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3 **BEFORE THE**  
4 **PUBLIC SERVICE COMMISSION OF WISCONSIN**  
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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.  
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Docket No. 9804-CE-100

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15 **SURREBUTTAL TESTIMONY**  
16 **BRIANNA EISENTROUT FREAR AND HENRY FREAR**  
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18 **GRANT COUNTY INTERVENORS**  
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21 **Q: Please state your name and address.**

22 A: We are Brianna Eisentrout Frear and Henry Frear. We live at 7016 U.S. Highway 35 &  
23 61, Potosi, Wisconsin.

24 **Q: Are you the same Frears who submitted Direct and Rebuttal Testimony in this**  
25 **docket?**

26 A: Yes, we are.

27 **Q: Is this your Surrebuttal, regarding the testimony of other witnesses in this docket?**

28 A: Yes. We join the Crays in having concerns about Stray Voltage and water issues and  
29 support protective conditions if a permit is issued.

30 **Q: Are there other areas of Rebuttal testimony you'd like to bring up:**

31 A: Yes. As we've stated in our Direct and Rebuttal testimony, we are particularly concerned  
32 about Heat Island Effect. Nextra's Locker states that the project does not pose a  
33 significant risk due to potential PVHI effects. Rebuttal-Grant County Solar-Locker-20-

1 21. We would like to point out that both Grant County Intervenors and Grant County  
2 Solar as well as the Public Service Commission staff have acknowledged that there is not  
3 enough information on the topic of heat island effect. Some studies show a temperature  
4 change 300m away, others are not “significant” but none of them are at this scale, in this  
5 environment, surrounding homes. Even RENEW’s Vickerman has testified in another  
6 docket regarding PSC staff’s suggestion that “the Commission’s decision could include  
7 an order point requiring the applicant to conduct heat island study.” Rebuttal-RENEW-  
8 Vickerman-10-11; Ex.-RENEW-Vicerman-7, p. 7-8. If a particular company should not  
9 be compelled to do a heat island study, who should it be? The PSC? A research  
10 institution? Since the effects of Solar on the scale are not known these projects should not  
11 go forward without completed 3<sup>rd</sup> party study. This is not a few panels on a rooftop. This  
12 is no time to “remain agnostic on the question of whether such a study is needed.”  
13 Rebuttal-RENEW-Vickerman-11, l. 3-4. There is scientific consensus that more study is  
14 needed.

15 In preparing for commenting on the Environmental Assessment, Grant County  
16 Intervenors learned that PSC staff Adria E. Brooks has co-authored a study on this  
17 subject, “The Photovoltaic Heat Island Effect: Larger solar power plants increase local  
18 temperatures” published October 13, 2016. Ex.-Grant County Intervenors-Frear-5c. The  
19 bottom-line of this study is that more study is needed:

20 The results presented here demonstrate that the PVHI effect is real and can  
21 significantly increase temperatures over PV power plant installations relative to  
22 nearby wildlands. More detailed measurements of the underlying causes of the  
23 PVHI effect, potential mitigation strategies, and the relative influence of PVHI  
24 in the context of the intrinsic carbon offsets from the use of this renewable  
25 energy are needed. Thus, we raise several new questions and highlight critical  
26 unknowns requiring future research.  
27

- 1 • What is the physical basis of land transformations that might cause a PVHI?
- 2 • What are the physical implications of a PVHI, and how do they vary by region?
- 3 • What are the human implications of a PVHI, and how might we mitigate these
- 4 effects?

5 Id., p. 3-4. These questions from over four years ago remain unanswered. Before siting  
6 massive solar projects, these answers should be known and support a Commission  
7 decision.

8 We are not willing to let our 10 month old and 2.5 year old be guineas pigs in this  
9 experiment NextEra is imposing on us. There should be no permit without binding  
10 commitments and until relevant studies have been conducted at scale.

11 We ask that if the Commission permits this project, that the Commission order  
12 contain a condition requiring the applicant to conduct a 3<sup>rd</sup> party analysis of the heat  
13 island effect for the project to begin to build an information base to inform the record in  
14 future proceeding and address landowner concerns of the heat island effect in this and  
15 other future solar generation dockets.

