### BEFORE THE OHIO POWER SITING BOARD

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In the Matter of the
Application of :

Angelina Solar I, LLC : Case No. 18-1579-EL-BGN for a Certificate of

for a Certificate of :
Environmental Compatibility :
and Public Need. :

- - -

#### PROCEEDINGS

before Patricia A. Schabo, Administrative Law Judge, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-A, Columbus, Ohio, called at 10:02 a.m. on Tuesday, September 10, 2019.

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### VOLUME IV

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482 1 APPEARANCES: 2 Vorys, Sater, Seymour & Pease, LLP By Mr. Michael J. Settineri 3 and Mr. MacDonald W. Taylor 52 East Gay Street 4 Columbus, Ohio 43215 5 On behalf of Angelina Solar I, LLC. 6 Dave Yost, Ohio Attorney General John H. Jones, Section Chief 7 By Ms. Jodi J. Bair Senior Assistant Attorney General, Public Utilities Section 8 30 East Broad Street, 16th Floor Columbus, Ohio 43215 9 On behalf of the Staff of the Ohio Power 10 Siting Board. 11 Van Kley & Walker, LLC 12 By Mr. Jack A. Van Kley 132 Northwoods Boulevard, Suite C-1 Columbus, Ohio 43235 13 14 On behalf of the Concerned Citizens of Preble County, LLC. 15 Ohio Farm Bureau Federation 16 By Ms. Amy M. Milam 280 North High Street, 6th Floor Columbus, Ohio 43215 17 18 On behalf of the Ohio Farm Bureau Federation. 19 Bricker & Eckler, LLP 20 By Mr. Dylan F. Borchers 100 South Third Street Columbus, Ohio 43215 21 On behalf of the Preble County 22 Commissioners. 23 2.4 25

483 1 APPEARANCES: (Continued) Preble County Prosecutor's Office 2 By Mr. Martin Patrick Votel 3 Prosecuting Attorney, and Ms. Kathyrn M. West 4 Assistant Prosecuting Attorney 101 East Main Street 5 Eaton, Ohio 45320 6 On behalf of the Preble County Engineer, Preble County Planning Commission, Preble 7 County Soil and Water Conservation District, the Board of Trustees of Israel 8 Township, and the Board of Trustees of Dixon Township, and the Preble County 9 Commissioners. 10 11 12 13 14 15 16 17 18 19 2.0 21 22 23 24 25

					484
1	INDEX				
2					
3	WITNESSES			PAGE	
4 5	Douglas Herling Direct Examination by Mr. Settineri Cross-Examination by Mr. Van Kley				487 490
6 7	David Hessler Direct Examination by Mr. Settineri Cross-Examination by Mr. Van Kley				497 498
8	Matt Marquis				
9	Direct Examination by Mr. Settineri Cross-Examination by Mr. Van Kley Redirect Examination by Mr. Settineri				506 508 527
10					
11	COMP	ANY EXHIBITS		IDENTIFIED	ADMITTED
12 13	19 -	Rebuttal Testimony Douglas Herling	of	487	496
14	20 -	Rebuttal Testimony David Hessler	of	497	505
<ul><li>15</li><li>16</li></ul>	21 -	Rebuttal Testimony Matt Marquis	of	506	528
17					
18	CCPC	EXHIBIT		IDENTIFIED	ADMITTED
19	1 -	"Study of Acoustic	and EMF	II-247	496
20		Levels from Solar Photovoltaic Project	cts"		
21					
22					
23					
24					
25					

Tuesday Morning Session,

September 10, 2019.

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ALJ SCHABO: The Ohio Power Siting Board has assigned for hearing at this time and place,

Case No. 18-1579-EL-BGN, being In the Matter of the Application of Angelina Solar I, LLC for a Certificate of Environmental Compatibility and Public Need.

My name is Patricia Schabo and I'm the Administrative Law Judge assigned by the Board to hear this case. We're here on Day 4, I believe, to take some rebuttal, so let's begin by taking appearances. You can start.

MR. SETTINERI: Thank you, Your Honor. On behalf of Angelina Solar I, LLC, Mike Settineri and MacDonald Taylor with the law firm of Vorys, Sater, Seymour and Pease, 52 East Gay Street, Columbus, Ohio 43215.

ALJ SCHABO: Thank you.

Ms. Bair.

MS. BAIR: Thank you, Your Honor. On behalf of the Staff of the Power Siting Board, Dave Yost, Attorney General, Jodi Bair, Assistant Attorney General, 30 East Broad Street, Columbus, Ohio 43215.

ALJ SCHABO: Mr. Van Kley.

MR. VAN KLEY: Jack Van Kley representing
the Concerned Citizens of Preble County and its
members.

5 MS. MILAM: Good morning, Your Honor. 6 Amy Milam on behalf of the Ohio Farm Bureau

7 Federation, 280 North High Street, Columbus, Ohio 8 43215.

9 MS. WEST: The Office of Martin P. Votel, 10 Preble County Prosecutor, I'm Kathyrn M. West, 101

11 East Main Street, Eaton, Ohio 45320, on behalf of the

12 Preble County Engineer, Preble County Planning

Commission, Preble County Soil and Water Conservation

District, Israel Township Trustees, Dixon Township

15 Trustees, and co-counsel for Preble County

16 Commissioners.

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MR. BORCHERS: Good morning. On behalf of the Preble County Commissioners, Dylan Borchers with the law firm of Bricker & Eckler, 100 South Third Street, Columbus, Ohio 43215.

