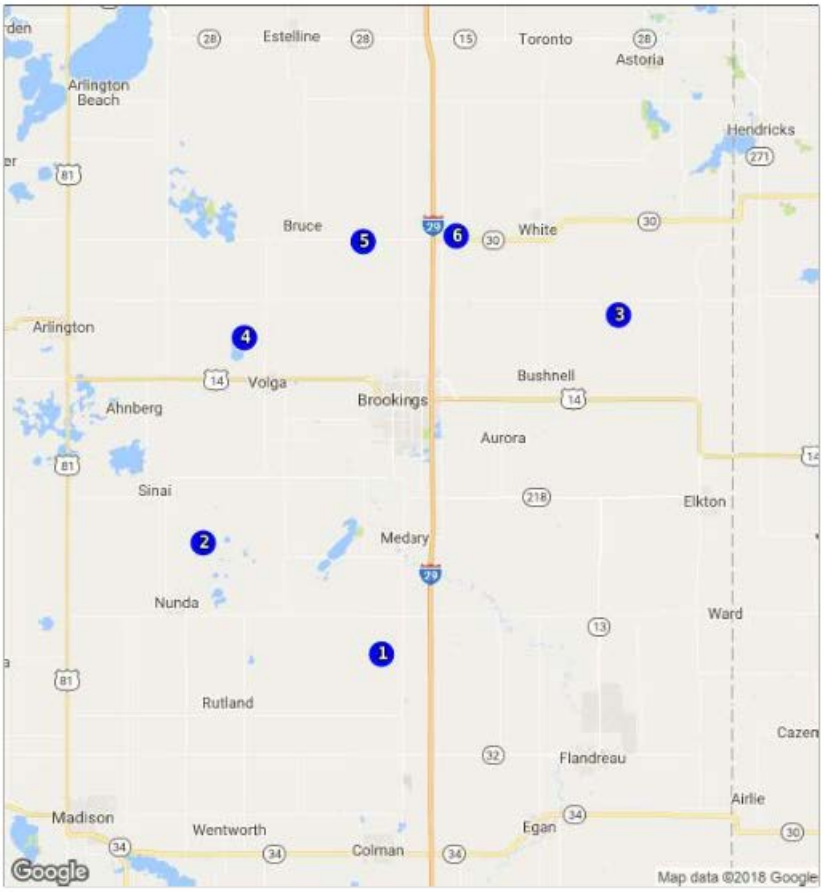
Interview Notes with Buyer:	Property value has increased by at least $75,000 since purchase. No issues or concerns with living near wind towers. There is no effect on the value. No effect to the animals. Can hear a faint "swoosh" noise. No big deal.

Market Sales Analysis:



Sales Analysis BK7									
Sale No.	Location	Sale Date	Price	Year/E.A.	GLA	Acres	Style	Outbuildings	Overall Analysis
BK7	**Elkton**	**2010**	**$180,000**	**1992**	**1,680**	**13.35**	**Ranch**	**Outbuild/2Car**	
1	Volga	2011	$200,000	2005	1,232	10	Ranch	Barn/2Car	**Superior**
			Adjustments:	*Superior(-)*	*Inferior(+)*	*Superior(-)*	*Similar (=)*	*Similar(=)*	
2	Colman	2009	$165,000	2001	910	22.03	Ranch	None	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior (+)*	*Superior(-)*	*Similar (=)*	*Inferior(-)*	
3	White	2010	$202,000	1967	1,304	12.78	Ranch	Metal Building/Shed	**Superior**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Similar(=)*	*Similar(=)*	*Superior(-)*	
4	Volga	2011	$204,000	1910	2,294	12.65	Story1/2	Barn/Shed/2car	**Superior**
			Adjustments:	*Similar(=)*	*Superior(-)*	*Similar(=)*	*Similar (=)*	*Superior(-)*	
5	Brookings	2010	$135,000	1974	1,288	7.5	Ranch	Shed/2Car	**Inferior**
			Adjustments:	*Similar(=)*	*Inferior(+)*	*Inferior(+)*	*Similar (=)*	*Inferior(+)*	

Sale Location Map:



Legend	
1. 47005 225th St., Colman, SD 57017(09-595)	4. 46306 209TH ST, Volga, SD 57071(11-436)
2. 21935 461ST AVE, Volga, SD 57071(11-226)	5. 20456 469TH Ave, Brookings, SD 57006(09-581)
3. 20787 482ND AVE, White, SD 57276(10-599)	6. 47318 SD Highway 30, Brookings, SD 57006(10-430)

Market Sales Analysis Conclusion:	Six sales are utilized in the grid that is not influenced by the proximity of a wind tower. All sales share in highest and best use as a rural acreage and sold around the same time as BK7. After analyzing the elements of comparison, the market sales bracket the selling price of BK7 and suggest the selling price has not been negatively affected by the proximity of the wind tower.

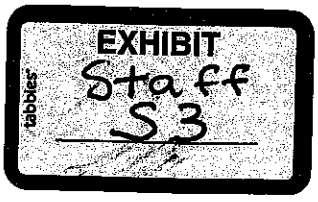
Overall Conclusion:	An interview analysis, site observation, and sales analysis were completed for sale BK7. The market sales and buyer interview comments are consistent. The evidence suggests wind towers have not negatively impacted the selling price of BK7.

BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET EL18-026

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME, CHARLES MIX AND HUTCHINSON COUNTIES, SOUTH DAKOTA, FOR THE PREVAILING WIND PARK PROJECT

Direct Testimony of David M Hessler
On Behalf of the Staff of the South Dakota Public Utilities Commission
September 10, 2018



Q. Please state your name and business address.

A. My name is David M. Hessler. The address of my company's administrative offices is 38329 Old Mill Way, Ocean View, DE 19970, and my personal office is located at 1012 W Las Colinas Dr., St. George, UT 84790.

Q. Mr. Hessler, by whom are you employed and in what capacity?

A. I have been employed for over 27 years by Hessler Associates, Inc., as Vice President and a Principal Consultant. Hessler Associates, Inc. is an engineering consulting firm that specializes in the acoustical design and analysis of power generation and industrial facilities of all kinds, including wind energy projects.

Q. Please describe your educational background and your professional experience?

A. I received my Bachelor of Science in Mechanical Engineering (B.S.), 1997, *Summa cum Laude*, at the A. James Clark School of Engineering, University of Maryland, College Park, MD, and a Bachelor of Arts (B.A.), 1982, at the University of Hartford, Hartford, Connecticut. I am a registered Professional Engineer (P.E.) in the Commonwealth of Virginia and I am a member of the Institute of Noise Control Engineering (INCE). My professional specialization is the measurement, analysis, control and prediction of noise from both fossil fueled and renewable power generation facilities. I have been the principal acoustical designer and/or test engineer on hundreds of power station projects all over the

world and on roughly 70 industrial scale wind energy projects. My resume is also attached for reference as Exhibit DMH-1.

Q. Have you ever testified as an expert witness before any court or administrative body? If so, what was the nature of your testimony?

A. Yes, on a number of occasions. Most recently I have reviewed, on behalf of the South Dakota Public Utilities Commission Staff, the noise aspects of the applications for the Crocker and Dakota Range Wind projects in South Dakota and provided written and oral testimony in those cases. In addition, I have provided both written and extensive oral testimony before the Ohio Energy Facility Siting Board on behalf of the Applicant in support of the Buckeye Wind Farm project in Champaign County, OH. I prepared the noise impact assessment study for that project and testified with regard to that study. On another occasion I testified before the Wisconsin Public Service Commission on behalf of Clean Wisconsin, Inc., a non-profit environmental advocacy organization, with regard to the proposed Highland Wind Farm project in St. Croix County, WI where I was tasked with reviewing and evaluating the validity of the Applicant's noise assessment study for that project. A further listing of all cases where I have testified is included in Exhibit DMH-1.

Q. What is the purpose of your testimony in this case?

A. I have been asked by the Staff of the South Dakota Public Utilities Commission to review and evaluate the adequacy of the noise assessment study carried out

by Burns & McDonnell Engineering Company in support of the Prevailing Wind Park Project, to consider any public/intervenor comments on the project regarding noise, and to review and comment on, as appropriate, any testimony relevant to noise issues filed by or on behalf of the Applicant.

Q. What materials have you reviewed in this matter?

A. I have reviewed Appendix M of the Application, which is the noise impact assessment prepared for the Project by Burns & McDonnell Engineers ("Sound Study, Prevailing Wind Park", Rev. 5, 5/30/18) and the responses to data requests recently submitted to the PUC Staff by Intervenors.

Q. Can you please summarize your overall opinion of the sound study submitted on behalf of the project?

A. In general, the noise modeling methodology and assumptions are satisfactory but the graphical presentation is fairly primitive in the sense that the turbines, sound contours and houses are not shown over a base map or aerial image, so it is virtually impossible to identify specific residences. More importantly, however, I would fault the study for focusing entirely on whether the Project complies with the Bon Homme County noise limit of 45 dBA at occupied residences rather than assessing or addressing in any way the potential for an adverse community reaction to project noise or discussing other aspects of wind turbine noise, such as issues potentially associated with low frequency sound emissions.

Q. Does the modeling indicate that the project will meet the Bon Homme County 45 dBA noise limit at all residences, including those in Charles Mix and Hutchinson Counties where no noise limit is in force?

A. Yes. The maximum predicted sound level at any residence is 43 dBA.

Q. Is that sufficient to adequately protect the health, safety and welfare of the community?

A. In my experience 45 dBA is an appropriate and reasonably fair regulatory noise limit for wind projects at non-participating residences generally balancing the interests of the both the community and developers; however, it does not guarantee that everyone will be completely satisfied with the sound emissions from the turbines or rule out the small potential for adverse health effects, such as sleep disturbance or vertigo. In general, in the course of testing newly operational wind projects for noise compliance and talking with residents at the closest and most impacted houses, I find that noise is not an issue for the vast majority of residents living in or near the turbine array, but also that it is not possible to please everyone. At almost every project that I'm familiar with there is one person or a few people that are extremely upset with project noise, largely irrespective of the specific sound level at their house. Consequently, there really isn't a regulatory sound level that would satisfy everyone.

Q. In your experience how does a typical community's expectations about the noise from a wind project compare to how it is viewed once in operation?

A. During the development phase there is often a lot of fear and resistance that is largely attributable to highly biased, even scary, anti-wind websites. Formal opposition groups are sometimes formed complete with their own websites. However, once the project becomes operational it is usually realized that many of the fears were unfounded and the large opposition groups evaporate leaving a few people who not only remain adamantly opposed but who are legitimately disturbed. Additionally, there are also sometimes people who were for the project but become unexpectedly irritated by it. The bottom line is that some level of discontent is practically inevitable from a typical wind project.

