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**BEFORE THE  
PUBLIC SERVICE COMMISSION OF WISCONSIN**

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4 Application for Grant County Solar, LLC to Construct a New  
5 Solar Electric Generation Facility located near Potosi and Docket No. 9804-CE-100  
6 Harrison Townships, in Grant County, Wisconsin

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**SURREBUTTAL TESTIMONY OF MICHAEL S. MAROUS**

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13 **Q. Are you the same Michael S. MaRous who filed prefiled direct and rebuttal testimony**  
14 **in this proceeding?**

15 A. Yes.

16 **Q. What is the purpose of your surrebuttal testimony?**

17 A. The purpose of my surrebuttal testimony is to address certain portions of the rebuttal  
18 testimony of Grant County Intervenors witnesses Daniel and Connie Cray and Brianna and  
19 Henry Frear. Where I refer to these individuals in the collective, I will refer to them as  
20 “Grant County Intervenors.”

21 **Q. Mr. and Mrs. Frear assert that your direct testimony “minimizes concerns over**  
22 **property valuation without any basis for doing so.” (Rebuttal-GCI-Frear-1). Do you**  
23 **agree with the Frear’s assertion?**

24 A. No. As discussed in my direct and rebuttal testimony, I prepared an independent market  
25 analysis of the potential impact, if any, of the Project on the value of residential and/or  
26 agricultural properties in the vicinity of the Project. (Direct-Grant County Solar-MaRous-  
27 1; Rebuttal-Grant County Solar-MaRous-2-3). A copy of the Market Impact Analysis has  
28 been provided in Appendix AA to Grant County Solar’s Application (Ex.-Grant County  
29 Solar-Application: Appendix AA). The Market Impact Analysis was performed in

1 accordance with the requirements of the Uniform Standards of Professional Appraisal  
2 Practice and Advisory (“USPAP”) Opinions.

3 As set forth in detail in the Market Impact Analysis conducted for the Project and  
4 discussed in my direct and rebuttal testimony, in my professional opinion as a licensed  
5 General Certified Appraiser in Wisconsin and a Designated Member (“MAI”) of the  
6 Appraisal Institute, which credential I have held for over 35 years, the Project will not have  
7 a negative impact on either rural residential or agricultural property values in the area  
8 surrounding the Project. (Direct-Grant County Solar-MaRous-3; Rebuttal-Grant County  
9 Solar-MaRous-2-3). In fact, for the agricultural properties that host photovoltaic panels,  
10 the additional income from the solar lease(s) may actually increase the value and  
11 marketability of those properties.

12 **Q. Have the Grant County Intervenors provided independent market analyses or**  
13 **appraisals in response to the Market Impact Analysis?**

14 A. No, they have not. Moreover, as stated in my rebuttal testimony, none of the Grant County  
15 Intervenors are property appraisers, nor have they obtained the MAI professional  
16 designation. (Rebuttal-Grant County Solar-MaRous-1).

17 **Q. Is your conclusion consistent with prior Commission precedent?**

18 Yes. It is my understanding that the Commission has previously rejected assertions in  
19 specific contested cases that solar generation facilities such as the Project adversely affect  
20 property values. *See Application for a Certificate of Public Convenience and Necessity of*  
21 *Badger Hollow Solar Farm, LLC to Construct a Solar Electric Generation Facility, to be*  
22 *Located in Iowa County, Wisconsin, April 18, 2019, Final Decision, Docket No. 9697-CE-*  
23 *100 (PSC REF#: 364425), pp. 18, and Application for a Certificate of Public Convenience*

1           *and Necessity of Two Creeks Solar, LLC to Construct a Solar Electric Generation Facility,*  
2           *to be Located in Manitowoc and Kewaunee Counties, Wisconsin,* April 18, 2019, Final  
3           Decision Docket No. 9696-CE-100 (PSC REF#: 364423), pp. 12-14. The Grant County  
4           Intervenors have not presented any evidence that would warrant the Commission reaching  
5           a different conclusion in this case.

6   **Q.    The Frears assert that the use of a matching pair analysis of properties in Illinois,**  
7           **Indiana, Minnesota, and North Carolina was inappropriate. (Rebuttal-GCI-Frear-**  
8           **2). How do you respond?**

9    A.    First, it should be noted that the matching pair analysis from Illinois, Indiana, Minnesota,  
10           and North Carolina was only one input to the Market Impact Analysis. As discussed on  
11           page 5 of the Market Impact Analysis (Ex.-Grant County Solar-Application: Appendix  
12           AA), in order to form a judgment of the potential impact of the Project, if any, on the value  
13           of the surrounding residential and agricultural properties, I also considered, among other  
14           things, the following:

- 15           • The character and the value of the residential and agricultural properties in the  
16           general area of the Project;
- 17           • Agricultural land values in Grant County and in other Wisconsin counties in which  
18           solar farms are located;
- 19           • Market trends for both residential and agricultural land within the market area up  
20           to the past 5 years;
- 21           • The economic impact on the larger community of the approval of the Project; and
- 22           • The impact on the value of the surrounding residential and agricultural properties  
23           of the approval of the Project.

