

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

**IN THE MATTER OF THE APPLICATION BY DEUEL HARVEST WIND ENERGY LLC
FOR ENERGY FACILITY PERMITS OF A WIND ENERGY FACILITY AND A
345-KV TRANSMISSION LINE IN DEUEL COUNTY, SOUTH DAKOTA FOR THE
DEUEL HARVEST NORTH WIND FARM**

SD PUC DOCKET EL18-____

**PRE-FILED DIRECT TESTIMONY OF MICHAEL MAROUS
ON BEHALF OF DEUEL HARVEST WIND ENERGY LLC**

November 30, 2018

1 **I. INTRODUCTION AND QUALIFICATIONS**

2

3 **Q. Please state your name, employer, and business address.**

4 A. My name is Michael MaRous. I am the owner and president of MaRous &
5 Company. My business address is 300 South Northwest Highway, Suite 204, Park
6 Ridge, Illinois 60068.

7

8 **Q. Briefly describe your educational and professional background.**

9 A. I graduated from the University of Illinois at Urbana-Champaign with a B.S. in
10 Urban Land Economics and began my career working with a Chicago real estate
11 appraisal and consulting firm. I founded MaRous & Company in 1980. I have a
12 South Dakota State Certified General Appraisal License, No. 1467CG.

13

14 During my career, I have appraised a variety of types of real estate located in more
15 than 25 states and reflecting a total value in excess of \$15 billion. I have done a
16 substantial amount of work on energy-related projects, including wind farm projects
17 such as the Prevailing Wind Park Energy Facility in Bon Homme County,
18 Hutchinson County, and Charles Mix County, the Dakota Range Wind Project in
19 Codington County and Grant County, and the Crocker Wind Farm in Clark County,
20 all in South Dakota; and a number of other wind farm projects in Illinois, Iowa, and
21 Minnesota. More information on my background is set forth in my statement of
22 qualifications, which is at the end of the November 28, 2018 Market Impact
23 Analysis (“Market Analysis”) for the Deuel Harvest North Wind Farm (“Project”)
24 included as Appendix W of the Application.

25

26 **II. OVERVIEW**

27

28 **Q. What is your role in the Project?**

29 A. I was retained by Deuel Harvest Wind Energy LLC (“Deuel Harvest”) to prepare an
30 independent market analysis of the potential impact, if any, the Project would have
31 on the value of the properties in the general area of the Project in Deuel County

32 (“Project area”). Specifically, the analysis addressed the question of whether
33 market data indicates that the Project will have an effect on the value of residential
34 properties and/or agricultural land in proximity to the proposed wind turbines. The
35 result of my work is the Market Analysis.
36

37 **Q. What is the purpose of your Direct Testimony?**

38 A. The purpose of my testimony, and specifically the Market Analysis, is to provide
39 information with respect to the potential impact, if any, of the Project’s wind
40 turbines on the value of rural residential and agricultural property.
41

42 **Q. Please identify the sections of the Application that your testimony supports.**

43 A. My testimony supports the following sections of the Application:
44 • Section 20.1.2.3: Property Value Impacts.
45 • Appendix W: Market Impact Analysis.
46

47 **Q. What exhibits are attached to your Direct Testimony?**

48 A. I am sponsoring the following exhibit:
49 • Exhibit 1: Surrebuttal Testimony of David Lawrence on Behalf of the Staff
50 of the South Dakota Public Utilities Commission, In re the Matter of the
51 Application by Dakota Range I, LLC and Dakota Range II, LLC for a
52 Permit of a Wind Energy Facility in Grant County and Codington County,
53 South Dakota, for the Dakota Range Wind Project, Docket No. EL18-003,
54 (June 8, 2018).
55

56 **III. MARKET ANALYSIS FOR DEUEL HARVEST NORTH WIND FARM**
57

58 **Q. Please briefly describe your Market Analysis.**

59 A. The Market Analysis in Appendix W of the Application shows the work that I did to
60 study the question of whether there will be property value impacts if the Project is
61 constructed as proposed. The Market Analysis explains background information
62 about the Project and the Project area. It then examines, describes, and analyzes

63 available data regarding the interactions, if any, between wind turbines and
64 property values in South Dakota and similar locales. The Market Analysis also
65 includes references to peer-reviewed literature that explored the same issue,
66 although in different places.¹ Finally, the Market Analysis presents my
67 conclusions.