Q. Could this perhaps be avoided with large setbacks of, say, several miles?

A. It takes quite some distance for a typical wind turbine project to become completely imperceptible under all wind and atmospheric conditions, which vary with time. Based on some long-distance wind turbine complaint cases I am familiar with, I would estimate that the setback necessary to result in a miniscule possibility of disturbance would be on the order of 2 miles. However, the immediate problem with that is such a huge setback on a project-wide basis would leave few or no viable turbine sites and make it impossible to site most projects - and it does not appear to be a viable or realistic option in this case either. As far as I can determine with some difficulty from the very crude sound

contour plot[1] in the sound study, about 5 to 8 turbines would need to be eliminated or relocated just to satisfy this condition at two Intervenor residences. To be fair, wind turbines cannot simply be located in remote, unpopulated areas because transmission lines or other infrastructure are lacking in those areas.

Q. Have you read the response to the Staff's data request to Intervenor Karen Jenkins, dated August 24, 2018?

A. I have. In response to Staff Data Request 1-5, Ms. Jenkins expresses concerns about audible noise, infrasound and negative health effects and asks for the Prevailing Wind Application to be denied or, if approved, for a maximum noise level of 35 dBA to be imposed.

Q. Do you believe Ms. Jenkins' concerns about low frequency noise and health effects are warranted?

A. Yes, to a certain extent. I believe, based on some recent research[2], that a very small minority of people are susceptible to vertigo and nausea symptoms that are apparently caused by inaudible pressure pulsations at the blade passing frequency of wind turbines, which is typically just below 1 Hertz. When this occurs it is severely problematic and has forced people to move from, or even abandon, their homes. However, my view is that this is an extremely rare

[1] No roads are shown and no addresses are given for the receptors in the tabular results, nor are the coordinates for the receptors given in a form that can accessed through conventional mapping programs.

[2] Cooper, Steven E., "Subjective perception of wind turbine noise – The stereo approach", 174th meeting of the Acoustical Society of America, New Orleans, LA, December 2017.

phenomenon. According to the latest quarterly report[3] of the American Wind Energy Association there are now over 90,000 MW of installed wind power in this country involving more than 50,000 wind turbines. To my knowledge, instances of apparent adverse health effects from wind turbines have occurred at only a small handful of sites with only a few turbines each, such as Falmouth in Massachusetts (three 1.5 MW GE units) and Shirley Wind in Wisconsin (eight 2.5 MW Nordex units). I have been to the latter site and taken sound measurements in the middle of the night inside the homes of those complaining of ill effects from the project. In one instance the wife was very disturbed by the noise while the husband said he's never noticed, heard or felt anything. If a large proportion of the population were susceptible to this effect it would be a major issue disrupting the entire industry, but the fact of the matter is that health issues from low frequency noise are quite rare. There is a risk here at Prevailing Winds but the evidence suggests that it is very small.

Q. What about Ms. Jenkins' proposed conditions of 35 dBA?

A. While I sympathize with everyone who is currently opposed to the project and would certainly like to see sound levels of 35 dBA or less at all residences, because such a level is so utterly quiet that most people wouldn't hear anything at all, its implementation would most likely force the elimination of so many turbines that the project would become unfeasible. As an impartial technical advisor to the PUC Staff I have no interest in whether this project goes forward or

[3] American Wind Energy Association, Second Quarter 2018 Market Report, AWEA Data Services, July 26, 2018.

not, but I believe it is incumbent upon me to fairly balance the interests of both the community and the project. I am not aware of any wind project being designed to such a low standard.

Q. Have you read the response to the Staff's data request to Intervenor Sherman Fuerniss, dated August 21, 2018?

A. I have. In response to Staff Data Request 1-4, Mr. Fuerniss recommends modeling the project sound levels in terms of the C-weighted sound level in order to take into account the low frequency content of the project's sound emissions.

Q. Would you agree with this recommendation?

A. No. The low frequency sound emissions that appear to be associated with adverse health effects are so low in frequency (less than 1 Hz) that they are below the range of all weighting networks, which only go down to 10 Hz, and even beyond the ability of normal instrumentation to measure. Consequently, in addition to other serious technical problems, C-weighting would not capture or represent in any way the frequency of concern.

Q. Did Mr. Fuerniss have any other concerns?

A. Yes. He refers to the work of Dr. Alec Salt who claims to have found a possible physiological link between very low frequency sound and various adverse health effects and goes on to assert, based on Dr. Salt's theories, I believe, that larger

wind turbines, presumably like those proposed for this project, produce more or worse low frequency noise than earlier smaller models.

Q. Would you agree with this assertion?

A. No. In fact, it is remarkable how similar the sound emissions are from all the various turbine models irrespective of rotor diameter. One of the worst sites for low frequency noise issues was Falmouth, which used very early GE 1.5 MW turbines with a rotor diameter of about 77 meters, about half the diameter of the GE 3.8-137 unit proposed for Prevailing Wind. All more recent projects normally involve rotors well over 100 meters in diameter with a power output of 2.5 MW or more each.

Q. Does this conclude your testimony?

A. Yes.

CURRICULUM VITAE

DAVID M. HESSLER

Title:	Principal Consultant, Vice-President Hessler Associates, Inc.
Professional Affiliations:	Professional Engineer (P.E.), Commonwealth of Virginia Member Institute of Noise Control Engineering (INCE) National Council of Acoustical Consultants (NCAC)
Education:	Bachelor of Science in Mechanical Engineering (B.S.), 1997 *Summa cum Laude* A. James Clark School of Engineering University of Maryland, College Park, MD Bachelor of Arts (B.A.), 1982 University of Hartford, Hartford, CT
Employer:	Hessler Associates, Inc. 3862 Clifton Manor Place Haymarket, VA 20169 Years in present position: 26

Current Job Description: Acoustical engineer specializing in the prediction, assessment and mitigation of environmental noise from new and existing power generation and industrial facilities. Typical tasks include:

- Field measurement studies of existing ambient sound levels in the vicinity of proposed project sites
- Computer noise modeling of new facilities prior to construction
- Environmental impact assessments for new projects
- Noise mitigation design studies of new facilities
- Verification measurements of completed facilities
- Diagnostic studies of facilities with existing noise problems
- Design and specification of noise mitigation measures
- Educational lectures on noise issues for private corporations
- Expert witness testimony

General Experience: As an outside consultant to nearly all the major power industry EPC contractors, developers and OEM's, have been the principal acoustical designer of over 400 power plants and industrial facilities worldwide ranging from a 3900 MW power station in Saudi Arabia to numerous combustion turbine combined cycle plants to refineries and wind turbine projects. Typically, the focus of the work on these projects was to anticipate potential noise impacts at sensitive receptors near the project and recommend practical noise abatement measures to avoid them. In addition, extensive verification measurements in and around the completed power plants and wind farms have been performed to confirm that the design recommendations have been successfully executed.

Wind Turbine Experience: Over the past 14 years have performed noise impact evaluations and siting optimization studies for roughly 70 large wind turbine projects in

the United States and Canada, involving nearly all current makes and models of wind turbines. Have developed test protocols and conducted long-term field measurement surveys of numerous newly completed wind projects to evaluate compliance with applicable permit conditions, to investigate complaints and/or to verify the accuracy of pre-construction noise modeling. Have carried out field tests of wind turbine sound power level in strict accordance with the IEC 61400-11 test methodology. Have carried out field measurement studies of operating wind turbines to evaluate their low frequency sound emissions, nacelle noise sources and radial directivity characteristics. Have testified as an expert witness at permitting hearings for proposed wind projects. Attended six bi-annual Wind Turbine Noise conferences.

Recent Papers and Publications:

"Wind Turbine Noise", Chapter 7 *Measuring and Analyzing Wind Turbine Sound Levels*, Multi-Science Publishing Co., Brentwood, Essex, UK, Jan. 2012. Comprehensive book on all aspects of wind turbine noise. Each chapter written by a recognized expert in that subject.

Teleseminar "Wind Turbine Siting and Best Practices", National Regulatory Research Institute (NRRI), Invited speaker, Jan. 2012.

"Best Practices Guidelines for Assessing Sound Emissions from Proposed Wind Farms and Measuring the Performance of Completed Projects", Prepared for the Minnesota Public Utilities Commission under the auspices of the National Association of Regulatory Utility Commissioners (NARUC), Oct. 2011.

"Accounting for Background Noise when Measuring Operational Noise from Wind Turbines", Fourth International Meeting on Wind Turbine Noise, Rome, Italy, Apr. 2011.

"Recommended noise level design goals and limits at residential receptors for wind turbine developments in the United States", *Noise Control Engineering Journal*, J.59 (1), January-February 2011.

"Wind tunnel testing of microphone windscreen performance applied to field measurements of wind turbines", Third International Meeting on Wind Turbine Noise, Aalborg, Denmark, June 2009.

"Experimental study to determine wind-induced noise and windscreen attenuation effects on microphone response for environmental wind turbine and other applications", *Noise Control Engineering Journal*, J.56, July-August 2008.

Expert Witness Cases:

Before the Washington State Energy Facilities Siting Board (EFSEC) on behalf of Bechtel and the Cherry Point Cogeneration Project, Bellingham, WA, 2003. Permitting support for a proposed combined cycle power plant facility.

Before the Public Service Commission of West Virginia on behalf of the Longview Power Project near Morgantown, WV, 2006. Permitting support for a proposed coal-fired power plant facility.

Before the Pennsylvania Department of Environmental Protection on behalf of Waste Management and the Alliance Sanitary Landfill in Taylor, PA, 2006. Support in defending against a Class Action Lawsuit brought by neighbors of the landfill.

Before the Office of the Attorney General of New York on behalf of the Hudson Valley Community College Cogeneration (Diesel) Plant. Support in defending against a Class Action Lawsuit brought by neighbors.

Before the Hanover County (VA) Board of Supervisors on behalf of Martin Marietta Materials and the Doswell Quarry, 2008. Permitting support for a proposed quarry expansion.

Before the New Hampshire Site Evaluation Committee on behalf of Granite Reliable Power, LLC, 2008. Docket No. 2008, July 2008. Permitting support for a proposed wind turbine project in Northern New Hampshire.

Before the Public Utilities Commission of Ohio, Ohio Power Siting Board on behalf of EverPower Renewables and the Buckeye Wind Project, 2008. Permitting support for a proposed wind turbine project in Ohio.

Before the Wisconsin Public Service Commission on behalf of Clean Wisconsin with regard to the proposed Highland Wind Farm in Forest, WI. Docket No. 2535-CE-100. Engaged as an independent expert to evaluate the Applicant's sound studies and the testimony of opposition groups.