21 ALJ SCHABO: All right. Thank you, 22 everyone.

I don't believe we have any
preliminaries, so let's go ahead and start with your
first witness, please.

487 1 MR. SETTINERI: Thank you, Your Honor. 2 The Company would call, on rebuttal, Mr. Douglas 3 Herling to the stand. 4 ALJ SCHABO: Good morning. 5 THE WITNESS: Good morning. 6 ALJ SCHABO: Would you do me a favor and 7 just press the "on" button on your microphone. 8 checked them all this morning, so we should be good. 9 (Witness sworn.) 10 ALJ SCHABO: Thank you. Have a seat. 11 MR. SETTINERI: Your Honor, at this time, 12 we would like to mark as Company Exhibit 19, the 13 Rebuttal Testimony of Douglas Herling. 14 ALJ SCHABO: So marked. 15 (EXHIBIT MARKED FOR IDENTIFICATION.) 16 MR. SETTINERI: Copies have been provided 17 to the Bench, the court reporter, and the witness as 18 well. Let me make sure I put one up there. 19 20 DIRECT EXAMINATION 2.1 being first duly sworn, as prescribed by law, was 2.2 examined and testified as follows: 23 DOUGLAS HERLING 24 By Mr. Settineri: 25 Q. Good morning, Mr. Herling.

A. Good morning.

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- Q. Can you please state your name and business address for the record, please.
  - A. My name is Douglas Herling. My address is 1105 Navasota Street, Austin, Texas 78702.
- Q. And on whose behalf are you testifying today, sir?
  - A. On behalf of the Applicant.
- 9 Q. And do you have before you what's been 10 marked as Company Exhibit 19?
- 11 A. Yes, I do.
- Q. And can you identify that for the record, please?
- A. Company Exhibit 19 is my rebuttal testimony in this case.
- Q. Was that prepared by you or at your direction?
- 18 A. Yes, it was.
- Q. All right. And do you have any changes to that testimony at this time?
- 21 A. I do have a few edits.
- 22 Q. Please proceed.
- A. On the first page, on line 13, Answer 4, following CCPC Exhibit 2 and before the period, we are inserting "and her Supplemental Testimony marked

as CCPC Exhibit 3."

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On line 15, Answer 5, following the words "in her testimony" we are inserting "marked as CCPC Exhibit 2 (Answer 13 and Answer 17)."

- Q. And does the rest of that sentence then remain as written?
- A. Yes. Yes, it does.

And then on page 2, line 14, before the word "There", the sentence will now read "The study also found that there were..."

- Q. And then the rest of the sentence after "were" remains the same, correct?
  - A. That's correct.
- Q. Do you have any other changes to your testimony at this time?
- 16 A. I do not.
  - Q. If I asked you the questions in your testimony today, would your answers be the same as written and as you have revised today?
    - A. Yes, they would.

MR. SETTINERI: Your witness -- Your
Honor, the witness is available for
cross-examination.

24 ALJ SCHABO: Thank you.

Ms. Bair, did you have any cross?

490 1 MS. BAIR: No questions. 2 ALJ SCHABO: Anybody on this side of the 3 room? 4 Mr. Van Kley? 5 MR. VAN KLEY: Yes, Your Honor. 6 7 CROSS-EXAMINATION 8 By Mr. Van Kley: 9 Mr. Herling, I'd like to direct your Ο. 10 attention to the sentence in Answer 6 on page 2 of your testimony that you just amended, and I'll just 11 12 read the entire sentence to you for context, which 13 states: "The study also found that there were 14 significant magnetic fields at locations a few feet 15 from inverters, in the range of 150 to 500 mG, but at 16 a distance of 150 feet from the inverters, the fields 17 dropped back to very low levels of .5 mG or less, and 18 in any many cases to background levels." Do you see that sentence? 19 20 Α. Yes, I do. 2.1 First of all, what does "mG" stand for? Q. "mG" stands for milliGauss. 22 Α. How do you spell that? 23 Q. 24 M-i-l-l-i-G-a-u-s-s. Α.

And what is a milliGauss?

25

Q.

- A. MilliGauss is a measurement for the magnetic field portion of an electromagnetic field.
- Q. Now, there's nothing in the Application or in the Stipulation that requires the inverters to be at least 150 feet away from the Project Area property line, correct?
  - A. Could you say that one more time, please?
  - Q. Yes.

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There's nothing in the Application or in the Stipulation that requires the inverters to be located at least 150 feet away from the Project Area's property lines, correct?

- A. There's nothing tying it to that specific number, but we do have reference to not causing any material adverse conditions.
- Q. Now, earlier in this proceeding you were asked, in connection with questions about the noise from the inverters, whether your Company would agree to a condition that required the inverters to be located at least 150 feet away from the property lines. Do you recall that testimony?
- A. I don't have that testimony in front of me, but it sounds -- it sounds familiar, but I can't say for sure that's exactly what was said.
  - Q. Well, do you remember saying that you

couldn't make that commitment on behalf of the

Company because you would have to consult with other

people in your company in order to be able to make

that commitment?

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- A. I do recall that, and that was also a heavily-negotiated stipulation.
- Q. Well, since you gave that testimony previously in this proceeding, have you discussed this issue with other people in your company in order to decide whether the Company would agree to a condition requiring the inverters to be located at least 150 feet away from the property line?

MR. SETTINERI: I object just to the extent it's outside the rebuttal testimony, now into noise. It has nothing to do with EMF. I object also to the extent it seeks to disclose attorney-client work product as well as attorney-client privilege.

