

BEFORE THE OHIO POWER SITING BOARD

- - -

In the Matter of the :
Application of Kingwood :
Solar I LLC for a :
Certificate of : Case No. 21-117-EL-BGN
Environmental :
Compatibility and Public :
Need. :

- - -

PROCEEDINGS

before Mr. Michael Williams and Mr. David Hicks,
Administrative Law Judges, at the Ohio Power Siting
Board, via Webex, called at 9:00 a.m. on Tuesday,
March 8, 2022.

- - -

VOLUME II

- - -

ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
Columbus, Ohio 43215-5201
(614) 224-9481

- - -

1 APPEARANCES:

2 Vorys, Sater, Seymour and Pease, LLP
3 By Mr. Michael J. Settineri,
4 Ms. Anna Sanyal,
5 Mr. Jonathan K. Stock,
6 and Mr. Nathaniel B. Morse
7 52 East Gay Street
8 Columbus, Ohio 43215

9 On behalf of the Applicant.

10 Van Kley & Walker, LLC
11 By Mr. Jack A. Van Kley
12 132 Northwoods Boulevard, Suite C-1
13 Columbus, Ohio 43215

14 On behalf of the Citizens for Greene
15 Acres and Individual Intervenors.

16 Cedarville University
17 By Mr. John E. Hart
18 251 North Main Street
19 Cedarville, Ohio 45314

20 On behalf of In Progress LLC.

21 Ohio Farm Bureau Federation
22 By Ms. Amy Milam
23 280 North High Street, 6th Floor
24 Columbus, Ohio 43215

25 On behalf of the Ohio Farm Bureau
Federation.

Dinsmore & Shohl LLP
By Mr. Lee A. Slone
One South Main Street, Suite 1300
Dayton, Ohio 45402

On behalf of the Miami Township Board of
Trustees, Greene County, Ohio.

- - -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

APPEARANCES: (Continued)

Brown Law Office LLC
By Mr. Daniel A. Brown
204 South Ludlow Street, Suite 300
Dayton, Ohio 45402

On behalf of the Cedarville Township
Trustees.

Plank Law Firm, LPA
By Mr. David Watkins
and Mr. Kevin Dunn
411 East Town Street, Floor 2
Columbus, Ohio 43215

On behalf of the Xenia Township Board of
Trustees.

Frost Brown Todd LLC
By Mr. Thaddeus M. Boggs
and Mr. Jesse J. Shamp
10 West Broad Street, Suite 2300
Columbus, Ohio 43215

On behalf of the Greene County Board of
Commissioners.

Mr. Charles D. Swaney
515 North Fountain Avenue
Springfield, Ohio 45504

On behalf of the Tecumseh Land
Preservation Association.

Dave Yost, Ohio Attorney General
Mr. John Jones, Section Chief
By Mr. Werner L. Margard, III,
Ms. Jodi Bair,
and Mr. Shaun Lyons
Assistant Attorneys General
Public Utilities Section
30 East Broad Street, 26th Floor
Columbus, Ohio 43215

On behalf of the Staff of the OPSB.

- - -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX

- - -

WITNESS	PAGE
Lynn Gresock	
Direct Examination by Mr. Settineri	248
Cross-Examination by Mr. Van Kley	251
Cross-Examination by Mr. Slone	317
Cross-Examination by Ms. Bair	334
Cross-Examination (Continued) by Mr. Van Kley	341
Redirect Examination by Mr. Settineri	358
Recross-Examination by Mr. Van Kley	359

Andrew Lines	
Direct Examination by Ms. Sanyal	364
Cross-Examination by Mr. Van Kley	366
Cross-Examination by Mr. Boggs	400
Cross-Examination by Mr. Brown	406
Redirect Examination by Ms. Sanyal	416
Recross-Examination by Mr. Van Kley	418
Recross-Examination by Mr. Brown	419

Alex Odom	
Direct Examination by Mr. Settineri	422
Cross-Examination by Mr. Van Kley	426
Cross-Examination by Mr. Slone	470
Cross-Examination by Ms. Bair	477
Redirect Examination by Mr. Settineri	484

- - -

APPLICANT EXHIBIT	IDENTIFIED	ADMITTED
8 Direct Testimony of Lynn Gresock	247	360
9 Direct Testimony of Andrew Lines	364	420
10 Direct Testimony of Alex Odom	422	486
11 Supplemental Testimony of Alex Odom	422	486

- - -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

INDEX (Continued)

- - -

CITIZENS EXHIBIT	IDENTIFIED	ADMITTED
14 FWS Website on Solar Energy	304	363
15 USGS Mortality Monitoring Design for Utility-Scale Solar Power Facilities	310	--

- - -

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Tuesday Morning Session,
March 8, 2022.

- - -

ALJ HICKS: Go ahead and go back on the record.

Good morning, everyone. We are reconvening in Case No. 21-117-EL-BGN in the Matter of the Application of Kingwood Solar I LLC. I am still David Hicks, and with me is Mike Williams, the Administrative Law Judges assigned to hear this case.

Just wanted to start out take quick appearances from folks, just name with each party just to make sure we know who all is on. Don't need the full formal appearance.

So we will go ahead and start with the Applicant.

MR. SETTINERI: Yes, good morning, your Honors. On behalf of Kingwood Solar I LLC, Vorys, Sater, Seymour and Pease, LLP, Michael Settineri and Anna Sanyal today.

ALJ HICKS: Thank you.
On behalf of Staff.

MS. BAIR: Thank you, your Honor. On behalf of Staff, Jodi Bair, Vern Margard, Shaun Lyons, Assistant Attorneys General.

