

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION OF DAKOTA RANGE I, LLC AND DAKOTA  
RANGE II, LLC FOR AN ENERGY FACILITY PERMIT TO CONSTRUCT  
A WIND ENERGY FACILITY

SD PUC DOCKET EL-18-003

PREFILED REBUTTAL TESTIMONY OF MICHAEL MAROUS  
ON BEHALF OF DAKOTA RANGE I, LLC AND DAKOTA RANGE II, LLC

May 21, 2018

## **I. INTRODUCTION**

**Q. Please state your name.**

A. My name is Michael MaRous.

**Q. Did you provide Direct Testimony in this Docket?**

A. Yes. I submitted pre-filed testimony in this docket on April 6, 2018.

**Q. What is the purpose of your Rebuttal Testimony?**

A. The purpose of my Rebuttal Testimony is to respond to the testimony of South Dakota Public Utilities Commission Staff (“Staff”) witness David Lawrence. Specifically, I respond to his four general critiques of my Direct Testimony: 1) the applicability of the peer-reviewed studies to South Dakota; 2) alleged inaccuracies in my Market Impact Analysis, MaRous Direct Exhibit 1; 3) the persuasive merits of my assessor surveys; and 4) the availability of market sales relevant to assessing the potential impact of a wind turbine in proximity to a residence or agricultural property.

I also comment on the Prevailing Winds, LLC’s Brookings County 2015 Property Value Survey attached to Mr. Mark Mauersberger’s Rebuttal Testimony, Exhibit 1.

**Q. What is your overall response to Mr. Lawrence’s testimony?**

A. I appreciate Mr. Lawrence’s professional criticisms. Having had the opportunity to investigate and analyze the sales he identified, I believe his testimony and the data further support my conclusion that there is no market evidence that proximity to a wind turbine adversely affects South Dakota property values. This conclusion is also consistent with my prior testimony, as well as my four decades of experience as an appraiser, including my experience with evaluating the potential impact of wind turbines on property values throughout the Midwest.

**Q. Are there any exhibits attached to your Rebuttal Testimony?**

A. Yes. I am sponsoring the following exhibits:

- Exhibit 1: Table and Figure of South Dakota Wind Farms.
- Exhibit 2: Updated South Dakota Assessors Survey.
- Exhibit 3: South Dakota Auctioneer/Broker Survey.
- Exhibit 4: Brookings County Single-Family Residential Sales Summary from Lawrence Direct Data - BK 1-5 and 7.
- Exhibit 5: Supplemental Paired Sales Analysis—Residential Sales BK 1-5 and 7.

**Q. Do you have any updates to your Direct Testimony?**

A. Yes. I received my South Dakota State Certified General Appraisal license No. 1467CG, which is valid through September 30, 2018.

**II. APPLICABILITY OF PEER-REVIEWED STUDIES TO SOUTH DAKOTA**

**Q. Mr. Lawrence criticizes the studies in your testimony because “some of the conclusions indicate there could well be a potential value impact to properties near a wind project. In light of each of the above studies, a reader could conclude the issue is unanswered.” Lawrence Direct at 8. What is your response?**

A. I agree with Mr. Lawrence’s general conclusion that some of the studies cited in the peer-reviewed literature I included with my testimony referenced other studies that indicated a possibility that wind turbines could impact property values. However, the studies Mr. Lawrence references regarding potential negative impact are generally not representative of the overarching conclusion of the peer-reviewed literature.

**Q. Do you have any specific responses to the excerpts Mr. Lawrence cited on pages 7 and 8 of his testimony?**

A. Yes. Mr. Lawrence takes six quotes from certain studies I provided. I included the studies in my testimony to provide a balanced overview of the peer-reviewed literature. These studies support my opinion that there is no definitive evidence in the literature to indicate that the Project will negatively impact the value of

agricultural or residential properties. None of the quotes detracts from my conclusion.

Mr. Lawrence quotes from five articles. The quotes from MaRous Direct Exhibits 2 (Geurin et al. 2012) and 6 (Atkinson-Palombo and Hoen 2014) expressly support a finding that there is no statistically significant impact on the sale prices of residential properties in proximity to wind turbines. The quote from MaRous Direct Exhibit 3 states only that assessed values of properties in proximity to wind turbines are equitably assessed.