1 In addition, a matched pair analysis of the impact of the Project on the value of residential  
2 properties proximate to a solar farm nearest Grant County, Wisconsin was conducted. As  
3 stated on page 14 of the Market Impact Analysis, due to the lack of larger solar farms in  
4 Wisconsin, an analysis of properties proximate to solar farms to established solar farms in  
5 other states, specifically Indiana, Illinois, Minnesota, and North Carolina, with similar  
6 demographics, land use, and economic characteristics, was conducted to further analyze  
7 any potential impact of the Project on value to residential properties proximate to solar  
8 farms. This includes properties near a 199 MW solar facility in Indiana, 100 MW solar  
9 facility in Minnesota, and 20 MW solar facilities in Illinois and Minnesota.

10 The matched pair studies in Wisconsin counties, as well as studies in similar market  
11 areas of other states, comparing the sale of properties proximate to photovoltaic panels to  
12 similar properties selling under similar market conditions without proximity to  
13 photovoltaic panels have not uncovered any sales in which proximity to photovoltaic  
14 panels appears to have had a negative impact on property values. (Ex.-Grant County Solar-  
15 Application: Appendix AA, p. 38). Therefore, there does not appear to have been any  
16 measurable negative impact on surrounding residential property values due to the  
17 proximity of a solar farm.

18 **Q. The Frears assert that a Market Impact Analysis should include “perception” in**  
19 **property valuation. (Rebuttal-GCI-Frear-2-3). Is the inclusion of “perception” in a**  
20 **Market Impact Analysis in accordance with applicable standards and requirements?**

21 A. No. Perception is subjective, unmeasurable, and does not conform to the requirements of  
22 USPAP Opinions. However, I would note that as discussed in the rebuttal testimony of  
23 Grant County Solar witness David Gil, a public opinion survey of 300 registered voters in

1 Grant County showed that a majority of voters support the Grant County Solar Project.  
2 (Rebuttal-Grant County Solar-Gil-8; Ex.-Grant County Solar-Application: Appendix V).

3 **Q. GCI witnesses Mr. and Mrs. Cray include a document titled “An Exploration of**  
4 **Property-Value Impacts Near Utility-Scale Solar Installations” as an exhibit to their**  
5 **rebuttal testimony. (Ex.-GCI-Cray-12). Did you analyze this exhibit as part of the**  
6 **Market Impact Analysis?**

7 A. No. Nevertheless, as stated in my direct testimony, my work and my report conform to the  
8 requirements of the USPAP. (Direct-Grant County Solar-MaRous-6).

9 **Q. Have you subsequently reviewed Ex.-GCI-Cray-12?**

10 A. Yes. I reviewed Ex.-GCI-Cray-12 in preparation of my surrebuttal testimony.

11 **Q. Based upon your review of Ex.-GCI-Cray-12, are the authors qualified property**  
12 **appraisers?**

13 A. Based upon my review of Ex.-GCI-Cray-12, none of the authors appear to be property  
14 appraisers, nor have they obtained the Appraisal Institute, MAI professional designation.

15 **Q. Does Ex.-GCI-Cray-12 change your conclusion that the Project will not have a**  
16 **negative impact on either rural residential or agricultural property values in the area**  
17 **surrounding the Project?**

18 A. No. First, in contrast to my Market Impact Analysis, Ex.-GCI-Cray-12 is not specific to  
19 either the Project or Wisconsin. Moreover, Ex.-GCI-Cray-12 is a general survey and not  
20 an independent Market Impact Analysis. Thus, unlike the Market Impact Analysis  
21 included as Appendix AA to the Application, it was not conducted in accordance with  
22 USPAP requirements. For example, Ex.-GCI-Cray 12 utilized an affected rural population  
23 density of under 500 residents per square mile to compare impacts from rural areas to more

1 densely populated areas. However, Grant County has an affected population density of  
2 less than 50 residents per acre, reflecting a rural setting which would be far potentially less  
3 impacted than a denser populated area. The overall lack of density in a rural area tends to  
4 mitigate a large-scale project. Nevertheless, even considering these flaws, in general, the  
5 conclusions in Ex.-GCI-Cray-12 establish that the majority of responding assessors  
6 suggested either no impact on home prices, or a positive impact as a result of proximity to  
7 solar installations (*see* Ex.-GCI-Cray-12 at 15). This is consistent with my conclusion that  
8 the Project will not have a negative impact on either rural residential or agricultural  
9 property values in the area surrounding the Project.

10 **Q. Did you speak with property owners in proximity to the Project or local realtors as**  
11 **part of the preparation of the Market Impact Analysis?**

12 A. As set forth on page 4 of the Market Impact Analysis, the following summarizes the actions  
13 taken in the preparation of the Market Impact Analysis:

- 14 • Review of the Grant County Public Documents and map;
- 15 • Review of the Project's supporting documents provided by Grant County Solar,  
16 LLC;
- 17 • Review of the demographics in the area of the Project;
- 18 • Review of data on the general market area of the Project, and on the other areas in  
19 Wisconsin and/or Grant County in which existing solar farms are located;
- 20 • Review data on the market for single-family houses in the immediate area of the  
21 proposed Project and from other areas in the county from private sources (*e.g.*, MLS  
22 services, research services, subscribed to data services), public sources, and sources  
23 from the Grant County and/or Wisconsin public records;

- 1 • Wisconsin and other Midwestern real estate professionals were interviewed  
2 concerning recent sales in their area, local market conditions, and the impact of  
3 solar farms on property values in the area. I did not consult with local realtors, as  
4 that would not be consistent with my standard practices;
- 5 • Properties used for development of the matched pairs were physically inspected by  
6 MaRous & Company on the exterior, and photographs of the interiors were  
7 reviewed where available; and,
- 8 • Inspections were performed of the subject area and the areas in nearby counties  
9 with existing solar farms by Michael S. MaRous on March 8, 2019 and by Joseph  
10 M. MaRous on May 8, 2019.

11 I did not consult with local property owners, as that would not be consistent with my  
12 standard practices. Property owners generally have no experience in the appraisal of  
13 property values and the appropriate requirements to measure the potential impact of a solar  
14 project on property values, if any. Moreover, property owners are generally reluctant to  
15 allow their names to be used as a reference due to potentially strong negative reactions  
16 from those that oppose a proposed solar project.

17 **Q. GCI witnesses Mr. and Mrs. Cray claim that the properties that you have relied on**  
18 **in your Market Impact Analysis are not comparable to those in proximity to the**  
19 **Project because the Project has a proposed setback distance of 150 feet from**  
20 **residences. (Rebuttal-GCI-Cray-6-7.) In your opinion, are the properties you**  
21 **utilized in your market study comparable to properties in Grant County?**

22 **A.** Yes. As stated in my rebuttal testimony, the numerous comparables provided in my Market  
23 Impact Analysis provide the best comparable information available in both Wisconsin and

1 elsewhere to support my conclusions. (Rebuttal-Grant County Solar-MaRous-5). In  
2 particular, the comparable properties utilized in my matched pair analysis (*See Ex.-Grant*  
3 *County Solar-Application: Appendix AA at 13-40*) are reasonably comparable to the  
4 properties at issue here, and provide ample grounds to conclude that there is not a negative  
5 impact to residential or agricultural property due to proximity to a solar farm.

6 Specifically, my analysis of recent residential sales proximate to proposed solar  
7 farms in Wisconsin, as well as similar sales in other states, which included residential sales  
8 as close as 165 and 175 feet to potential photovoltaic panels of the 100 MW North Star  
9 Project in North Branch Minnesota, demonstrated that proximity to a photovoltaic panel  
10 does not have impact on property values. These distances are comparable to the 150-foot  
11 setback from residences proposed for this Project. My analysis of agricultural land values  
12 in the Project Area as well as other areas of Wisconsin with solar farms also did not support  
13 any finding that agricultural land values would be negatively impacted by proximity to  
14 photovoltaic panels. Finally, my survey of assessors in Wisconsin and other states  
15 confirmed that there is no market evidence to support a negative impact upon residential  
16 property values as a result of proximity to a solar farm.

17 **Q. Did the various solar projects near the comparable properties included in the Market**  
18 **Impact Analysis have fencing?**

19 A. Yes. All the projects near the comparable properties included in the Market Impact  
20 Analysis have fencing around the various project sites.