Before the Public Utilities Commission of Ohio, Ohio Power Siting Board on behalf of EverPower Renewables and the Buckeye II Wind Project, 2012. Permitting support for a proposed wind turbine project in Ohio.

Before the Maine State Government Energy, Utilities and Technology Committee on behalf of Patriot Renewables and the Beaver Ridge Wind Project, 2014. Peer review of operational sound testing by others.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

EL18-026 - IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA, FOR THE PREVAILING WIND PARK PROJECT	* * * * * * * *	**APPLICANT'S RESPONSES TO STAFF'S FOURTH SET OF DATA REQUESTS TO APPLICANT** **EL18-026**

Below please find Applicant's Responses to Staff's Fourth Set of Data Requests to Applicant.

4-1) Provide a map that shows the proposed turbines within 2 miles from the residence of Ms. Kelli Pazour. 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).

Bridget Canty: Please see Applicant's Responses to Intervenors' Second Set of Data Requests, response to Second Set, Attachment 2-4.

4-2) 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:

a) Mr. Gregg C. Hubner and Mrs. Marsha Hubner;
b) Mr. Paul M. Schoenfelder and Mrs. Lisa A. Schoenfelder;
c) Mr. Sherman Fuerniss;
d) Ms. Karen D. Jenkins; and
e) Ms. Kelli Pazour.

Chris Howell (sound) and Aaron Anderson (shadow flicker): The table below provides the modeled annual shadow flicker and turbine sound at the following residences for the Intervenors listed in (a) through (e).

Intervenor	Address (From Intervenors' Petitions to Intervene)	Sound (dBA)	Shadow Flicker (hours per year)
a) Mr. Gregg C. Hubner and Mrs. Marsha Hubner	29976 406th Avenue Avon, South Dakota 57315	28.5	The address appears to be REC-047, which is estimated at 0 hours per year.
b) Mr. Paul M. Schoenfelder and Mrs. Lisa A. Schoenfelder;	40228 296th Street Wagner, South Dakota 57380	35.5	The address is estimated at ~5 hours per year.
c) Mr. Sherman Fuerniss	40263 293rd Street Delmont, South Dakota	This address includes both REC-68 and REC-69 for Fuerniss. The values there are 35.8 and 36.0, respectively.	The address includes REC-068 and REC-069, which are estimated at 2.87 hours per year (REC-068) or 2.98 hours per year (REC-069).
d) Ms. Karen D. Jenkins	28912 410th Avenue Tripp, South Dakota 57376	28.4	The address appears to be REC-121, which is estimated at 0 hours per year.
e) Ms. Kelli Pazour.	29668 402nd Avenue Wagner, South Dakota 57380	32.4	This address appears to be REC-024, which is estimated at 5.98 hours per year.

Dated this 25th day of September, 2018

By */s/ Lisa M. Agrimonti*

Mollie M. Smith
Lisa M. Agrimonti
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Attorneys for Applicant
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Phone: (612) 492-7270
Fax: (612) 492-7077

PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC, FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA FOR THE PREVAILING WIND PARK PROJECT	* * * * * * * * *	**CERTIFICATE OF SERVICE** **EL18-026**

Bridget Duffus, of Fredrikson & Byron, P.A., hereby certifies that on the 25th day of September, 2018, true and correct copies of this Certificate of Service and Applicant's Responses to Staff's Fourth Set of Data Requests to Applicant were served electronically on the persons listed below:

Ms. Kristen Edwards Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 Kristen.edwards@state.sd.us	Ms. Amanda Reiss Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 amanda.reiss@state.sd.us
Mr. Darren Kearney Staff Analyst South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 darren.kearney@state.sd.us	Mr. Jon Thurber Staff Analyst South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 jon.thurber@state.sd.us
Ms. Lisa M. Agrimonti - Representing: Prevailing Wind Park, LLC Fredrikson & Byron, P.A. 200 South Sixth Street, Suite 4000 Minneapolis, MN 55402-1425 lagrimonti@fredlaw.com	Ms. Mollie Smith - Representing: Prevailing Wind Park, LLC Fredrikson & Byron, P.A. 200 S. 6th St., Ste. 4000 Minneapolis, MN 55402 msmith@fredlaw.com
Reece M. Almond – Representing: Gregg C. Hubner, Marsha Hubner, Paul M. Schoenfelder, and Lisa A. Schoenfelder Davenport, Evans, Hurwitz & Smith. LLP 206 West 14th Street P.O. Box 1030 Sioux Falls, SD 57101 ralmond@dehs.com	

/s/ Bridget Duffus
Bridget Duffus

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA, FOR THE PREVAILING WIND PARK PROJECT	* * * * * * * * *	**APPLICANT'S RESPONSES TO INTERVENORS' SECOND SET OF DATA REQUESTS EL 18-026**

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

Objections to Definitions

Prevailing Wind Park objects to the definitions of "You" and "Your". For purposes of these responses, "You" and "Your" shall refer to Prevailing Wind Park, LLC, the applicant in this matter and its parent company, sPower Development Company, LLC, and any employees thereof.

2-1) Provide the application for a Large Wind Energy System Permit You submitted to Bon Homme County.

Peter Pawlowski: The application is available at: https://fredriksonandbyron.sharefile.com/d-sf499da35c754466a

2-2) Provide any application You have submitted to Bon Homme County, Charles Mix County, or Hutchinson County.