Mr. Lawrence also cites to the Vyn and McCullough study, MaRous Direct Exhibit 5. The Vyn and McCullough study evaluated the impacts of 133 turbines in Melancthon Township on property values. Vyn and McCullough concluded:

The empirical results generated by the hedonic models, using three different measures to account for disamenity effects, suggest that these turbines have not impacted the value of surrounding properties.

MaRous Direct Exhibit 5 at 26. Mr. Lawrence then states that the researchers note the study “does not preclude any negative effects from occurring on individual properties.” Lawrence Direct at 7.

Vyn and McCullough then note the Lansink (2012) appraisal from which Mr. Lawrence quotes. Mr. Lawrence fails to include Vyn and McCullough’s criticism of the Lansink appraisal: the sales were not market sales and therefore may not be representative of the market—“the five properties in question were purchased by Canadian Hydro developers and resold after turbines had been constructed.” MaRous Direct Exhibit 5 at 27. Transactions involving the developers, who often pay premiums to secure their sites, do not provide a basis from which credible, fair market value comparisons may be drawn. In my opinion, the Lansink appraisal is not indicative of the market value impacts of a wind farm because of its limited, non-

market sales data. Further, the quoted language is not representative of the overarching conclusions of the article's authors.

The other article Mr. Lawrence cites – twice – is MaRous Direct Exhibit 4 by Lang and Opaluch, and he does so incompletely. The first quote from the study affirms my conclusion: “while we cannot conclude for sure that there is no effect on housing prices, there is no statistical evidence of a large, adverse effect.” Lawrence Direct at 7.

Lang and Opaluch, in their discussion of the literature, also describe a study in Upstate New York. Mr. Lawrence quotes a sentence stating that the Upstate New York study “impl[ies]” that a wind farm within a half mile of a turbine could impact value. However, Mr. Lawrence did not include the limitation for that study that Lang and Opaluch point out: “It is important to note, however, that the average distance to a turbine of a transaction in their data is over 10 miles, and they interpolate effects to close proximity.” MaRous Exhibit 4 at 7. In fact, Lang and Opaluch emphasize that the more persuasive study work is by Hoen, one of the authors of the LBNL studies:

The strongest research to date is a recent report from Hoen et al. (2013) [Exhibit 3], which updated Hoen et al. (2011). They collect over 50,000 transactions within 10 miles of wind farms spanning 27 counties in nine states.... Similar to our results, Hoen et al. (2013) find no statistical effect of wind turbines on property values.

MaRous Direct Exhibit 4 at 7-8 (emphasis added).

### **III. ALLEGED INACCURACIES IN MARKET IMPACT ANALYSIS**

**Q. On pages 11 and 12 of Mr. Lawrence's testimony, Mr. Lawrence alleges four inconsistencies in the data provided for Brookings County sales comparison of 19937 473rd Avenue and 5705 Rathum Loop. What is your response?**

A. I do not believe Mr. Lawrence's criticisms are well-founded. I have included each of Mr. Lawrence's allegations and my specific responses below:

*"1. The sale price is not reported accurately. The Market Impact Analysis lists the 19937 473rd Avenue sale price as \$169,500. The Brookings County records & Brookings County MLS show the 19937 473rd Avenue sale price as \$167,500."*

Mr. Lawrence is correct that the publicly available county records do show a \$167,500 sale price. However, our further research found that \$169,500 is the accurate figure. Further, I would not consider a \$2,000 difference in price to be material.

*"2. The Market Impact Analysis does not provide any discussion about the proximity to the high-traffic Interstate corridor along the west property boundary."*

The interstate is 500 feet away from the residence at 19937 473rd Avenue and blocked by two large outbuildings and trees. Due to this screening, I concluded there was no effect on value.

