

1
2
3 **BEFORE THE**
4 **PUBLIC SERVICE COMMISSION OF WISCONSIN**

6
7
8 Application for a Certificate of Public
9 Convenience and Necessity of Grant County
10 Solar, LLC to Construct a Solar Generation
11 Facility, to be Located in Grant County,
12 Wisconsin.

Docket No. 9804-CE-100

14
15 **REBUTTAL TESTIMONY OF DANIEL AND CONNIE CRAY**
16
17 **GRANT COUNTY INTERVENORS**

19
20 **Q: Please state your name and address.**

21 A: We are Daniel Cray, and Connie Cray, husband and wife, and we live adjacent to the
22 project area at 5491 Lone Elm Road, Potosi, Wisconsin.

23 **Q: Are you the same Crays who submitted Direct Testimony in this docket?**

24 A: Yes, we are.

25 **Q: Is this your Rebuttal, with comments and questions regarding the testimony of other**
26 **witnesses in this docket?**

27 A: Yes. We will start with the Direct Testimony of the PSC's Bert Chee. In reviewing
28 electrical utility construction projects, we have found guidance regarding project design,
29 photovoltaic arrays, collector circuits, substations and generator tie lines, we learned of
30 Farmers' Legal Action Group's **"Farmers' Guide to Solar and Wind Energy in**
31 **Minnesota."** Ex.-GCI-Cray-7¹. As farmers, we are particularly concerned with potential

¹ Online at: <http://www.flaginc.org/wp-content/uploads/2019/04/Farmers%E2%80%99-Guide-to-Solar-and-Wind->

1 for stray voltage and the harm it can cause our livestock. This FLAG guide and the
2 PSC's Environmental Assessment raise stray voltage as a potential problem of large scale
3 solar projects. In his Direct, p. 3, Chee recommends stray voltage testing as a condition
4 to the permit. He further recommends additional conditions based on concerns raised in
5 comments on the Environmental Assessment. First, he recommends pre- and post-
6 construction testing, and we agree that this testing should be included as a condition to
7 any permit.

8 **Q: Are you looking for additional provisions regarding stray voltage?**

9 A: Yes. Chee does not specify a wide enough range for stray voltage testing, instead limiting
10 it to one half mile of the project area. Because this project utilizes a collector system and
11 transmission over many acres, we ask that any utility customer within a 2 mile area
12 experiencing signs of a stray voltage issue be able to be tested post-construction. Further,
13 there should be a procedure with time-frames setting out the process for post-construction
14 testing and responsibility for correction and mitigation. There is no language suggested
15 in Chee's testimony regarding responsibility for correction of stray voltage issues, and
16 this responsibility should rest squarely on the project owners. Stray voltage cases have
17 led to high costs to utilities. Ex.-GCI-Cray-8. The PSC should do its utmost to prevent
18 stray voltage from becoming a problem for local farmers, and clearly state how stray
19 voltage problems will be dealt with. Other states, when permitting solar farms, have
20 increased stray voltage precautions and protections. Ex.-GCI-Cray-9². It is always better
21 to prevent problems than to have to fix them after the fact, after damage has been done.

[Energy-in-Minnesota-April-2019.pdf](#)