MR. VAN KLEY: A couple of responses, Your Honor.

First of all, I'm asking this question because his rebuttal testimony states that the EMFs will drop off to .5 mG or less, 150 feet away from the inverters, so my question is directly relevant to this issue concerning whether or not, with respect to EMFs, they would agree to that setback.

Secondly, I'm asking him whether he's had 1 2 any conversations with members of his -- other people in his company, not with counsel, with regard to 3 whether or not they're ready to make a commitment to 4 5 site these inverters at least 150 feet away from the 6 boundaries. 7 MR. SETTINERI: Your Honor, if I may? 8 Discussions within the Company about ongoing 9 litigation are certainly protected. If he would like 10 to simply ask a question, would the Company be 11 willing to do blank, that is a fine guestion to ask 12 and he can answer it, but to ask about what 13 conversations the Company has had within it about an 14 ongoing case is completely off limits. 15 MR. VAN KLEY: It's not off limits to 16 talk -- to ask questions about discussions about 17 litigation with other non-attorneys in his company. 18 That is not privileged. 19 ALJ SCHABO: I would like to hear the 20 question back. 2.1 (Record read.) 2.2 ALJ SCHABO: You can answer that 23 question. 24 THE WITNESS: Okav. 25 With regard to EMF, there is no reason

that 150 feet is a magic number. The .5 milliGauss figure is very low and the 150 to 500 milliGauss numbers are also well below accepted international limits. So there's really no significance to that figure except to illustrate that the field strength diminishes rapidly over distance, but even adjacent to the inverter it's already very low.

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ALJ SCHABO: Your Honor, I would move to strike that answer as not being responsive to the question. He was asked to say whether or not he's had any discussions with other people in his company about whether they would commit to siting the -- commit to a condition siting the inverters at least 150 feet away from the property line. He did not answer that question.

MR. SETTINERI: I simply repeat my objection that it seeks attorney-client information and conversations in anticipation of litigation or during litigation as well, so.

ALJ SCHABO: I'll overrule the objection,
I'll deny the motion to strike, and I'll instruct you
to answer the question that was asked.

THE WITNESS: We have not had any conversations with regard to EMF and its effect at that distance, no.

- Q. (By Mr. Van Kley) All right. As you sit here today, can you make a commitment, on behalf of the Company, that the inverters that you would be agreeable to a condition in the Certificate that would require you to site the inverters at least 150 feet away from the property line?
- A. We would not, because with regard to EMF there is no reason to do so.
- 9 MR. VAN KLEY: I have no further 10 questions.
- ALJ SCHABO: Any -- everybody already declined cross, so any redirect?
- MR. SETTINERI: No redirect, Your Honor.
- 14 Thank you.

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- 15 ALJ SCHABO: All right. Thank you,
- 16 Mr. Herling.
- 17 THE WITNESS: Thank you.
- MR. SETTINERI: Your Honor, at this time,
  we would move for the admission of Company Exhibit 19
  as well as CCPC Exhibit 1 into the record, which has
  been previously marked, which I can provide the Bench
  with a copy.
- ALJ SCHABO: Company Exhibit No. 19, any objections to its admission?
- Seeing none, Company Exhibit 19 will be

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     admitted.
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                 (EXHIBIT ADMITTED INTO EVIDENCE.)
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                 ALJ SCHABO: Okay. The Company has also
    moved to have CCPC Exhibit 1, which is the "Study of
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     Acoustic and EMF Levels from Solar Photovoltaic
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     Projects, " previously marked as I think I said CCPC
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     1, into the record. Are there any objections?
     Seeing none, CCPC 1 will also be admitted.
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                 (EXHIBIT ADMITTED INTO EVIDENCE.)
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                 ALJ SCHABO: Mr. Herling, you may step
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     down.
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                 Mr. Settineri or Mr. MacDonald (sic),
13
     your next witness.
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                 MR. SETTINERI: Thank you, Your Honor.
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    At this time, the Company would call Mr. David
16
     Hessler to the stand on rebuttal.
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                 ALJ SCHABO: Good morning, Mr. Hessler.
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                 THE WITNESS: Good morning.
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                 (Witness sworn.)
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                 ALJ SCHABO: Thank you. You may have a
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     seat.
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                 MR. SETTINERI: Your Honor, at this time
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    we would like to mark as Company Exhibit 20, the
24
     Rebuttal Testimony of David Hessler.
25
                 ALJ SCHABO: So marked.
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# (EXHIBIT MARKED FOR IDENTIFICATION.)

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## DAVID HESSLER

being first duly sworn, as prescribed by law, was examined and testified as follows:

### DIRECT EXAMINATION

7 By Mr. Settineri:

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- Q. Good morning, Mr. Hessler.
- A. Good morning.

MR. SETTINERI: Copies of Company

Exhibit 20 have been provided to the Bench and the

court reporter.

- Q. Mr. Hessler, do you have a copy in front of you of what's been marked as Company Exhibit 20?
- 15 A. I do.
- Q. And can you please identify that for the record?
  - A. This is my rebuttal testimony.
  - Q. And before I get too far ahead of myself, can you please state your name and business address for the record, please.
- A. Yes. My name is David Hessler and my
  office address is 5096 North Silver Cloud Drive in
  Saint George, Utah 84770.
- Q. And regarding Company Exhibit 20, your

rebuttal testimony, was that prepared by you or at your direction?

- A. Yes, it was.
- Q. And do you have any changes or revisions to your testimony today?
  - A. No, I don't.

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- Q. And if I asked you the questions in your testimony today, would your answers be the same?
  - A. Yes, they would.