1 ALJ HICKS: Thank you.

2 And for Ohio Farm Bureau Federation.

3 MS. MILAM: Good morning, your Honors,
4 Amy Milan on behalf of Ohio Farm Bureau Federation.

5 ALJ HICKS: Thank you. And Board of
6 Trustees of Cedarville Township.

7 MR. BROWN: Good morning, your Honors.
8 This is Daniel Brown for Cedarville Township.

9 ALJ HICKS: Thank you.
10 Board of Trustees of Xenia Township.

11 MR. DUNN: Good morning, your Honors.
12 Kevin Dunn with Plank Law Firm for Xenia Township.

13 ALJ HICKS: Board of Trustees of Miami
14 Township.

15 MR. SLONE: Good morning. Lee Slone,
16 Dinsmore & Shohl.

17 ALJ HICKS: Thank you.

18 In Progress LLC. I would just note he
19 may be joining us later. It's our understanding he
20 is having a few issues getting on.

21 Tecumseh Land Preservation Association. I
22 am not hearing Mr. Swaney. He may join us later
23 which we can note at that time.

24 And for Citizens for Greene Acres and the
25 associated Intervenors

1 MR. VAN KLEY: This is Jack Van Kley of
2 Van Kley & Walker.

3 ALJ HICKS: Thank you.

4 And for Greene County Board of
5 Commissioners.

6 MR. SHAMP: Good morning, your Honors.
7 This is Jesse Shamp, Frost Brown Todd law firm.

8 ALJ HICKS: Thank you.

9 ALJ WILLIAMS: David, I just want to note
10 for the record Attorney Hart was not having
11 connection issues. He had some other conflicting
12 meeting.

13 ALJ HICKS: Oh, apologies.

14 ALJ WILLIAMS: No connection issues. He
15 is going to join us later though.

16 ALJ HICKS: Okay. Thank you.

17 Okay. And with that, we are ready to
18 resume, and I will hand things off to Mr. Settineri.

19 MR. SETTINERI: Thank you, your Honor.
20 And at this time we would like to call our next
21 witness, Ms. Lynn Gresock, to the stand, please.

22 ALJ HICKS: Promote her.

23 MR. SCHMIDT: Ms. Gresock, you have been
24 promoted. If you can enable your audio and video.

25 MS. GRESOCK: Did that work?

1 ALJ HICKS: I saw you for a flash, but
2 you went away.

3 MS. GRESOCK: Sorry.

4 ALJ HICKS: There we go.

5 MS. GRESOCK: Did that work? Okay.

6 Thank you.

7 ALJ HICKS: Sure. Ms. Gresock, if you
8 could just raise your right hand.

9 (Witness sworn.)

10 ALJ HICKS: Please go ahead,

11 Mr. Settineri.

12 MR. SETTINERI: Thank you, your Honor.

13 At this time I would like to mark an exhibit Kingwood
14 Exhibit 8 the direct testimony of Lynn Gresock.

15 ALJ HICKS: It is so marked.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 MR. SETTINERI: Okay. And I would note
18 for the record that this testimony was originally
19 filed February 23 and then refiled February 24,
20 subject to leave of the Bench to include exhibits
21 that were missing from the initial filing.

22 ALJ HICKS: So noted.

23 MR. SETTINERI: Thank you.

24 - - -

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

LYNN GRESOCK

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

DIRECT EXAMINATION

By Mr. Settineri:

Q. Good morning, Ms. Gresock.

A. Good morning.

Q. Do you have in front of you what's been
marked as Kingwood Exhibit 8, please?

A. I do.

Q. And can you identify that for the record,
please.

A. Kingwood Exhibit 8 is my direct
testimony.

Q. Okay. And was that prepared by you or at
your direction?

A. It was.

Q. And at this time do you have any
revisions to that testimony today?

A. I do.

Q. If you could slowly walk through those
revisions for us and most importantly the court
reporter, please.

A. The first revision is on page 3, line 3,
inserting after the word "application" the words "and

1 Joint Stipulation." So it would read "in support of
2 its application and Joint Stipulation."

3 Q. Thank you, Ms. Gresock.

4 MR. SETTINERI: Your Honor, could we go
5 off the record briefly?

6 ALJ HICKS: Sure. We are off the record.

7 (Discussion off the record.)

8 ALJ HICKS: We'll go back on the record.

9 Q. (By Mr. Settineri) And, Ms. Gresock, do
10 you have additional revisions to your testimony?

11 A. I do. On page 10, line 7, just prior to
12 the end of the sentence that currently ends "within a
13 fence" and a parenthetical saying "(reduced to 16
14 based upon the Joint Stipulation)."

15 Then on page 11, line 2, provide an
16 additional sentence that reads "The conditions in the
17 Joint Stipulation which I have reviewed further
18 support my opinion."

19 On page 14, line 5, after the sentence
20 that ends "prior to construction" provide an
21 additional sentence that says "It will also be
22 updated if Condition 16 of the Joint Stipulation is
23 approved."

24 Page 16, line 11 following the date
25 "January 3, 2022," add "(see Kingwood Exhibit 2)."

1 On page 17, line 21, at the end of the
2 last sentence add the same thing, "(see Kingwood
3 Exhibit 2)."

4 And then finally on page 18, lines 10 and
5 11, strike the words "additional testimony in support
6 of any stipulation or" so that it reads "Yes, but I
7 reserve the right to present any rebuttal testimony."

8 Q. Okay. Do you have any other revisions to
9 your testimony at this time, Ms. