

BEFORE THE OHIO POWER SITING BOARD

In the Matter of the Application of Angelina Solar I, LLC for a Certificate of Environmental Compatibility and Public Need)))))	Case No. 18-1579-EL-BGN
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REBUTTAL TESTIMONY OF DAVID HESSLER

Q.1. Please state your name and business address.

A.1. My name is David M. Hessler. The address of my company's administrative offices is 38329 Old Mill Way, Ocean View, Delaware 19970, and my personal office is located at 5096 N. Silver Cloud Dr., St. George, Utah 84770.

Q.2. Did you previously present direct testimony in this proceeding?

A.2. Yes.

Q.3. What is the purpose of your rebuttal testimony?

A.3. I am filing rebuttal testimony on behalf of the Applicant, Angelina Solar I, LLC in response to testimony by Rachel Vonderhaar.

Q.4. Have you reviewed Ms. Vonderhaar's testimony?

A.4. Yes. I reviewed Ms. Vonderhaar's direct testimony marked as CCPC Ex. 2, her supplemental direct testimony marked as CCPC Ex. 3 and also reviewed her later oral testimony from the hearing transcript.

Q.5. What portions of Ms. Vonderhaar's testimony will you address?

A.5. I will address Ms. Vonderhaar's new concern in her recent testimony that operational noise associated with the project's inverters may also be an issue, rather than just noise from construction piling, her concern that the application fails to identify the specific location of project components sufficient to gauge problems their locations could

1 cause, her concern that the project will increase the ambient background noise level in the
2 area surrounding the project area and her concern about the placement of the sound
3 monitoring equipment during the baseline sound survey.

4 **Q.6. Ms. Vonderhaar originally testified that the Concerned Citizens of Preble County**
5 **group was only concerned about noise from pile driving during construction but in**
6 **more recent testimony expressed a new concern about operational noise associated**
7 **with the project's inverters. Do you believe that inverter noise is a legitimate**
8 **concern?**

9 **A.6.** No, not at all. DC/AC inverters are simply electrical cabinets sitting near the
10 middle of the panel arrays typically hundreds of feet from anyone's residence or from the
11 boundaries of non-participating properties. Their significance as a potential community
12 noise impact has somehow taken on an unwarranted importance to Ms. Vonderhaar and
13 those that she testified on behalf of in this proceeding. In their standard configuration some
14 ventilation fan noise, roughly comparable in qualitative terms to the sound of a domestic
15 air conditioning condenser unit, is present near the unit but this sound dies out quickly with
16 distance and will most likely be inaudible, or at worst only faintly perceptible, at any given
17 site boundary. Irrespective of the specific inverter model eventually selected for the project
18 it is important to understand that the sound emissions from these units are not fixed and
19 largely unavoidable, but rather can be easily mitigated on a retrofit basis in the unlikely
20 event that any sort of noise issue should arise. The cooling air intake and discharge could
21 be fitted with an acoustical hood or small silencer and any electrical hum radiated from the
22 cabinet could be abated in a matter of minutes with peel and stick damping sheet.

Moreover, it should not be forgotten that the inverters are only active during the daytime and are completely inert and silent at night when sensitivity to noise is much greater.

Q.7. Ms. Vonderhaar testified that she was concerned that the application fails to specify the exact locations of project components and that she cannot gauge problems the locations will cause. Do you believe you need to know the specific locations of the inverters to gauge whether the inverters will lead to adverse noise impacts?

A.7. No. As I stated above, DC/AC inverters are simply electrical cabinets sitting near the middle of the panel arrays typically hundreds of feet from anyone's residence or from the boundaries of non-participating properties. In their standard configuration some ventilation fan noise, roughly comparable in qualitative terms to the sound of a domestic air conditioning condenser unit, is present near the unit but this sound dies out quickly with distance and will most likely be inaudible, or at worst only faintly perceptible, at any given site boundary. Irrespective of the specific inverter model eventually selected for the project it is important to understand that the sound emissions from these units are not fixed and largely unavoidable, but rather can be easily mitigated on a retrofit basis in the unlikely event that any sort of noise issue should arise. The cooling air intake and discharge could be fitted with an acoustical hood or small silencer and any electrical hum radiated from the cabinet could be abated in a matter of minutes with peel and stick damping sheet. Moreover, it should not be forgotten that the inverters are only active during the daytime and are completely inert and silent at night when sensitivity to noise is much greater. Lastly, in addition to being a normal state of affairs at this point in the development of a solar project, the fact that the final locations have not yet been worked out is actually an advantage because it allows the inverters to be sited to ensure that there is no adverse