*"3. The Market Analysis lists 5705 Rathum Loop as having a crawl space. Brookings County shows 5705 Rathum Loop as having a finished  $\frac{3}{4}$  basement with 800 square feet finished in the lower level."*

Again, while Mr. Lawrence accurately reports what is in the public records, my research indicates that the Rathum Loop property has only a crawl space.

*"4. 19937 473rd Avenue is located on a gravel road and in rural setting 13 miles north of Brookings. 5705 Rathum Loop is on the east edge of Brookings on a solid surface road and would be considered within the City of Brookings real estate market."*

I disagree that the Rathum Loop property should be considered within the City of Brookings real estate market. While Rathum Loop is closer to the Brookings city limits, it is still approximately two miles away and rural in nature. Also, both properties in this paired sale analysis are located on gravel roads.

**Q. Mr. Lawrence also comments that the Macon County residential paired sale had a “peculiar” statement that a proximate wind turbine may have led to a quick sale at a higher price. Lawrence Direct at 12. What is your response?**

A. Notably, Mr. Lawrence acknowledges that he did no research regarding the paired sale. I believe I have accurately represented the statement the broker made.

#### **IV. ASSESSOR SURVEYS**

**Q. On pages 13 and 14 of his testimony, Mr. Lawrence states that assessors lack appraisal training, are not focused on assessing individual market values of properties, and therefore interviews with assessors are “not substantively valid in determining the negative impacts from a wind project.” What is your response?**

A. First, I disagree with Mr. Lawrence’s criticism of an assessor’s training and knowledge. A county assessor must obtain the Certified Appraiser Assessor designation from the South Dakota Department of Revenue. SD Laws 10-3-1.1; SD Laws 10-3-1.2; SD Admin. Rules 64:02:01:14. To be eligible for this certification, they must have “at least one year of full-time experience in the assessing and appraising field, have completed and passed the required training prescribed in § 64:02:01:16, and ha[ve] passed the certification examination.” SD Admin. Rules 64:02:01:05. Assessors also have first-hand knowledge of property values in their communities. They receive input on factors influencing value and know of complaints from parties protesting the assessor’s opinion of market value. Thus, while assessors may have less formal training than appraisers, they are required to complete specified property valuation training, and also have personal knowledge of the market in their area.

Second, I believe Mr. Lawrence may be misunderstanding the purpose of the assessor surveys. Appraisers routinely and reasonably rely upon information provided by assessors to prepare market analyses and appraisals and I believe it was appropriate to do so here. My surveys of assessors in South Dakota was

intended to be another data point for my overall analysis of the potential impact of wind turbines on property values. The assessors have experience in assessing properties in counties where wind farms are located. The assessors' interactions with landowners and knowledge of landowner complaints about valuation and formal value appeals is valuable data and indicates that wind farms have not resulted in reduced assessments on proximate properties.

## V. MARKET SALES

**Q. In your Market Impact Analysis, you researched potential sales of properties in six counties where there are more than 25 wind turbines.<sup>1</sup> Why did you select these counties when there are 12 counties that have operating wind turbines in the state of South Dakota?**

A. I chose to focus on wind farms that had more than 25 wind turbines to better match the scale of the 72-turbine Dakota Range Wind farm both in number of turbines and project footprint.

The sizes of the wind farms in the 12 counties in South Dakota with wind turbines vary greatly. A list of the counties and wind farms is provided in Exhibit 1. As Exhibit 1 shows, two of the 12 counties have just two wind turbines (Brule County) or 3 wind turbines (Miner County). Two other counties have wind farms that are half the size of my study threshold: Hand County has 10 turbines and Clark County has 11 turbines belonging to the Oak Tree Farm which was developed by an upper end Hunt Club and Inn. The Oak Tree Wind Farm is adjacent to their lodge, with meeting and wedding facilities. This is one of the more desirable if not the most valuable recreational facility in Clark County. I concluded that these wind farms were not good comparables to the Dakota Range Wind Farm because of their smaller sizes.

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<sup>1</sup> Aurora County, Brookings County, Charles Mix County, Day County, Hyde County and Jerauld County. I note that these counties were listed incorrectly in my Direct Testimony, p. 4, n. 1.