MR. SETTINERI: Your Honor, the witness is available for cross-examination.

12 ALJ SCHABO: Mr. Borchers, Ms. West,

13 Ms. Milam? Ms. Bair?

MS. BAIR: No questions.

ALJ SCHABO: Mr. Van Kley.

MR. VAN KLEY: Yes, Your Honor.

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18 CROSS-EXAMINATION

19 By Mr. Van Kley:

- Q. Mr. Hessler, go to page 2 of your testimony, please, Answer 6.
- 22 A. Okay.
- Q. Directing your attention to the second sentence of answering -- of Answer 6, I see that it states as follows: "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." Did I read that correctly?

A. That's correct.

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- Q. All right. So in the case of Angelina Solar, to your knowledge is there anything in the Application or the Stipulation that requires the inverters to be located hundreds of feet from anybody's residence or the boundaries of nonparticipating properties?
- A. There's no specific stipulation or requirement, no.
- Answer 6, I'd like to direct your attention to the sixth line where you refer to "qualitative terms," and I'm going to ask you what that means in just a second, but first let me read the sentence in which that term appears which states: "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." Do you see that sentence?

A. I see it.

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- Q. So when you refer -- when you use the words "qualitative terms," what do you mean?
- A. I was just trying to give an example of something that people were familiar with that they could picture one of these converters or inverters might be like. In general, the sound emissions from inverters, as given in that Massachusetts study, are comparable to a domestic air conditioner unit.

Out of curiosity, I went out behind my house and it's a brand new house, brand new unit, I measured it and it's louder than several of the inverters referred to in the Massachusetts study. So it's -- it's an example of -- so you could picture what it might be like.

- Q. Well, when you use the term "qualitative," you're not talking about volume, are you?
  - A. I'm talking about it sounds like.
  - Q. It's like the tone?
  - A. Yeah. It's just fan noise.
- Q. Uh-huh, okay.

24 At the end of that sentence you say that 25 it "will most likely be inaudible, or at worst only faintly perceptible, at any given site boundary."

A. Uh-huh.

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- Q. Now, does that mean, for example, if the site boundary is only 10 feet away from the inverter, you won't be able to hear it?
- A. No. I've talked to the Company about the site plan and I'm comfortable that these units are all going to be at least several hundred feet from any boundaries. There's plenty of room in the Project to put these far away from anyone. And at this point, because of all the attention that's been focused on it, I'm certain that they're going to be placed in the most optimal locations, the maximum distance from anyone.
- Q. When you had these conversations -- well, first of all, who did you have the conversations with?
  - A. With Mr. Herling.
- Q. Did Mr. Herling tell you whether or not the Company would agree to a condition that required the inverters to be at least hundreds of feet away from the boundary?
- A. There was no discussion of any particular agreement or stipulation, but the Project Area is definitely large enough that large buffer distances

can be accommodated.

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- Q. Let's look further down in the Answer.

  Let's start with line 17 where you have a new sentence starting with the word "Irrespective" and that sentence reads as follows: "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." Did I read that correctly?
  - A. Yes, you did.
- Q. Okay. And then in the next sentence you provide some examples of mitigation measures that could be taken, correct?
  - A. Correct.
- Q. Now, those mitigation measures include "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," right?
  - A. Right.
- Q. Is there any reason why any or all of these mitigation measures couldn't be installed at

the time that the inverters are installed?

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- A. I don't see any reason to put this in ahead of time. This is only in the highly unlikely event that there are any kind of disturbance off the Project property.
- Q. Well, my question was whether or not you could install these measures during the initial installation of the inverters.
- MR. SETTINERI: I object. He did answer the question. This is a different question than he asked him.
- MR. VAN KLEY: No. I asked him this
  question, whether he could, and he told me why he
  would not want to.
- MR. SETTINERI: If we could at least have the question reread, that would be helpful.
- 17 ALJ SCHABO: If you could reread the question, please.
- 19 (Record read.)
- 20 ALJ SCHABO: Go ahead and answer that, 21 please.
- 22 THE WITNESS: This could be applied 23 during the initial installation, sure.
- Q. (By Mr. Van Kley) Let's go to Answer 11 on page 5 of your testimony. I'd like to direct your

attention to the sentence that starts on line 6, which reads as follows: "At the time of the survey no transformers were present in the AEP substation, which appeared to be a switching station, nor were there any audible sound emissions from it at the monitoring location." Did I read that correctly?

A. Yes.

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- Q. Okay. What does this sentence mean?
- A. The concern was that we put this monitor on adjacent property to the existing AEP substation, and the concern was that noise from that substation would elevate the results of the background survey, but the College Station substation doesn't have any noise generating components in it or at least it didn't at the time of the survey. You could see that some work was going on and perhaps they were going to add equipment, but at the time the measurements were taken, there was nothing generating any noise there.
  - Q. And how do you know that?
- A. Because nothing was audible and you can see that there aren't any transformers in that substation.
- MR. VAN KLEY: All right. I have no further questions.
- 25 ALJ SCHABO: Mr. Settineri.