1 impact as committed to by Angelina Solar in its application (page 58). Given that
2 commitment, I'm sure the inverters will be sited with a high degree of sensitivity to
3 surrounding residences and placed so as to maximize the buffer distances.

4 **Q.8. Why is sensitivity to noise greater at night versus daytime?**

5 **A.8.** Unwanted sound at night can lead to sleep disturbance or the inability to get to
6 sleep, while during the day any audible noise is at worst a mild annoyance.

7 **Q.9. Ms. Vonderhaar testified that she and her group are concerned about construction**
8 **noise. Have you reviewed the stipulation filed in this proceeding and the condition**
9 **that relates to construction noise?**

10 **A.9.** Yes. Condition 10 limits Angelina Solar to certain periods for construction
11 activities.

12 **Q.10. Will Condition 10 help avoid construction noise complaints?**

13 **A.10.** Yes, it should help. Condition 10 essentially limits general construction activities
14 to the daytime hours between 7 a.m. and 7 p.m., or dusk - and limits pile driving to between
15 9 a.m. and 7 p.m. on weekdays. Any potential nighttime construction is basically limited
16 to activities that are not noisy. These time limitations and the fact that construction
17 activities move around the site and are not concentrated in any one area for a long period
18 of time should reasonably minimize any impact.

19 **Q.11. Ms. Vonderhaar expressed concern in her testimony that the sound monitoring**
20 **equipment employed during the baseline survey was located at Mr. Giffin's house,**
21 **which is about 800 ft. from the existing AEP College Station Substation to the west,**
22 **and that the location may have led to sound levels that were unrepresentative of the**

1 **area in general. Do you think the existing substation adversely affected the survey**
2 **results?**

3 **A.11.** No. That monitoring location was specifically chosen to capture the existing sound
4 levels in the immediate vicinity of the proposed new substation, which is on Mr. Giffin's
5 land, in order to evaluate potential impacts from the project's principal sound source (the
6 step-up transformer) at the closest residences, whether participating or not. At the time of
7 the survey no transformers were present in the AEP substation, which appeared to be a
8 switching station, nor were there any audible sound emissions from it at the monitoring
9 location. Moreover, extremely low sound levels of 31 dBA L90 daytime and 39 dBA Leq
10 daytime were measured, which are low even for a sparsely populated rural area without
11 any significant man-made sound sources. Consequently, I do not believe the monitoring
12 location led to elevated or unrepresentative background levels. In general, the purpose of
13 the survey was to establish a baseline ambient sound level for later comparison to the
14 modeled transformer sound level with the L90 statistical level representing the quietest 1
15 minute of every 10 minute measurement period, which constitutes a very conservative, or
16 "worst-case" design basis, and the Leq, or average level, which represents a more "typical"
17 or more commonly observed level. Projections of transformer sound to the nearest non-
18 participating residences to the west and north are 28 and 26 dBA, respectively, or below
19 the existing daytime L90 of 31 dBA and even comparable to the nighttime L90 of 27 dBA.
20 Because the project sound levels are either below or do not significantly exceed the
21 background no adverse impact would be anticipated. In addition, these predicted levels are
22 well below 40 dBA, which is the minimum absolute threshold any project would ever need

1 to be designed to because that sound level is so low that complaints are extremely rare even
2 when there is no significant background masking noise present in the environment.

3 **Q.12. Does this conclude your rebuttal testimony?**

4 **A.12.** Yes, it does.

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8/23/2019 5:17:35 PM

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Case No(s). 18-1579-EL-BGN

Summary: Testimony -Rebuttal Testimony of David Hessler electronically filed by Mr. Michael J. Settineri on behalf of Angelina Solar I, LLC