That leaves eight counties with more than 25 wind turbines. As I noted, I included six of those counties in my sales research and in the South Dakota Assessors Survey contained in my Market Impact Analysis. There are two other counties that have more than 25 turbines. One is McPherson County, which has 59 turbines, and the other county is Campbell County which has 55 turbines.

I did not include the wind farm in McPherson in my initial South Dakota Assessors Survey because more than 50 percent of the wind farm is in North Dakota. The Campbell County wind farm was not identified in our initial research. After filing my Direct Testimony, we contacted assessors in these two counties as well and updated our South Dakota Assessors Survey, attached as Exhibit 2. The information from those interviews was consistent with the information from other county assessors in that there was no data indicating an adverse impact of wind turbines on property values.

**Q. Did you conduct any further market research since your Direct Testimony?**

A. Yes. I interviewed four individuals who worked for auction/brokerage houses operating in Jerauld County, Clark County, Deuel County, Hyde County, Hand County, Day County and McPherson County. A summary of those interviews is attached as Exhibit 3. Their experience echoes my report findings and conclusions, mainly that turbine leases have a positive effect on agricultural land values and that there is no market evidence that wind farms negatively impact houses in proximity to turbines.

**Q. On pages 15 to 19 of his testimony, Mr. Lawrence challenges statements in your testimony and Market Impact Analysis that stated you found no arm's length sale of a property proximate to a wind turbine in the State of South Dakota or a sale of South Dakota farmland in which the transaction included a wind turbine. What is your general response?**

- A. In my property sales research, I used the residential online services, including Trulia and Zillow; brokerage research Multiple Listing Service (“MLS”); and public county records. In general, I found South Dakota data to be limited.

Mr. Lawrence’s testimony directed me to Beacon, another source of property sales information for Brookings County. Beacon is a subscription service of which I was not previously aware. To my knowledge, no other counties with wind farms in eastern and central South Dakota have a service that provides the same level of information that Beacon provides in Brookings County. In response to Mr. Lawrence’s testimony, I subscribed to the Beacon service and reviewed the data Mr. Lawrence provided. I then conducted further research on the residential sales to undertake a paired sales analysis. Based on this research and my further analysis, I believe all of the sales Mr. Lawrence identified support the conclusions in my prior testimony and Market Impact Analysis.

**Q. Please describe the residential property sales Mr. Lawrence identifies in his testimony.**

- A. There are six residential sales, BK Sales 1-5 and 7. A table showing these sales and a figure showing the locations of the sales are provided in Exhibit 4.

**Q. Mr. Lawrence identifies distances of homes from turbines in his testimony. Did you use the same measurements in your analysis of the sales he identified?**

- A. When doing my analyses for the Market Impact Analysis and in my prior experiences evaluating the potential impact of wind turbines on land values, I have used the distance of a turbine from the residence. When I confirmed those distances, they ranged from 1,118 feet to 10,538 feet.

**Q. Did you undertake a paired sales analysis of the residential sales?**

- A. Yes. I first searched in Brookings County to determine if there were any additional proximate sales using the Beacon service. I did not find any other than the six

residential sales Mr. Lawrence identified. I then researched Brookings County sales data to determine whether there was a comparable non-proximate sale for each that could be used to conduct a paired sales analysis. I found six non-proximate sales and conducted a paired-sales analysis using six pairs of property sales in Brookings County.

**Q. What were your conclusions from the paired sales analysis?**

A. As detailed in Exhibit 5, Supplemental Paired Sales Analysis—Residential Sales BK 1-5 and 7, the results of my analysis confirmed my prior opinion that there is no record evidence to support a conclusion that proximity to wind turbines affects residential property values. In all cases, when I evaluated the two properties in detail and made appropriate adjustments for key factors including building size, year date, utilities and sale date, the prices of the two properties were essentially the same on a per square foot value.

**Q. Mr. Lawrence identifies Sales BK-2 and BK-2.5 as related. What is your assessment of these sales?**

A. Mr. Lawrence appears to contend that BK-2, 198424 478<sup>th</sup> Avenue in Toronto indicates some value diminution due to wind turbines because the initial price for a house with 10 acres sold for less than its “listing price” and close to the price it was in 1998. If this is his implication, I do not agree. The fact that a property sells for less than listing price because listing prices – what a seller wants to get for a property – may or may not be consistent with the reality of market price – what a buyer is willing to pay.