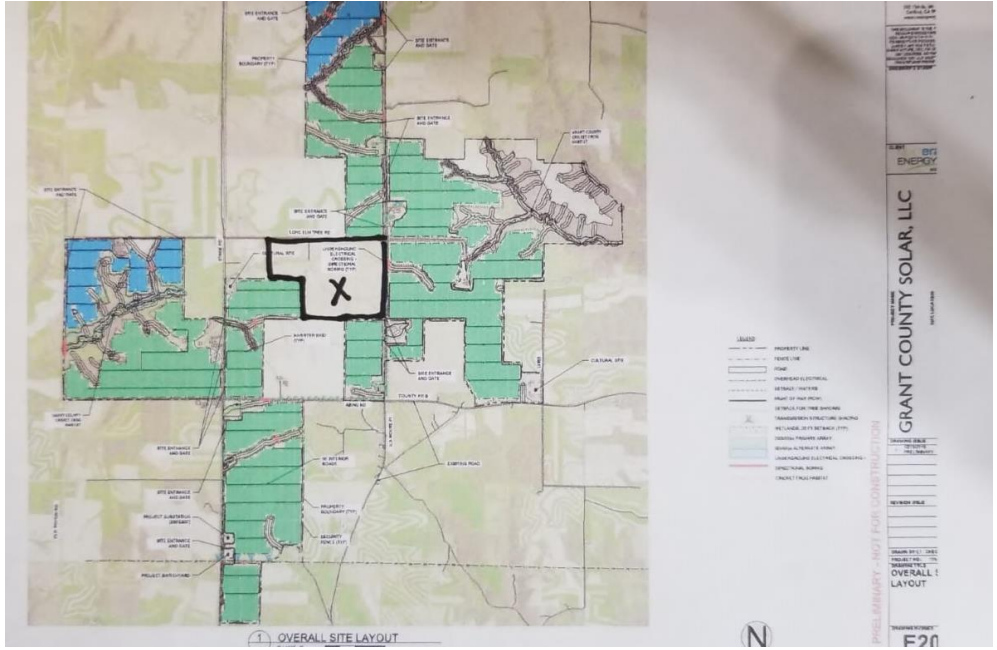
² Online at: <https://energynews.us/2016/02/03/midwest/amid-pushback-minnesota-solar-developers-expand-stray-voltage-testing/>

1 **Q: Are there other concerns you have regarding stray voltage?**

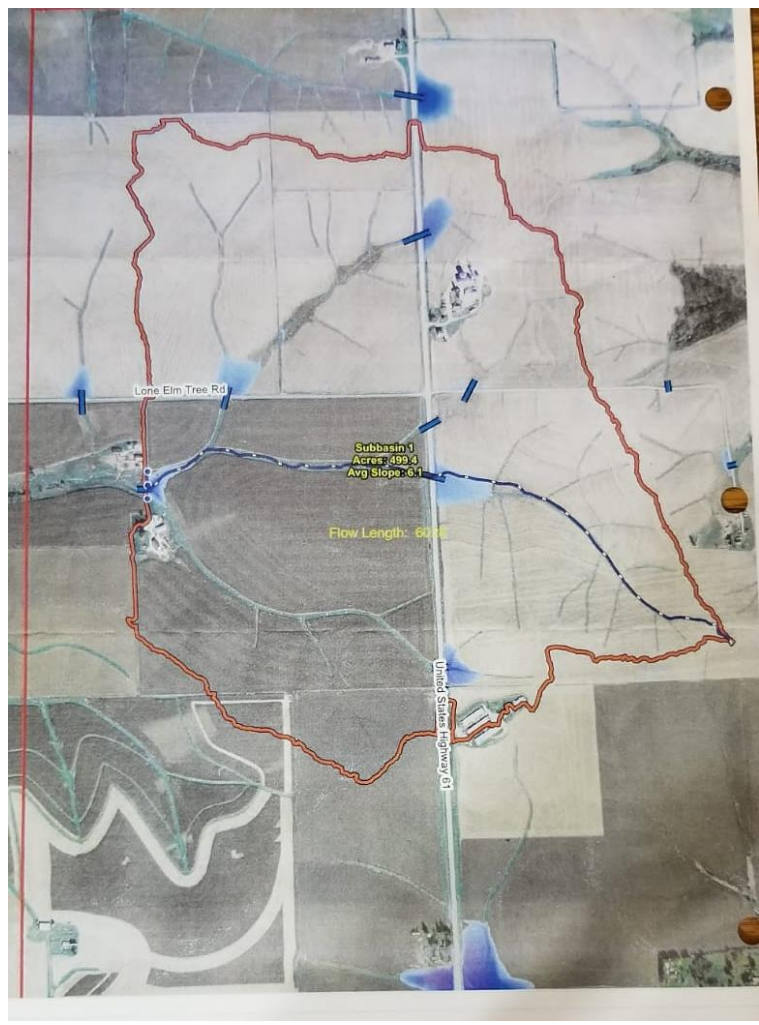
2 A: Yes. There are no solar siting rules in Wisconsin, and not that specifically pertain to stray
3 voltage. Minnesota does have a stray voltage, and Wisconsin should as well. Ex.-GCI-
4 Cray-10. We ask that the Commission develop solar siting rules, with particular
5 attention to stray voltage. Projects have been, and are being, sited without rules for this
6 type of generation. This is asking for trouble by making siting decisions with no basis for
7 decisions. In his testimony, Chee relies on the PSC's Wind Siting Rules, which do exist,
8 but it is not clear how wind siting rules apply to solar as they are such different
9 technologies for generation of electricity. The Midwest Rural Energy Council has
10 published information regarding stray voltage and wind, but thus far, none on solar. Ex.-
11 GCI-Cray-10. It is clear that research is necessary, and this should be completed before
12 large solar projects such as this are permitted.