68

69 **Q. Have you performed similar studies in the past?**

70 A. Yes. I have completed market analyses in connection with wind farm projects on
71 several occasions. The most relevant work that I have done was the market
72 analyses I did recently for three other wind farm projects in South Dakota. Those
73 analyses were filed with the South Dakota Public Utilities Commission
74 (“Commission”) in Docket Nos. EL18-026 (“Prevailing Wind Park”), EL18-003
75 (“Dakota Range”), and EL17-055 (“Crocker”), respectively.

76

¹ Some of the widely-accepted, large-scale, peer-reviewed literature that I considered and find particularly informative are the following:

- Brian Guerin, Jason Moore, Jamie Stata, and Scott Bradfield (2012). Impact of Industrial Wind Turbines on Residential Property Assessment in Ontario: 2012 Assessment Base Year Study. Municipal Property Assessment Corporation.
- Jason Moore, Jamie Stata, and Scott Bradfield (2016). Impact of Industrial Wind Turbines on Residential Property Assessment in Ontario: 2016 Assessment Base Year Study. Municipal Property Assessment Corporation.
- Corey Lang and James Opaluch (2013). Effects of Wind Turbines on Property Values in Rhode Island. Environmental and Natural Resource Economics, University of Rhode Island.
- Richard J. Vyn and Ryan M. McCullough (2013). The Effects of Wind Turbines on Property Values in Ontario: Does Public Perception Match Empirical Evidence? University of Guelph, Canada.
- Carol Atkinson-Palombo and Ben Hoen (2014). Relationship between Wind Turbines and Residential Property Values in Massachusetts. University of Connecticut and Lawrence Berkeley National Laboratory.

For additional discussion of the relevant literature, see pages 53-54 of the Market Analysis.

77 **Q. Have other professionals researched whether wind turbines impact property**
78 **values in South Dakota?**

79 A. To my knowledge, the only other professional who has studied this issue is Mr.
80 David Lawrence, an appraiser who testified on behalf of the Commission Staff in
81 the Crocker and Dakota Range proceedings. There are not, to my knowledge, any
82 peer-reviewed studies that deal specifically with South Dakota properties. The
83 large-scale peer-reviewed studies that have been done evaluated properties
84 outside of South Dakota.

85
86 **Q. Getting back to your Market Analysis for this Project, please briefly explain**
87 **what you did to familiarize yourself with the Project.**

88 A. To familiarize myself with the Project, I reviewed documents relating to the
89 proposed Project, including the Application filed in this matter and engineering
90 information. I reviewed the proposed layout and turbine models in the Application
91 and the applicable regulations and Deuel County Zoning Ordinance.

92
93 In addition, although I am generally familiar with the current market for real estate
94 toward eastern South Dakota, I needed to further develop my knowledge of the
95 current market in and around the Project area. To do that, I researched property
96 values and market conditions through a variety of methods (e.g., interviews with
97 market participants, survey of assessors, public records, and online research). I
98 also visited the Project area on October 4-5, 2017 and again on October 8-9, 2018.
99 It is also worth noting that the recent work I did in the Commission's dockets for the
100 Prevailing Wind Park, Dakota Range, and Crocker wind farm projects helped to
101 inform my knowledge of issues relevant to my Market Analysis in this proceeding.

102
103 **Q. Please generally describe the work that is detailed in the Market Analysis.**

104 A. The Market Analysis brings together several different data sources and ways of
105 evaluating the potential valuation impacts of wind turbines on properties. As
106 detailed further in the Market Analysis, I evaluated the footprint of the Project, as
107 well as the surrounding area, and reviewed rural residential and agricultural

108 property sales data and market information for Deuel County and other counties in
109 South Dakota in which wind farms are located. I considered that information, as
110 well as information from assessors in several South Dakota counties that are home
111 to active wind farms. I also considered the economic impact on the larger
112 community by the approval of the use as proposed. In addition to analyzing South
113 Dakota-specific information, I considered and re-examined my prior analyses for
114 wind projects in similar areas of Minnesota, Iowa, and Illinois. Finally, I also
115 considered the work done by Mr. Lawrence in the Dakota Range proceeding,
116 attached as Exhibit 1, and relevant peer-reviewed literature. More detail regarding
117 the information I researched and considered, and the analyses that I performed, is
118 set forth in the Market Analysis.