16 **Q: Do you have issues with other parts of RENEW-Vickerman’s Rebuttal?**

17 A: Yes. As policy Director I believe that RENEW should be focusing on a comprehensive  
18 strategy for renewable energy. Ignoring the mounting of waste that will need to be  
19 disposed of should not be pushed down the road. Using Wisconsin’s resources wisely  
20 should be the top priority for renew.

21 Vickerman uses “one-to-five megawatt ground-mount solar arrays” in discussing  
22 impacts of severe weather events and testifies that “I have not come across” reports of  
23 weather-related damage to those projects nor other small solar farms. Rebuttal-RENEW-  
24 Vickerman-4, l. 16- 19. These comparisons are not valid. Both of these facilities are

1 1.25MW and 3MW respectively. Therefore the effects and footprint are only a fraction of  
2 the facility being proposed for Grant County Solar. Scale is the key in this discussion.  
3 The Alliant arrays in Dubuque are also both located in low points of valley's that will not  
4 see the same wind fatigue and wind events that we experience here. Again, these projects  
5 are also only a fraction of the scale.

6 The testimony of NextEra's Paul Callahan is equally odd, stating that "given that  
7 the Project will be primarily located on agricultural land and that the Project Site will be  
8 use-restricted behind locked fences and gates, the public health and safety from extreme  
9 weather events is small." Rebuttal-Grant County Solar – Paul Callahan-8-9. With the  
10 hundreds of thousands of panels in this project, there are that many more items to be  
11 thrown around by the wind. Please see Frear Direct testimony for visual evidence of the  
12 severe weather that has hit this particular land directly. Look at what has been blown  
13 down, and what has blown into our property. Anecdotally, when we first heard of this  
14 proposal, we drove to Mt. Hope to see what 1/200<sup>th</sup> of this facility might look like. When  
15 we got there, a panel in the row next to the gate was lying face down on the ground:



16  
17 That first image was not exactly confidence inspiring for claims that the

1 technology is built to withstand high winds over the next 30 – 50 years.

2 Vickerman’s testimony regarding whether solar farms “would increase the  
3 probability of damage to neighboring properties in the event of violent weather” is  
4 equally off point. Rebuttal-RENEW-Vickerman-6, l. 17-19. Solar facilities at this scale  
5 are relatively new, and internet searches are what we, Grant County Intervenors, have had  
6 to rely on to get information about solar facilities like this. I would expect that an  
7 “environmental” and “energy” “non-profit” advocating for the largest energy company in  
8 the country may have the interest and the resources, including Public Service  
9 Commission annual grants and Intervenor Compensation for specific projects, to actually  
10 conduct studies at scale to ensure families being imposed upon are not left with the  
11 consequences of lack of study as the industry scales up. What is RENEW doing with its  
12 PSC funding?

13 Vickerman’s Testimony that the project “certainly would” reduce the atmospheric  
14 fuel that feeds severe weather events such as violent storms is false. Rebuttal-RENEW-  
15 Vickerman-8, l. 2-5. Per the application this is project is not a replacement power source.  
16 Therefore, the assumption that it would reduce the severe weather we currently  
17 experience, is false. There will be no greenhouse gas increase, but there will be no  
18 decrease.

19 While we agree solar is a way forward, we believe that Wisconsin has a  
20 responsibility to plan for “green” energy responsibly. Utilizing built horizontal spaces,  
21 brownfields, and irrigated land first before destroying farmland and surrounding families  
22 with a 2058 acre utility district is the only responsible solar solution, as the footprint  
23 required to produce power is so much greater than the power sources it is intended to

1 replace. Rebuttal-RENEW-Vickerman-9-10. Odd that RENEW “is not aware of any  
2 legislative interest in the creation of a statewide rule to address the siting of solar energy  
3 systems.” Id., l. 15-17. As an environmental/energy organization with public resources  
4 for its work, we believe RENEW’s job is to lead the way in establishing responsible  
5 siting and environmental review process and criteria, and note that RENEW did not sign  
6 on to a solar rulemaking petition filed in 2018, nor has RENEW taken any action towards  
7 legislation to mandate rulemaking or environmental review of solar projects.