Peter Pawlowski: Responsive documents are available at https://fredriksonandbyron.sharefile.com/d-sf499da35c754466a

2-3) What is the modeled noise level and shadow flicker at the Presbyterian-Bohemian Cemetery located at the intersection of 401st Avenue and 295th Street near turbines 48 and 57?

Aaron Anderson: Assuming the figure below shows the Presbyterian-Bohemian Cemetery, the Project will result in approximately 10 hours per year of shadow flicker at the Presbyterian-Bohemian Cemetery using the GE 3.8-137 model.

Chris Howell: The noise modeling for the GE 3.8-137 turbine predicts a sound level from turbines of 33.8 dBA at this location.

2-4) Provide a map that shows the proposed turbines within 2 miles from the residence of Ms. Kelly Pazour (29668 402nd Avenue, Wagner, South Dakota 57380) and the applicable setbacks for those turbines, similar to the map on 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/sl.pdf).

Bridget Canty: See Attachment 2-4 for turbine locations. For setbacks, see Figure 5 in the Application.

2-5) Provide a map that shows the proposed turbines within 2 miles from the residence of Mr. Jerome Powers (40427 294th Street, Wagner, South Dakota 57380) and the applicable setbacks for those turbines, similar to the map on 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/sl.pdf).

Bridget Canty: See Attachment 2-5 for turbine locations. For setbacks, see Figure 5 in the Application.

2-6) Provide a map that shows the proposed turbines within 2 miles from the residence of Mr. Kevin Andersh and the applicable setbacks for those turbines, similar to the map on 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/sl.pdf).

Bridget Canty: See attachment 2-6 for turbine locations. For setbacks, see Figure 5 in the Application.

2-7) Provide a map that shows the proposed turbines within 2 miles from the residence of Mr. Gregg Hubner (29976 406th Avenue, Avon, South Dakota 57315) and the applicable setbacks for those turbines, similar to the map on 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/sl.pdf).

Bridget Canty: See response to Staff Request DR 2-23.

2-8) Provide a map that shows the proposed turbines within 2 miles from the residence of Mr. Paul Schoenfelder (40228 296th Street, Wagner, South Dakota 57380) and the applicable setbacks for those turbines, similar to the map on 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/sl.pdf).

Bridget Canty: See response to Staff Request DR 2-24.

2-9) Appendix T, page 84 email from Jennifer Bell to Bridget Canty on the subject of Prevailing Winds Tribal Meeting dated Monday, March 26, 2018 10:02:20 AM. Please provide any additional correspondence between Kip Spotted Eagle and/or the leadership of the Yankton Sioux Tribe, including any agreements made in regards to cultural discoveries during the construction of the Prevailing Winds Park project.

Lisa Agrimonti: Prevailing Wind Park objects to this request because it is overbroad and ambiguous regarding the parties to the requested communications. Prevailing Wind Park further objects to this request to the extent that it seeks confidential information.

Dated this 24th day of September, 2018.

By: */s/ Lisa M. Agrimonti*

Mollie M. Smith
Lisa M. Agrimonti
FREDRIKSON & BYRON, P.A.
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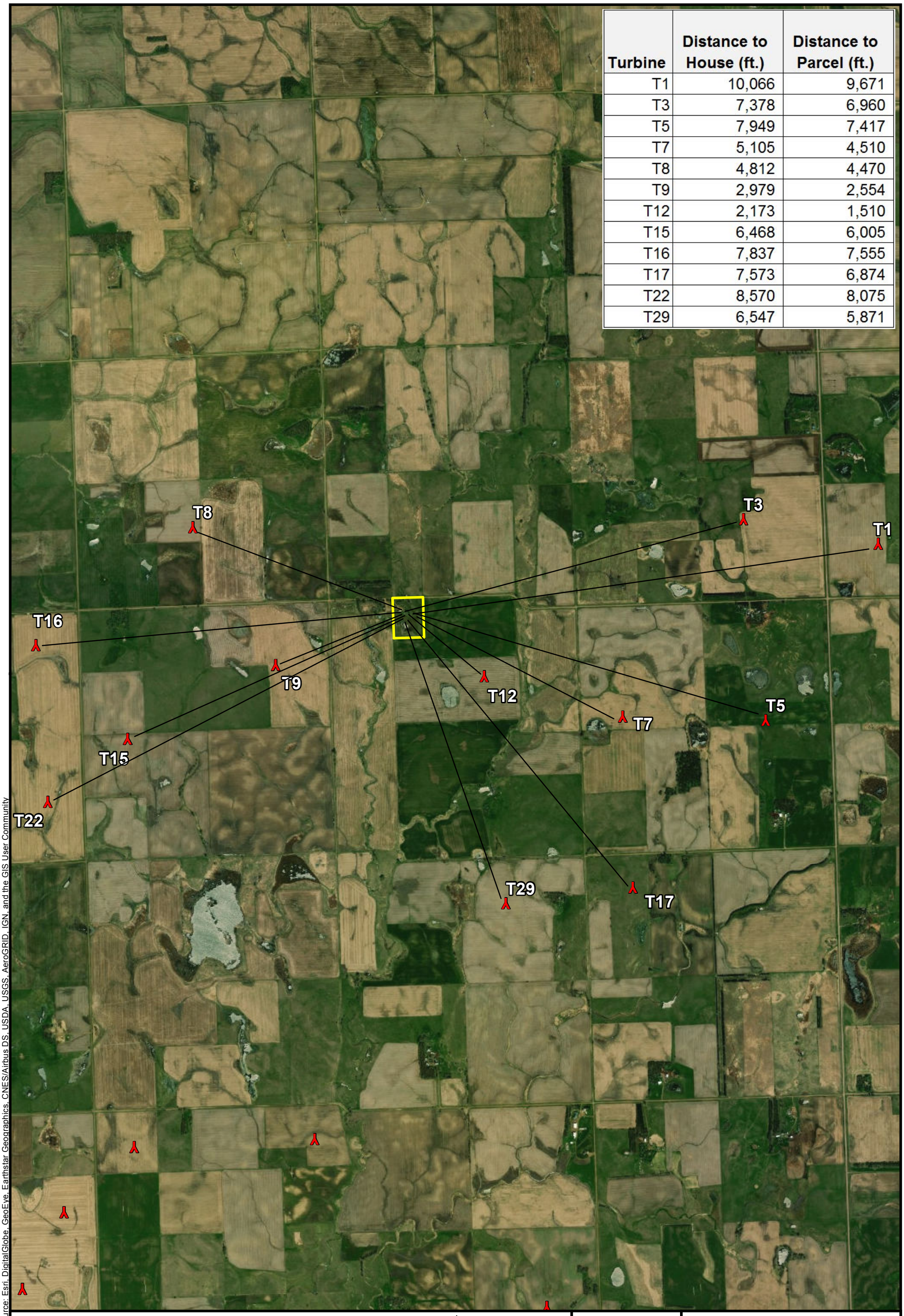
200 South Sixth Street, Suite 4000
Minneapolis, MN 55402
Phone: (612) 492-7270
Fax: (612) 492-7077