119

120 **Q. The matched pairs analysis in the Market Analysis contains many of the**
121 **same sales that you used in your market analyses submitted in the Dakota**
122 **Range and Prevailing Wind Park proceedings. Why is that?**

123 A. The credibility of my analysis depends on having quality market data that is
124 appropriate for consideration. For example, matched pair analyses require what
125 we call “good sales,” or sales that are appropriate for study and comparison. To
126 do the analysis, we need the available good sales to include some that are in
127 proximity to wind farms and some that are not in proximity to wind farms. It can be
128 difficult to locate these sales, because, for a variety of reasons, properties in rural
129 areas such as the Project area do not sell often and, when they do, the sales may
130 not be considered for fair market value. That said, we located sufficient good sales
131 to perform our analyses in connection with the prior Commission proceedings
132 noted above and the information provided by Mr. Lawrence on behalf of
133 Commission Staff was useful as well. For this Market Analysis, we also used
134 additional, relevant matched pairs from outside of South Dakota to inform the
135 analysis.

136

137 In addition, in connection with preparing the Market Analysis, we continued
138 searching for additional good sales and other relevant information. I have

139 continued to research available agricultural land and residential transactions in the
140 Deuel County and South Dakota markets, including through interviews with market
141 participants and data sources such as Beacon. For example, the land sales
142 analyzed in the Market Analysis were located specifically in connection with the
143 Market Analysis and Project area.

144

145 I have also continued to monitor development of wind projects in eastern and
146 central South Dakota to seek information and/or sales that would show any impact
147 on property values due to wind development. Moreover, I am continually
148 monitoring the available scholarly literature and professional journals and
149 publications regarding impacts of wind farms on property values. The recent
150 literature that I have reviewed is consistent with my analysis as well.

151

152 **Q. What were your conclusions about the impact that the Project, if**
153 **constructed, would have on property values?**

154 A. As detailed in the Market Analysis, there is no market evidence to support a
155 conclusion that proximity to wind turbines negatively affects rural residential
156 property or agricultural property values. Further, I concluded that the value of
157 properties with wind leases may be increased.

158

159 **Q. Are your conclusions consistent with your prior work and the work of**
160 **others?**

161 A. Yes. My conclusions are consistent with my conclusions in other market analyses
162 I have performed, including those filed in the Commission's proceedings for
163 Prevailing Wind Park, Dakota Range, and Crocker, respectively. My conclusions
164 are also consistent with the work of Mr. Lawrence, the Commission's prior findings,
165 information from assessors and market participants in South Dakota and
166 elsewhere, and the findings of widely-accepted, large-scale peer-reviewed studies.

167

168 **Q. You describe your conclusions as consistent with the work of Mr. Lawrence**
169 **on behalf of Commission Staff in the Dakota Range proceeding. What do**
170 **you mean by that?**

171 A. Mr. Lawrence's research led him to conclude that, based on the evidence and
172 research he had conducted,

173 (1) "the evidence supports the presumption there have been no adverse
174 effects on the selling price of rural residential properties in proximity to a
175 wind tower, turbine or wind project," Exhibit 1 at 5; and

176 (2) "the research supports the presumption there have been no adverse
177 effects on the selling price of agricultural properties in proximity to and
178 within the boundaries of the property with a wind tower." Exhibit 1 at 6.

179

180 Mr. Lawrence's work also helped to demonstrate that allegations that the values of
181 rural residential properties within the viewshed of a wind project are negatively
182 affected are not supported by the data. The Rural Residential Transaction
183 Summary Table at Exhibit 1 to Mr. Lawrence's testimony (which is attached as
184 Exhibit 1 to my testimony) showed that seeing and/or hearing wind turbines does
185 not reduce nearby properties' values:

186

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. **

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Likewise, Mr. Lawrence’s work on agricultural properties suggests that the value of properties proximate to wind farms is not decreased and that the value of properties that host turbines is likely increased. See Exhibit 1 at 5-6. I have not located any market data that would support the opposite conclusion.

194 **IV. CONCLUSION**

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196 **Q. Do you have any concluding remarks?**

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202

A. Yes. Having studied the potential impacts of wind farm projects on properties in South Dakota and across the Midwest, the data consistently shows that property values are not negatively impacted by proximate wind farm projects. As set forth above and in my Market Analysis, sales data, interviews with market participants, real estate professionals and assessors, peer-reviewed literature, and testimony on behalf of Commission Staff all consistently support my opinion that there is no

203 market evidence to support a conclusion that proximity to wind turbines negatively
204 affects proximate rural residential or agricultural property values.

205

206 **Q. Does this conclude your Direct Testimony?**

207 A. Yes.

208

209 Dated this 30th day of November, 2018.



210

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212 Michael MaRous

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