505 1 MR. SETTINERI: Thank you, Your Honor. 2 No redirect. 3 ALJ SCHABO: Mr. Hessler, you may step 4 down. Thank you. 5 MR. SETTINERI: Your Honor, at this time, 6 the Company would move for the admission of 7 Exhibit 20 into the record, please. ALJ SCHABO: Any objections? 8 9 Hearing none, Company Exhibit 20 will be 10 admitted. 11 (EXHIBIT ADMITTED INTO EVIDENCE.) 12 ALJ SCHABO: Your next witness, 13 gentlemen. 14 MR. SETTINERI: Thank you, Your Honor. 15 At this time, the Company would call Matt Marquis on 16 rebuttal. 17 ALJ SCHABO: Good morning. 18 (Witness sworn.) 19 ALJ SCHABO: Thank you. Please have a 20 seat. 2.1 THE WITNESS: Thank you. 22 MR. SETTINERI: Your Honor, at this time, 23 the Company would like to mark as Company Exhibit 21, 24 the rebuttal testimony of Matt Marquis.

ALJ SCHABO: So marked.

506 1 (EXHIBIT MARKED FOR IDENTIFICATION.) 2 MR. SETTINERI: We've provided copies to 3 the Bench and the court reporter as well. 4 5 MATT MARQUIS 6 being first duly sworn, as prescribed by law, was 7 examined and testified as follows: DIRECT EXAMINATION 8 9 By Mr. Settineri: 10 Q. Good morning, Mr. Marquis. 11 A. Good morning. 12 Q. Can you please state your name and 13 business address for the record, please. 14 Α. Yeah. My name is Matt Marquis. My 15 business address is 6397 Emerald Parkway, Dublin, 16 Ohio 43016. 17 And do you have before you what's been Q. 18 marked as Company Exhibit 21? I do. 19 Α. 20 Q. And can you identify that for the record, 2.1 please? 22 That is my rebuttal testimony in this Α. 23 case. 24 Was that prepared by you or at your Ο. 25 direction?

A. Yes.

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- Q. And do you have any changes to that testimony today?
- A. Yes, I do. I don't have the changes marked.
- 6 MR. SETTINERI: If I may approach the 7 witness, Your Honor?

ALJ SCHABO: You may.

- A. Yes. In Answer 5, line 14, after "Mr. Mast's testimony" I'd like to add "(CCPC Exhibit 5A.11, and CCPC Exhibit 6A.5)."
- Q. And would the rest of that sentence, starting with "regarding," remain the same then?
  - A. Yes.
  - Q. And do you have any other changes to your testimony?
- 17 A. I do. In Answer 9, on line 10, after
  18 "affected by the project area," I'd like to change
  19 the word "suggests" to "means." The rest of that
  20 sentence stays the same.
- Q. Do you have any other changes to your testimony at this time, Mr. Marquis?
  - A. I do not.
- Q. And if I asked you the questions in your testimony today, would your answers be the same today

508 1 as you have revised? 2 Α. Yes. 3 MR. SETTINERI: Thank you. Your Honor, the witness is available for 4 5 cross-examination. ALJ SCHABO: Mr. Borchers, Ms. West, 6 7 Ms. Milam, Ms. Bair? 8 Mr. Van Kley? 9 MR. VAN KLEY: Yes, Your Honor. 10 11 CROSS-EXAMINATION 12 By Mr. Van Kley: 13 Q. Would you go to Answer 8 of your 14 testimony on page 4. 15 Α. Yes. I'd like to direct your attention to the 16 Ο. 17 sentence starting on line 11, which states: "The Four 18 Mile Creek watershed covers 38.3 square miles (sqmi), 19 of which 1.0 sqmi (or 2.6 percent of the watershed) 20 is part of the project area." Do you see that 2.1 sentence? 22 Α. Yes. 23 All right. So does this sentence mean Q. 24 that 1 square mile of the Project Area drains into 25 the Four Mile Creek watershed?

- A. Yes, that is correct.
- Q. And does all of that drainage go into Four Mile Creek?
  - A. Yes.

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- Q. And does it go into Four Mile Creek prior to the location at which Four Mile Creek flows through the Village of Fairhaven?
  - A. Repeat that question.
- Q. Does all of this drainage go into Four Mile Creek prior to the location at which Four Mile Creek flows through the Village of Fairhaven?
- A. You're referring to the drainage from the Project Area?
- 14 O. Yes.
- A. No. Only .08 square miles or .2 percent
  of the watershed, to a point just south of Mr. Mast's
  property, actually contributes to Four Mile Creek.
- Q. I guess I'm not understanding your
  answer. Maybe it would help to back up a little bit
  here.
- Four Mile Creek flows past Mr. Mast's property, correct?
- A. Yes, it does.
- Q. Is the Project Area upstream or downstream of Mr. Mast's property?

- A. It is west of Mr. Mast's property. A portion of the Project Area is upstream or contributes to the watershed that's upstream of Mr. Mast's property, and a portion of the Project Area contributes to the watershed south -- the portion of the Four Mile Creek watershed that's south of Mr. Mast's property.
- Q. How much acreage from the Project Area drains into Four Mile Creek upstream of Mr. Mast's property?
- A. I don't know the conversion of square miles to acreage off the top of my head.
- Q. Well, how many square miles, then, drains into Four Mile Creek upstream of Mr. Mast's property?
  - A. .08 square miles.

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- Q. What is the total square-mile area that drains into Four Mile Creek from the Project Area?
- A. Into the Four Mile Creek watershed or Four Mile Creek is 1.0 square miles.
- Q. I see throughout this answer you talk about, for example, on line 15, .08 square miles, and then on line 19, .04 square miles, and then line 22, .06 square miles; where do those three areas drain into?
- 25 A. Sure, let me explain. So Acton Lake is

downstream of the Village of Fairhaven and Mr. Mast's property. It's a few miles downstream down Four Mile Creek. There are three what are called HUC-12 watersheds, I describe those earlier in my testimony, that all contribute and collect downstream of the Four Mile Creek watershed just prior to entry to Acton Lake.