64809191.1

Turbine	Distance to House (ft.)	Distance to Parcel (ft.)
T1	10,066	9,671
T3	7,378	6,960
T5	7,949	7,417
T7	5,105	4,510
T8	4,812	4,470
T9	2,979	2,554
T12	2,173	1,510
T15	6,468	6,005
T16	7,837	7,555
T17	7,573	6,874
T22	8,570	8,075
T29	6,547	5,871



Wind Turbine

Parcel Boundary

NORTH

1,240 620 0 1,240

Scale in Feet

BURNS McDONNELL

Residence of
Mr. Jerome Powers
40427 294th Street
Charles Mix County
South Dakota

Source:

Issued: 9/20/2018

006142

Path: Z:\Resources\Local\Clients\KCMENS\SPowerGroup\104294_PrevailingWind\ArcGIS\GeospatialDataFiles\ArcDocs\PUC Data Requests\Powers2.mxd apwoehler 9/20/2018

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Turbine	Distance to House (ft.)	Distance to Parcel (ft.)
23	8,517	7,235
37	10,012	7,543
39	6,405	3,959
41	8,502	5,683
45	10,168	7,177
48	9,575	8,813
49	3,390	1,006
57	10,447	9,703
58	4,508	2,037

T57
T48
T23
T39
T37
T58
T49
T41
T45

Wind Turbine

Parcel Boundary

NORTH

0.25 0.125 0 0.25

Miles

BURNS McDONNELL

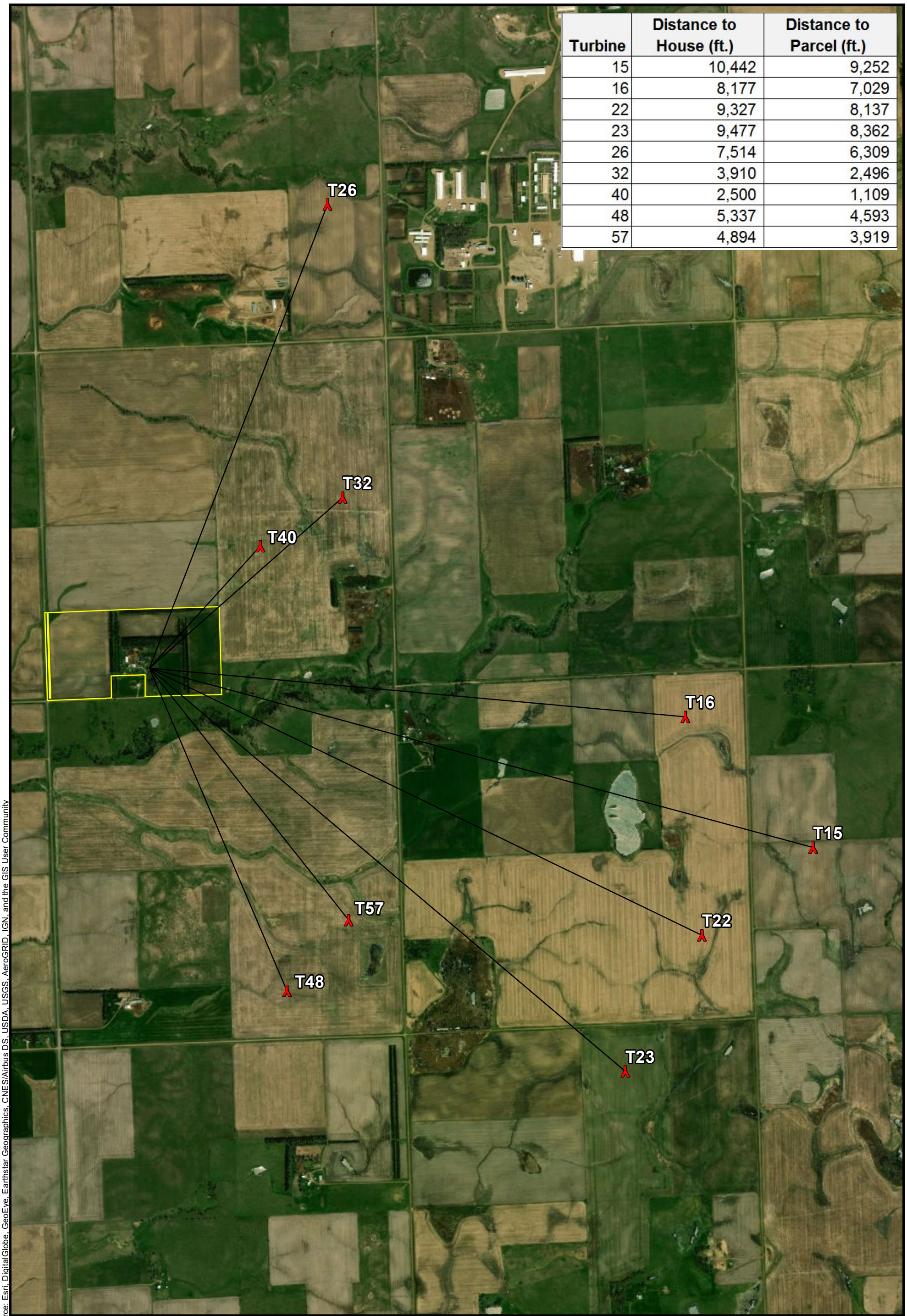
Brown Residence (Pazour)
29668 402nd Avenue
Charles Mix County
South Dakota