13 **Q: Do you have rebuttal and questions for other witnesses?**

14 A: Yes, we do. The Department of Natural Resources' Lindsay Tekler had testimony
15 regarding waterways and wetland considerations. Tekler states that no permit is needed
16 for waterways as "none of the wetlands or waterways within the project area are proposed
17 to be impacted." Direct, p. 3, l. 4-9. This conclusion is based on a claim that "avoidance
18 of these sensitive resources are achieved due to siting project components outside of their
19 boundaries, avoiding traversing across these areas with vehicles and equipment, and by
20 utilizing trenchless underground installation methods for collection lines. Id. We
21 disagree. Below is an image of a map with all waterways clearly marked, and attached
22 separately as Ex.-GCI-Cray-11:



1



2

1 These maps are also available online³. The project has not avoided these sensitive areas.

2 **Q: Is there other testimony that concerns you?**

3 A: Yes. The DNR’s Stacy Rowe also testifies regarding endangered resources, also
4 supporting waterway, wetland, and storm water permits. Rowe states that it is “[n]ot
5 necessary to develop a comprehensive inventory of endangered resources for each
6 proposed location.” P. 3, l. 15-17. Rowe further states that, “Several rare species and a
7 natural community were found to be present within the buffered project area; however,
8 suitable habitat for these endangered resources are not present within the project area.
9 Therefore, impacts to these rare species and the natural community are not expected.” P.
10 4, l. 23- p. 5, l. 3. We cannot find correspondence or documentation, likely due to
11 prohibitions covering NHI-related data, however, Rowe’s testimony conflicts with that of
12 the PSC’s Tomaszewski, which states that “The fenced arrays would restrict movement
13 and use by certain larger species.” Tomaszewski Direct, p. 6, l. 12-13). Further, the
14 statement that a “take” permit may be required, but that determination has not yet been
15 made whether or not that is the case, implies that there are potential significant impacts.
16 Rowe Direct, p. 2, l. 12-15; p. 3, l. 17-21.

17 **Q: Have you reviewed the testimony of the PSC’s Tyler A. Tomaszewski?**

18 A: Yes, we have. Tomaszewski testifies that he is the environmental review coordinator and
19 that he is responsible for reviewing and assessing the environmental impacts associated
20 with construction, operation, and maintenance of the proposed project. He states:
21 “However, wetland and waterway impacts are expected to be avoided completely if best
22 management practices (BMP) for erosion control and storm water management are

³ Ex.-GCI-Cray-11 maps: 1) <https://app.box.com/s/fvr6joq2d1ehdddgf8w1dvfxb1awa8v1>
2) <https://app.box.com/s/9uxb29hl9vpmuv5emchuk5tp3kici36o>

1 strictly employed. No permits for wetlands or waterways would be required by DNR.” P.
2 3, l. 21- p. 4 l. 2. However, as above shown in the maps, the project does not avoid the
3 waterways.

4 **Q: Do you have rebuttal for Grant County Solar’s witnesses?**

5 A: Yes. We are struck by the Direct Testimony of MaRous regarding property values. As
6 landowners and residents of this area, property value is a primary concern that we have.
7 As we noted in our Direct Testimony, there is very little to go on regarding impacts of
8 large utility scale solar projects on property values. We found the attached study,
9 published in 2018, that found that “Our results show that while a majority of survey
10 respondents estimated a value impact of zero, some estimated a negative impact
11 associated with close distances between the home and the facility, and larger facility
12 size.” Ex.-GCI-Cray-12⁴. MaRous did not include this study with his testimony nor did
13 he reference this study.