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So the Four Mile Creek watershed, if you consider like a point of interest, meaning you were standing on Four Mile Creek looking upstream, that watershed is 38.3 square miles.

The Project Area falls within three separate watersheds. So a portion of the Project Area enters a watershed that doesn't meet up with Four Mile Creek until it enters Acton Lake, another portion of the Project Area enters a separate watershed that again doesn't rejoin the other two watersheds until just prior to Acton Lake, and then the Four Mile Creek watershed has a portion of the Project Area as well.

So what I was trying to do here was to kind of lay out what portion of the Project Area is actually affecting the Four Mile Creek watershed versus these other watersheds that don't really come into play until much further downstream of the Four

Mile Creek watershed.

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- Q. Do you know how many acres of land are contained in the Project Area?
- A. I can add up the square miles that I list in my testimony. I don't know the conversion to acres.
- Q. Does all of the land, inside of the Project Area, drain into Four Mile Creek or these other streams that you listed in Answer 8?
  - A. Yes.
- MR. SETTINERI: I'll lay an objection;
  compound question.
- 13 ALJ SCHABO: It's already answered. You can divide it up on redirect.
- MR. SETTINERI: Yeah.
  - Q. Have you done any studies to determine how much water from the Project Area is going to drain into Four Mile Creek after the solar project has been built?
- 20 A. No.
- Q. Has your consulting firm been retained in order to deal with surface water issues during or after construction of the Project?
- A. No. I'm here to testify in rebuttal to
  Mr. Mast's testimony.

- Q. Well, Hull & Associates contributed a report for the Application in this case, didn't it?
  - A. Yes.

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- Q. And that was marked as Exhibit F to the Application if you recall?
  - A. Yes, I believe that's right.
- Q. Okay. And were you involved in preparing that report?
  - A. I was not.
  - Q. But that -- yeah, okay.
- Have you been involved with surface water issues pertaining to construction or operation of solar facilities?
  - A. I personally have not. My expertise in hydrology and hydraulics translates to many industries, including solar projects, but Hull & Associates does have experience working on solar projects and construction of a lot of different types of renewable energy projects.
  - Q. So you've had experience with surface water issues on other types of project.
    - A. Yes.
- Q. Okay. Have you been involved in any projects in which you have advised companies with respect to surface water issues in constructing

facilities?

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- A. Yes.
- Q. Okay. In those cases is it typical that you would prepare a study of some sort in order to evaluate the amount of surface water that would result from the construction activities?
- A. No, it is not typical. It depends on the circumstances or why they're asking for a study to be performed. Typically studies that are done, flood studies, are local to the project area and don't typically look downstream or upstream of the area, the project area in question.
- Q. So in a project in which you would advise a company on the construction of a facility, would you typically perform a hydrology study to determine the amount of surface water that would flow from the project area for such a project?

MR. SETTINERI: I just object. There's no foundation laid that he actually, in his capacity at Hull, advises on the design of construction of facilities.

MR. VAN KLEY: That wasn't the question. The question is whether it would be typical to do a hydrology study in order to determine how much water is going to flow from the project area. I'm not

1 | asking about the design of the project.

ALJ SCHABO: You can answer that question.

MR. SETTINERI: I like that question.

ALJ SCHABO: You can answer that

6 question.

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THE WITNESS: Okay. I think, from a regulatory standpoint, what we would be looking at would be hydrology in terms of surface water runoff during construction. That's first and foremost.

So, during construction, they will have a construction general permit, through the Ohio EPA, where they have to manage surface water runoff as the ground is impacted by construction equipment, installation of the solar panels and stuff like that.

Post-construction, there are plenty of best-management practices that are typically implemented; the best being vegetation.

In this case, I know the Application is proposing to convert the farm and crop fields to, I can't remember the exact terminology, but vegetation, grasses post-construction, and grass is a great best-management practice for managing erosion and sediment runoff and managing stormwater runoff from a project site.

So that would be essentially the capacity that I would advise a company on performing an H&H analysis and, again, it would be local to the Project Area. We wouldn't be looking downstream as much as how are we managing water that does land within the watershed of the Project Area and that would -- and how to, I guess, intercept it and reduce the likelihood that you have an increase in runoff from the Project site.

- Q. And in the process of doing this evaluation, would you determine the amount of surface water flow that would come from the Project Area?
  - A. I'm sorry, say that again.
  - O. Yeah.

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In the process of doing the evaluation you've just described in your last answer, would you determine or quantify the amount of surface water that is coming from the Project Area in order to do that evaluation?

MR. SETTINERI: Your Honor, at this time I'll just object. No. 1, it mischaracterizes the testimony. No. 2, I've been patient, we are now well outside the scope of rebuttal testimony. The rebuttal testimony related to watersheds and the flooding issues. We are now into evaluations of the

Project itself and surface water evaluations regarding what should have happened or should happen with the Project in the Application, so we're well outside the scope of rebuttal testimony.

MR. VAN KLEY: Your Honor, Answer 8, which covers almost an entire page, talks about the amount of flow coming from the Project Area, and my question deals with the amount of flow coming from the Project Area and when is it going to be determined.

MR. SETTINERI: No, that's --

ALJ SCHABO: Can you repeat the question

for me?

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(Record read.)

ALJ SCHABO: Give me a moment, please.

You can answer the question but, Mr. Van Kley, it's not quite as -- I wouldn't read his answer quite as broadly as you do, so try to keep it contained. Thank you.