Looking specifically at the parcels, both sales occurred after Buffalo Ridge II became operational in 2010. Given this timing, I am not able to reconcile the note in Mr. Lawrence’s testimony that states the sellers were able “to cancel wind lease agreement per negotiation with buyer of sale BK2.” Also, I note that the BK-2.5 parcel is only 16.95 acres, which is undersized for a wind lease—typically, I have seen those parcels to be of a 50-plus acres size.

BK2.5 has a poor, elongated shape and its unit price of approximately \$3,000/acre appears reasonable, considering a major downward shape adjustment. The property sold in January 2011 for \$50,000 and then again in September 2012 for \$50,000.

BK-2 sold in May 2004 for \$234,900, which is the sales price that Mr. Lawrence uses on page 8. The property resold in March 2011 during the recession for \$235,000 after the Buffalo Ridge wind farms became operational. Based on the major drop in residential values from 2008 to 2011, the value should have probably been less than the price in 2004; however, the property actually sold for a slightly higher price in 2011. The sale price for BK-2 at approximately \$100/sf and an overall price of \$234,900 or \$235,000 is at the upper end of the sales range for the properties Mr. Lawrence identified.

**Q. Were you present at the hearing on the Crocker Wind Farm, LLC matter, Docket EL17-055 on May 11, 2018 to hear the testimony of Mr. Lawrence?**

A. Yes.

**Q. In his testimony, Mr. Lawrence testified that he believed sales BK-2 and BK-5 raised a question of whether a proximate wind turbine could negatively impact property values. Do you agree with his assessment?**

A. No, I do not agree with Mr. Lawrence that these sales raise any question. There is no evidence that the sale prices were affected by proximity to a wind turbine. As I noted above, the 2011 sale price of BK-2 was on the high side of the data that Mr. Lawrence presented.

Property BK-5 sold for \$144,200 in September 2008 before the first wind farm became operational. It then sold in July 2010 when the wind farm was under construction, and just before becoming operational, for \$215,000, an increase of \$70,800 in approximately two years. Mr. Lawrence did not mention this transaction

in his testimony. The property resold again for \$190,000 in March 2014. Mr. Lawrence noted the drop in value, approximately 13 percent from 2014 over 2010, in his testimony at hearing. There is no evidence the drop related to wind turbines. The value could have been attributed to many items, including market conditions, property conditions, or a seller wishing to liquidate.

Moreover, any effect the wind farm would have had on the value of the property should have been experienced with the 2010 sale—during wind farm construction. Based on the 49 percent increase in value over the 2008 sale there is no evidence of negative impact caused by the wind farm.

## **VI. PROPERTY VALUE SURVEY**

**Q. Mr. Mauersberger attaches the Brookings County 2015 Property Value Survey to his Rebuttal Testimony. How does that survey impact your analysis and conclusions?**

A. I have reviewed the survey and found it to be consistent with my opinion that the Dakota Range Wind Farm will not impact property values. While the survey does not provide detailed information on its methodology, the data compiled included property assessment data and agricultural sales between 2011 (first year of wind turbine operation) and 2015 of 233 properties, including 30 rural acreages. Of those properties reviewed, only one property decreased in assessed value during that time period. All other properties' assessed values showed an increase. The survey also summarized discussions with auctioneers that was consistent with my interviews with brokers and auctioneers.

## **VII. CONCLUSION**

**Q. As stated in your April 6, 2018, testimony, do you continue to believe that the Commission has adequate information in this record to evaluate the potential land value impacts of the Project?**

A. Yes. The Commission has even more information than was available at the time of my initial testimony. The additional paired sales analysis of the Brookings County sales detailed in this testimony supports by opinion that there is no market evidence to conclude that property values would be adversely impacted.

**Q. Does this conclude your Rebuttal Testimony?**

A. Yes.

Dated this 21st day of May, 2018.



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Michael MaRous