14 We ask the following questions of Mr. Marous:

- 15 • How many neighbors/homeowners directly within or near the Grant County Solar
16 project area were contacted or asked about their thoughts about property values?
- 17 • What did you use as your reference to suggest that this 2,000 acre project will not
18 impact land values?
- 19 • What was your reference to show that having a solar panel field within 150 feet of a
20 home will not impact that home’s value?

21 In his testimony, MaRous states that other solar projects to help guide his conclusions.
22 Direct, p. 4, l. 11. What sizes were these solar projects? We could not see any study

⁴ Online at: https://emp.lbl.gov/sites/default/files/property-value_impacts_near_utility-scale_solar_installations.pdf

1 approaching the acreage or megawatt size of this project. Many of his statements in
2 Direct Testimony were regarding wind projects, and not solar. Did any of those
3 referenced studies include homes within 150 feet of the project? This project has at least
4 2 properties with homes located within 150 feet of the proposed panels.
5 MaRous again reference a proposed solar project with residential sales in an area as close
6 as 370 feet. Direct, p. 4, l. 15.

- 7 • Did the sellers disclose the proposed project to potential buyers?
- 8 • What was the size of the proposed project?
- 9 • How does that compare to this project?
- 10 • At what stage is that proposed project, is it completed?

11 All of these factors would impact the willingness of an individual to purchase a home.

12 Regarding the project referenced, page 4 line 19.

- 13 • What was the size of the solar project referenced?
- 14 • Can those smaller projects and that data be applicable to something as large as the
15 Grant County Solar project – what adjustments were made for the differences?
- 16 • Minnesota especially has rules/guidelines in place when it comes to solar projects,
17 and Wisconsin does not. How does that affect applicability of that data to
18 property values near this project?
- 19 • Has MaRous or any agent personally talked to any individuals that would
20 purchase non-solar included land if current landowners decided to sell?
- 21 • How does a landowner's willingness, or unwillingness, to move into a solar
22 surrounded area impact land value?

- 1 • Has MaRous talked with any local real estate agents in the area regarding property
- 2 value?
- 3 • Would realtors be willing to take on marketing a property in such a case and do
- 4 they have confidence in being able to sell the properties?

5 In your testimony, you note well paid jobs that this project will create. Direct, p. 4, l. 6.

- 6 • How are jobs related to property valuation?
- 7 • What is a “well paid job?”
- 8 • What is the data to support that statement?
- 9 • How, and how long, will those “well paid jobs” impact the local economy?
- 10 • What is the dollar impact of jobs lost and cessation of farming in the project area?
- 11 • What consideration has been given to jobs lost, business lost, due to cessation of
- 12 farming on the solar project land?
- 13 • How does this project affect farmland rent rates in the area?

14 In his direct, MaRous says that “Studies indicate that solar energy leases add value to

15 agricultural land.” Page 5 line 4. Please provide those studies referenced.

16 In his direct, page 5 line 9 through page 6 line 3, it is not clear the sizes of the solar

17 projects being compared. Alliant Energy has been contacting locals about increasing the

18 initial approximate 2,000 acres to many more acres in this area. Comparing to any

19 projects smaller than that 2,000 acre size have little to no value in this testimony as they

20 are not comparable.

- 21 • What solar panels were used in your assessment as NextEra has not disclosed or
- 22 purchased the solar panels for the project yet. Comparing against a different

1 variety than that which will be used would change the assessments rendered in
2 this testimony.

3 The homeowners directly affected by this project feel they need to move out of their
4 homes because they have concerns about health and safety, many of these homeowners
5 have lived here their entire lives. Their concern is raised even further because of the
6 ‘effects easement’ included in the project contracts of NextEra. How can property values
7 not be negatively affected?

8 We are very concerned about the prospect of such a large project surrounded by
9 fences. When there will be a tall project fence around the solar project area and the
10 project can encompass 3-4 sides of a person’s property, who would want to live here?
11 What about the noise and cell phone/tv signal interruptions, how can these things not
12 affect property values?

13 One of the landowners that have included their land for this project suggested to us
14 that we plant trees around the exterior of our property because of the solar project. Two of
15 the landowners that have included their land for this project told me that they, themselves
16 would not want these solar panels near their homes. That affects property values.

17 **Q: Do you have rebuttal to other Grant County Solar witnesses?**

18 A: Yes. We have reviewed Mr. Loomis’ Direct testimony regarding economic impacts and
19 land use, which raises questions for us.