THE WITNESS: Yes, a hydrologic study does establish things like peak runoff or estimate peak volume of flow through a watershed.

Q. (By Mr. Van Kley) Moving on to Answer 9 on page 5 of your testimony, I'd like to direct your attention to the sentence that starts on line 4 which

reads partially as follows: "The Village along Four Mile Creek and the entirety of Mr. Mast's property falls within a FEMA designated 100-year floodplain with a base flood elevation and floodway established..." Do you see that?

A. Yes.

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- Q. FEMA stands for what?
- A. Federal Emergency Management Agency.
- Q. And what's the purpose of the floodplain designations made by FEMA?
- A. So, in this case, FEMA performs or FEMA's sub-consultants perform flood studies along major rivers throughout Ohio, throughout the United States, to establish 100-year floodplain boundaries, and these are to essentially protect people from building homes and businesses within the limits of what could be the limits of inundation from a 100-year floodplain to prevent the risk of property damage or loss of life in the event of a 100-year event.

So the significance here in terms of the established floodway and base flood elevation means that a detailed study has already been performed by a reputable engineering firm and approved by FEMA.

Q. And that evaluation concluded that Mr. Mast's property is located in the 100-year

floodplain, right?

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- A. Yes.
- Q. And that would indicate that it's already prone to flooding from time to time?
  - A. Yes.
- Q. And if there's more water coming from the Project Area as the result of the solar facility being constructed there, than is currently coming off the Project Area into Four Mile Creek, then that would increase the volume of water flowing through Mr. Mast's property, correct?
- A. I disagree with the premise of that question because I haven't stated that there is going to be more runoff from the Project Area or that more runoff is being contributed to the watershed at Mr. Mast's property.
- Q. Well, you haven't answered my question.

  My question asks you to assume that that would be the case. If that's the case, then isn't it true that there would be more water flowing through Mr. Mast's property?
- MR. SETTINERI: I object to the form of the question. What is being assumed here is very vague.
- 25 ALJ SCHABO: Are you trying to set up a

hypothetical, Mr. Van Kley?

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MR. VAN KLEY: Exactly, Your Honor.

ALJ SCHABO: Okay. So could you set it up a little bit better for me, please?

MR. VAN KLEY: Sure.

- Q. (By Mr. Van Kley) I would like you to assume, as a hypothetical, that the presence of the solar facility increases the amount of surface water flow into Four Mile Creek.
  - A. Okay.
- Q. If that is the case, then isn't it true that there will be more water flowing through
  Mr. Mast's property?
- A. In that hypothetical situation you have more water in Four Mile Creek, it's a possibility but it's not -- it's not a certainty. It depends on the location of the rainfall, the duration of the rainfall, it depends on a lot of different things, whether or not there would actually be an effect.

Additionally, the location of the Project Area is off to the west of Mr. Mast's property to the west of Four Mile Creek. By the time any runoff in your hypothetical situation, assuming there was an increase in runoff, by the time that would reach Four Mile Creek, it's had time to attenuate.

So the significance of the -- in your hypothetical situation the significance of additional runoff at the Project Area is not the same as the runoff that would actually be entering Four Mile Creek by the time it got there.

- Q. In the previous sentence of Answer 9, which starts on line 3, you state as follows: "As previously stated, the project area only contributes 0.2 percent of the entire watershed area to the Village of Fairhaven and Mr. Mast's property." Do you see that sentence?
  - A. Yes.

- Q. What's the quantity of water that flows off of the Project, the Project Area's watershed, to the Village of Fairhaven and Mr. Mast's property as stated to be .0 -- .0 -- 0.2 percent of the watershed area?
  - MR. SETTINERI: I'll object to the form of the question.
- MR. VAN KLEY: Well, I'll re-ask it. It wasn't very good.
  - Q. With respect to the 0.2 percent of the watershed area --
- 24 A. Yes.
- 25 Q. -- that flows through Fairhaven and

Mr. Mast's property --

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- A. Yes.
- Q. -- how much water does that represent that goes into that creek?
- A. I don't believe it represents -- are you asking how much more water than the existing conditions it would represent, or are you just asking blankly how much runoff comes off of the Project Area property?
- Q. Both of those are excellent questions. We can start with the first one. How much currently, from that area, goes into the creek, how much water?
  - A. I don't know the answer to that question.
- Q. Do you know how much, if any, increase there will be from that area into the creek?
- A. No, I don't believe there will be an increase from the Project Area into Four Mile Creek.
- Q. You don't believe. Have you done any calculations to that effect?
- A. No, but I can tell you why I don't believe there would be an increase. The watershed in a hydrologic study is characterized by a lot of different factors. One being the size of the drainage area, which in this case is not changing. The Project Area is within a drainage area. That

drainage area is not getting bigger or smaller as a result of the Project being constructed.

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Another is the shape of the watershed, which, again, is not changing. They're not changing drainage divides or appreciably changing the size or shape of the watershed.

Another being the soils, the site soils, which can have an influence on infiltration which is part of how water interacts with the earth and, again, the soils are not changing.

The land cover is really the only thing that's changing of all of those characteristics here, and the land cover is, again, being converted from farmland and cropland use to vegetation which would actually result, in most cases, in a reduction of runoff if not the same amount of runoff.

So for those reasons and especially the fact that we're only talking about .2 percent of the entire watershed that there's actually a land use change, with all of the other parameters the same, it doesn't seem reasonable to assume there would be any increase in runoff.