Source: sPower, ESRI, Burns & McDonnell

Issued: 9/20/2018

006143

Turbine	Distance to House (ft.)	Distance to Parcel (ft.)
15	10,442	9,252
16	8,177	7,029
22	9,327	8,137
23	9,477	8,362
26	7,514	6,309
32	3,910	2,496
40	2,500	1,109
48	5,337	4,593
57	4,894	3,919



Wind Turbine

Parcel Boundary

NORTH

1,240 620 0 1,240

Scale in Feet

BURNS McDONNELL

Residence of
Kevin & Georgia Andersh
40128 294th Street
Charles Mix County
South Dakota

Source:

Issued: 9/20/2018

006144

Path: Z:\Resources\Local\Clients\KCM\ENS\SPowerGroup\104294_PrevailingWind\ArcGIS\GeospatialDataFiles\ArcDocs\PUC Data Requests\Andersh2.mxd apwoehler 9/20/2018

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC, FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA FOR THE PREVAILING WIND PARK PROJECT	* * * * * * * * *	**CERTIFICATE OF SERVICE** **EL18-026**

Bridget A. Duffus, of Fredrikson & Byron, P.A., hereby certifies that on the 24th day of September, 2018, true and correct copies of the following documents were served electronically on the persons listed below:

1. Applicant's Responses to Intervenors' Second Set of Data Requests; and
2. Certificate of Service.

Ms. Kristen Edwards Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 Kristen.edwards@state.sd.us	Ms. Amanda Reiss Staff Attorney South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 amanda.reiss@state.sd.us
Mr. Darren Kearney Staff Analyst South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 darren.kearney@state.sd.us	Mr. Jon Thurber Staff Analyst South Dakota Public Utilities Commission 500 E. Capitol Ave. Pierre, SD 57501 jon.thurber@state.sd.us
Ms. Lisa M. Agrimonti - Representing: Prevailing Wind Park, LLC Attorney Fredrickson & Byron, P.A. 200 South Sixth St., Ste. 4000 Minneapolis, MN 55402-1425 lagrimonti@fredlaw.com	Ms. Mollie Smith - Representing: Prevailing Wind Park, LLC Fredrikson & Byron, P.A. 200 S. 6th St., Ste. 4000 Minneapolis, MN 55402 msmith@fredlaw.com
Reece M. Almond – Representing: Gregg C. Hubner, Marsha Hubner, Paul M. Schoenfelder, and Lisa A. Schoenfelder Davenport, Evans, Hurwitz & Smith. LLP 206 West 14th Street	

P.O. Box 1030 Sioux Falls, SD 57101 ralmond@dehs.com	

/s/ Bridget A. Duffus
Bridget A. Duffus

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION BY PREVAILING WIND PARK, LLC FOR A PERMIT OF A WIND ENERGY FACILITY IN BON HOMME COUNTY, CHARLES MIX COUNTY AND HUTCHINSON COUNTY, SOUTH DAKOTA, FOR THE PREVAILING WIND	)))))))	**Certificate of Service** **EL18-026**

I hereby certify that on October 1, 2018, true and correct copies of the following were served electronically to the all parties on the Service List:

1. Filing Letter
2. Staff's Witness and Exhibit List
3. Staff Exhibits S1, S2, S3, and S4.

I hereby certify that a true and correct copy of Staff Exhibit S1(Confidential) was served electronically upon the following:

Ms. Mollie M. Smith and Ms. Lisa Agrimonti

Representing: Prevailing Wind Park, LLC Attorney
Fredrikson & Byron, P.A. 200
South Sixth St., Ste. 4000
Minneapolis, MN 55402
msmith@fredlaw.com
lagrimonti@fredlaw.com

Kristen N. Edwards