8 **Q: Do you have comments on testimony regarding impacts on wildlife?**

9 A: Yes. We have reviewed the Rebuttal testimony of the DNR’s Rowe, Director of PSC’s  
10 Tomaszewski, and Rebuttal of Grant County Solar’s Locker, and find they give little  
11 attention to the impact of fencing on wildlife. See e.g., Rebuttal-Locker-10. The project  
12 application proposes barbed wire on top of chain link fence.

13 NextEra should know from its Two Creeks project that the Commission has  
14 rejected use of fencing with barbed wire. PSC REF # 364423 (11. Commission finds it  
15 reasonable to require Two Creeks to use agricultural fencing in those areas where a chain  
16 link fence with barbed wire is not required by applicable electrical codes because it will  
17 mitigate the change to the aesthetics and be less hazardous to wildlife.). The  
18 Commission’s Tomaszewski testifies that there can be benefits to gaining information on  
19 wildlife interactions with solar projects, but only addresses avian impacts. The  
20 Commission should require an avian study, as suggested, but a study on wildlife  
21 interactions with fencing is needed because there is little information available. “*Barrier*  
22 *Behaviour Analysis (BaBA) reveals extensive effects of fencing on wide-ranging*  
23 *ungulates,*” a study released last year, provides information for the Commission to

1 consider, particularly regarding the different types of impacts on different animals due to  
2 their characteristic approaches to, through, and around fencing:

3 Importantly, our study shows that behavioural responses to fences  
4 are more complex than simply crossing or not crossing them. For both  
5 pronghorn and deer, nearly 40% of fence encounters altered their  
6 normal movement. Among the non-normal fence behaviours, *bounce*  
7 was the most common for both species, indicating that animals often  
8 move away from fences if they cannot quickly cross. Such avoidance  
9 of fences can drive animals away from high-quality resources and reduce  
10 habitat use effectiveness (Jones et al., 2019)—a barrier effect reported  
11 for a wide range of species including wildebeest *Connochaetes*  
12 *taurinus* (Stabach et al., 2016), African elephant *Loxodonta africana*  
13 (Vanak et al., 2010) and Przewalski's gazelle *Procapra przewalskii* (Zhang  
14 et al., 2014). The other two altered fence behaviours, *back-and-forth*  
15 and *trace*, could be particularly costly, especially when resources are  
16 not available along fences. For example, Mongolian gazelle *Procapra*  
17 *gutturosa* were observed to trace border fences for as long as 59 days  
18 (Nandintsetseg et al., 2019). Lastly, although not frequently detected  
19 in our study, *trapped* events often occurred in areas with high fence  
20 density—for example, near exurban properties or livestock pastures.  
21 Constraining animal movements for prolonged periods within limited  
22 areas may trigger human–wildlife conflicts (Zhang et al., 2014).

23  
24 Ex.-Grant County Intervenors-Frear-15, p. 7. How will the plentiful deer and other large  
25 wildlife in Grant County be affected?

26 Grant County Intervenors request that if the Commission issues a permit, that the  
27 Commission order a post-construction fencing impact study, looking at impacts to  
28 wildlife, humans, and community, to build knowledge of whether and what impacts are  
29 observed at large solar facilities such as this.

30 **Q: You had raised issues with decommissioning planning in this docket. Have you**  
31 **reviewed rebuttal testimony regarding decommissioning?**

32 A: Yes, we have. NextEra's Gil discusses decommissioning, as does Locker. Rebuttal-  
33 Grant County Solar-Gil-2-4. Decommissioning has the potential to be the most critical  
34 part of making sure our community does not become the next superfund site. Currently

1 the infrastructure to dispose of this much solar equipment does not exist and without  
2 incentive it may never exist which means when the project has run its profitable course  
3 without a full binding decommissioning plan we the community will be left with a  
4 crumbling utility district. NextEra has already filed a Decommissioning Plan for its  
5 Two Creeks solar project, and because this plan is readily available, it makes no  
6 sense to postpone their filing of a Grant County Solar Decommissioning Plan  
7 after a permit is granted. It makes more sense to file that Decommissioning Plan  
8 now, as a part of the Commission's permitting process, for public, party,  
9 Commission staff, and Commission review. Attached is the Two Creeks  
10 Decommissioning Plan filed with the Commission. Ex.-Grant County  
11 Intervenors-Frear-15.