- 20 • Will any jobs be lost by this project coming into the area?
- 21 • Will businesses lose income when land is no longer farmed?
- 22 • Were those considered in this analysis?
- 23 • What is the net gain of long-term jobs?

- 1 • What are the local and state costs associated with this project?
- 2 • Were those costs considered in this analysis?
- 3 • What is the net gain of earnings? It is our understanding that the local fire
- 4 departments will need to purchase special foam if a fire occurred at the solar
- 5 project site and will need training on use. Were these costs taken into
- 6 consideration?

7 In Direct, page 4, line 18, how was the figure of \$485,000 calculated?

8 In Direct, page 5, line 14-20, there is a reference to communities receiving increased
9 revenue through the shared revenue utility aid fund. For how many years are these
10 payments made?

11 **Q: Have you reviewed Grant County Solar Locker’s Direct Testimony?**

12 A: Yes, we have. The Locker testimony focused on potential for and environmental impacts
13 of construction and operation of the Project will result in adverse impacts to wetlands,
14 waterways, shorelines, threatened/endangered species or their habitats, historical and
15 cultural resources, agricultural lands, or visual aesthetics. There was also testimony
16 regarding the project’s vegetation management plan and the Photovoltaic Heat Island
17 (“PVHI”) hypothesis and its potential to occur at the Project Site. These issues are of
18 great concern to us.

19 Locker testifies, as other witnesses have, that no wetlands or waterways will be
20 impacted due to construction or operation of the Project. Direct, p. 5, l. 1-2. Again, we
21 disagree. See Ex.-GCI-Cray-11. We note the testimony that “eleven (11) Wisconsin
22 Department of Natural Resources (“WDNR”) mapped waterways are located within the
23 Project Study Area that did not exhibit evidence of stream characteristics during field

1 delineation.” Direct, p. 5, l. 20-22. What time of year was this data collected? Did
2 collection occur during all 4 seasons including spring when those waterways are
3 predominantly saturated with water? Locke testifies that, “Both permanent and
4 temporary wetland impacts have been avoided by all Project components including the
5 arrays, underground collection system, and associated facilities.” Direct, p. 6, l. 4-6.
6 Referring again to our Exhibit 11, please provide a map showing the project design
7 avoiding all such areas.

8 We believe there will be impacts to wildlife, undue impacts to wildlife. For example,
9 “lake effect” where birds land on solar panels thinking they are water resources, is a
10 potential impact. See Direct, p. 10, l. 3-13. Reports of this are common. Ex.-GCI-Cray-
11 13. Locker testifies that NEER does not believe that the lake effect hypothesis (i.e.,
12 evaluation 4 of reflective surfaces of panels and orientation leading to perception as
13 wetland/open water 5 by waterfowl or other birds) is applicable to the Project, but given
14 the project’s proximity to six naturally occurring bodies of water, there is no support for
15 this conclusion, no studies to back up this belief offered by Grant County Solar. If this is
16 found to be a problem, if this project is permitted, what conditions and possible
17 mitigation is available? Monitoring of impacts must be planned and performed for large
18 scale solar projects such as this. Grant County Solar states this is not necessary. Direct,
19 p. 11. These are early very large solar project, and there is no information from these
20 projects to support this statement, post-construction monitoring is not complete. Studies
21 and monitoring must be done to have information to share and use as basis for siting and
22 policy decisions. As Locker states, there is “no knowledge or data of any documented

1 bird mortality” and that is because there has not yet been studies and monitoring on
2 projects of this size.

3 Locker Direct, regarding the Wildlife Response and Reporting System (“WRRS”),
4 we would like to review this system and data. Is the WRRS available to the general
5 public? How often are personnel on-site to see wildlife? Do they walk the entire 2000
6 acres to check for dead or injured wildlife that may be trapped within the array network
7 and subsequent fencing?

8 Locker Direct, page 5, lines 2-4, discusses underground collection line crossings of
9 surface waters within both the Proposed Array and Alternative Array will be installed via
10 Horizontal Directional Drilling (“HDD”). Where is information regarding HDD found in
11 the application or exhibits?

12 **Q: Does this conclude your rebuttal testimony?**

13 A: Yes, it does.

14

15