- Q. Are you aware there are going to be access roads built in the Project Area?
  - A. I am, yes.

- Q. Is that a land use change?
- A. It is. The same as changing from crop or farmland to vegetation, yes.
- Q. Okay. So there will be some land use change in the Project Area, right?
  - A. Yes. I already stated that, yeah.
- Q. Okay. And access roads used by construction traffic tend to compact?
  - A. They do.

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- Q. Okay. Compaction can increase the amount of surface water flow?
- A. Yes, it can, and, in fact, we've -- we recently had a very large wind turbine project but we have a lot of access roads built to service the wind turbines and for construction and we've worked closely with the Ohio EPA on how those haul routes and access roads are being handled as far as runoff from the site and, for the most part, those roads are limited in size and number on the site. It's not typically a high enough amount of a conversion to a compacted gravel surface to warrant any sort of an increase in runoff.
- Q. Have you done any calculations to determine how much of the Project Area in this project will be converted into roads?

A. I have not.

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- Q. So you've done no calculations to determine how much flow is going to come from those roads?
- A. I have not done calculations on how much flow would come off of those roads.
- Q. And you've done no calculations to determine how much flow will come from the solar facility after it's built, correct?
- A. I've not done calculations. Based on my experience in watershed models, doing hydrologic studies of watersheds that range in size from 1 acre to 60 square miles, and after reviewing the Application, the proposed changes to land use in this project in my experience, in my opinion, do not -- would not result in an increase in runoff.
- Q. But in those past projects you just referred to, that doesn't include any solar facilities.
- A. One flood study did include a solar facility, yes.
- Q. And what facility was that?

  MR. SETTINERI: I'll just object to the extent the witness is able to disclose that, given any confidentiality agreements on that project. I

just caution the witness to that extent whether he is comfortable, but if he does not know whether he can disclose that, then I would say that's simply not relevant to his rebuttal testimony.

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ALJ SCHABO: With that caution, you can answer the question.

A. I don't know if I can disclose the name of the company that's building the solar field, but it is in Ohio so it's somewhat relevant.

However, that flood study did not have to do with downstream flooding or impacts from runoff from the project area for that project. It was simply logistical for their purposes to establish routes for maintenance and haul roads and height of equipment, for example, on a given parcel for various recurrence events, 100-year, 25-year events, stuff like that.

Actually, the owner had just happened to drive through the project area and noticed a few "High Water" signs, so they asked us to take a look at that so they could establish, like I said, access routes and try to understand, you know, the direction of water through the project area.

MR. VAN KLEY: Okay. No further questions.

ALJ SCHABO: Any redirect?

2 MR. SETTINERI: Your Honor, if I may take

3 a brief moment with the witness, please?

ALJ SCHABO: Absolutely.

MR. SETTINERI: Thank you.

ALJ SCHABO: Let's go off the record for

five minutes.

(Off the record.)

ALJ SCHABO: Any redirect?

MR. SETTINERI: Yes, yes, Your Honor.

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## 13 REDIRECT EXAMINATION

14 By Mr. Settineri:

Q. Mr. Marquis, Mr. Van Kley asked you a question about, and I'll paraphrase, essentially whether the Project drains into Four Mile Creek or the other watersheds, and I believe you answered yes, and I objected it was a compound question. For the record, I guess I'll say where does the Project Area or to what does the Project Area drain to?

A. The Project Area drains into three watersheds that all collect downstream of the Four Mile Creek watershed near Acton Lake.

MR. SETTINERI: Thank you.

528 1 No further questions, Your Honor. 2 ALJ SCHABO: It doesn't really open it up 3 to anything, but --MR. VAN KLEY: Well, I have a ton now, 4 5 Your Honor. (Laughter all around.) 6 7 MR. VAN KLEY: No, nothing further. 8 ALJ SCHABO: Okay. Thank you, 9 Mr. Marquis. You can step down. 10 THE WITNESS: Thanks. MR. SETTINERI: Your Honor, at this time, 11 12 we would move for the admission of Company Exhibit 13 21, the Rebuttal Testimony of Matt Marquis, into the 14 record. 15 ALJ SCHABO: Any objections? Seeing none, it will be admitted. 16 17 (EXHIBIT ADMITTED INTO EVIDENCE.) 18 MR. SETTINERI: At this time, Your Honor, 19 that concludes our rebuttal testimony in this 20 proceeding. ALJ SCHABO: Okay. Let's go off the 2.1 2.2 record for a minute. (Discussion off the record.) 23 24 ALJ SCHABO: We're back on the record. 25 Off the record, we had a brief discussion

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     regarding the anticipated briefing schedule. Looking
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     at October the 18th for initial briefs, with reply
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     briefs being due on November 1st. Am I correct in
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     that?
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                 MR. SETTINERI: Correct, Your Honor.
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                 MR. VAN KLEY: Yes.
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                 ALJ SCHABO: All right. With that, I
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    believe we're adjourned. Thank you very much.
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                 (Thereupon, the proceedings concluded at
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     11:13 a.m.)
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## CERTIFICATE

I do hereby certify that the foregoing is a true and correct transcript of the proceedings taken by me in this matter on Tuesday, September 10, 2019, and carefully compared with my original stenographic notes.

Carolyn M. Burke, Registered Professional Reporter, and Notary Public in and for the State of Ohio.

My commission expires July 17, 2023.



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Summary: Transcript Volume IV - In the Matter of the Application of Angelina Solar I, LLC for a Certificate of Environmental Compatibility and Public Need, hearing held on September 10th, 2019 electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Burke, Carolyn