12 **Q: Are there other issues about which you have questions or concerns?**

13 A: Yes. NextEra's Gil states that the project outreach was begun in April, 2017. If this  
14 indeed started in April of 2017, how did it turn out that we, neighbors directly north and  
15 east of the initial land identified for the project, did not know about it until October of  
16 2019 when we received a vague flyer stuck in our door? If this project was in the works  
17 for years before we found out and we have received no communication since we actively  
18 attended meetings, asked questions, and specifically requested information over a year  
19 ago, providing mailing address, phone number, and email, and not heard a word, we  
20 would say outreach is lacking. Rebuttal-Grant County Solar-Gil-8, 1. 8.

21 **Q: Any other issues?**

22 A: Yes. Locker specifically brought up viewshed from our property, and Crays as well, in  
23 her rebuttal. Rebuttal-Grant County Solar-Locker-16-17; Application-Grant County  
24 Solar-Appendix K We provided photos of our viewshed in our Direct Testimony. See



1 Ex.-Grant County Intervenors-Frear-2. Locker testifies that “although PV arrays would  
2 be visible and identifiable while in close proximity, due to the rolling topography, in  
3 broader, more long-distance views, the project is likely to appear mostly absorbed into  
4 the existing agricultural landscape.” Id. However, we live here. Anytime we leave and  
5 return to our home, we will have to drive through this fenced in area with fields of panels.  
6 We will see and feel the aesthetic change daily, or more often. This is not what we regard  
7 as our “community,” and the character will be forever changed.

8 **Q: After reviewing the Direct and Rebuttal testimony in this docket, are there other**  
9 **conditions that should be included in this docket?**

10 A: Yes. Another condition that has been utilized in other solar dockets that should be  
11 incorporated into this docket, particularly because Alliant is anticipated to purchase this  
12 project:

13 The transfer of rights and obligations under this CPCN to a third-party  
14 does not confer either additional rights or obligations upon that third-party  
15 than what is afforded to Wood County Solar Project, LLC at the time of  
16 application and as specified in this Final Decision. If a successor, assign,  
17 or future owner or operator of the project is a public utility, this CPCN is  
18 conditional upon the public utility waiving any rights it may otherwise  
19 have under Wis. Stat. §§ 32.02 and 32.075(2) for the project. This CPCN  
20 does not confer any “right to acquire real estate or personal property  
21 appurtenant thereto or interest therein for such project by condemnation”  
22 under Wis. Stat. §§ 32.02 or 32.075(2) as otherwise provided under Wis.  
23 Stat. § 32.03(5)(a).

24  
25 A particularly important condition to Grant County Intervenors is regarding the  
26 panels to be used:

27  
28 NextEra/Grant County Solar must identify and commit to make and model  
29 of solar panel to be used prior to issuance of any CPCN.

30  
31 **Q: Do you have any comments about the Rebuttal of Mr. Marous?**

32 A: Yes. Marous is correct that we do not have any real estate credentials, are not appraisers,

1 nor are either of us designated by the Appraisal Institute. However, I, Brianna Frear, do  
2 have a background in Six sigma, and I know very well the difficulty of statistical analysis  
3 of a both quantitative and qualitative properties. Data is only as good as the people and  
4 tools used to collect it. In the case of comparing a very small sample of property in  
5 unsimilar places, with much smaller installations, at varying distances, the data will tell  
6 you what you want to see.

7 As you say, we do not have the background or resources to offer expert testimony  
8 and evidence. But we offer as our personal opinion based on talking with neighbors that  
9 none of the families living in the community, none of those non-participating landowners  
10 who haven't signed away their right to speak negatively for a sum of money, none of us  
11 are happy to have a 200MW solar utility district take over our community, and none of us  
12 are happy about all the unknowns imposed on their families. Many of these families have  
13 turned down the offer to contribute land, as this is where they live and work. Show me  
14 the people on the other side of the bell curve actively seeking to live in a utility district.

15 **Q: Does this conclude your Surrebuttal testimony?**

16 **A:** Yes, it does.