21 **Q. Mr. and Mrs. Cray assert that the type of solar panel used at the Project “would**  
22 **change the assessments rendered in [Mr. MaRous’ direct testimony].” (Rebuttal–**

1 **GCI-Cray-8-9.) Will the type of solar panels utilized at the Project impact the**  
2 **Market Impact Analysis?**

3 A. No. Grant County Solar is currently considering two different PV panels for the Project--  
4 thin film and mono-crystalline. (Direct-Grant County Solar-Guzman-5). The use of either  
5 thin film or mono-crystalline panels will not impact the conclusions set forth in the Market  
6 Impact Analysis. Both of these panel types are consistent with the industry standard and,  
7 while not identical, are similar to as-built projects that I have studied.

8 **Q. Mr. and Mrs. Cray also assert that there are no comparable properties near a Project**  
9 **“approaching the acreage or megawatt size of this project.” (Rebuttal-GCI-Cray-7).**  
10 **Do you agree?**

11 A. No. As I discussed in my rebuttal testimony, in addition to the comparable properties set  
12 forth in the Market Impact Analysis, the 2019 sale of the Kite Property near the 300 MW  
13 Badger Hollow Solar Project in Iowa County, Wisconsin provides information on a  
14 property located near a large scale solar generation located approximately 30 miles away  
15 from the Project. (Rebuttal-Grant County Solar-MaRous-5-6). The Badger Hollow Solar  
16 Project, which is located on approximately 3,500 acres of primarily agricultural land, is  
17 larger in size and area to the Grant County Solar Project.

18 **Q. Did the Badger Hollow Solar Project utilize similar fencing to the Grant County Solar**  
19 **Project?**

20 A. Yes. The Badger Hollow Solar Project utilized an eight-foot tall deer fence around the  
21 project arrays and chain-link fence with barbed wire around the collector substation. *See,*  
22 *Docket 9697-CE-100, Application for a Certificate of Public Convenience and Necessity*  
23 *of Badger Hollow Solar Farm, LLC to Construct a Solar Electric Generation Facility, to*

1 *be Located in Iowa County, Wisconsin, Final Decision, issued on April 18, 2019 (PSC*  
2 *REF#: 364425), pp. 17, 32. Similarly, as set forth in the direct testimony of Grant County*  
3 *Solar witness Rafael Guzman, Grant County Solar will utilize “deer fencing” or equivalent*  
4 *around the PV solar array sites and a seven-foot chain link fence that includes one foot of*  
5 *barbed wire on top around the substation site. (Direct-Grant County Solar-Guzman-7-8).*

6 **Q. Does the 2019 sale of the Kite Property near the Badger Hollow Solar Project support**  
7 **your conclusions that the Grant County Solar Project will not have a negative impact**  
8 **on property values and/or marketability?**

9 A. Yes. As stated in my rebuttal testimony, prior to the approval of the Badger Hollow Solar  
10 Project in Docket No. 9697-CE-100, interveners Brenda and Casey Kite requested  
11 appraisal services for their property at 2680 County Road G #80, from Kurt Kielisch of  
12 Forensic Appraisal Group. The residence is a 1,987-square-foot farmhouse with a 5,040-  
13 square-foot pole barn and grain bin that sits on 3.73 acres of land. The Kite property is  
14 located in an area that is surrounded by tall crops, such as corn. Kurt Kielisch appraised  
15 the property with an effective date of November 14, 2018, with an after solar development  
16 value of \$179,000. (Rebuttal-Grant County Solar-MaRous-5-6).

17 The Kites purchased the property on December 5, 2005 for \$179,999, which is  
18 understood to be near the top of the local residential real estate market up to the year 2015.  
19 There is limited information that indicates that significant improvements were made to the  
20 property between 2005 and the eventual sale in 2019.

21 In 2019, the Kites listed the property as “For Sale by Owner”, which implies that  
22 the sale was substantially under-exposed to the market. Due to the Kites not using a broker  
23 for the listing, the sale price did not factor in the market broker commission. Also,

1 throughout the marketing period the Kites had a large anti-solar sign posted on the front of  
2 their property.

3 The property sold on August 1, 2019 for \$253,700. With the addition of a market  
4 commission of 5.5%, the sale price of the property is adjusted to \$267,600. Another  
5 adjustment of 5% should be added to the property's selling price for the lack of market  
6 exposure and the anti-solar sign, to create a final adjusted sale price of \$281,000.

7 The adjusted August 1, 2019 sale price of \$281,000, which occurred with the  
8 knowledge of the solar development, reflects an increase of \$102,000, or 57%, compared  
9 to the Kielisch's after solar development value estimate of \$179,000. Complete details of  
10 this appraisal can be found on pages XXV and XXVI in the addenda of the Market Impact  
11 Analysis. (Ex.-Grant County Solar-Application: Appendix AA).

12 **Q. Does this conclude your prefiled surrebuttal testimony?**

13 A. Yes.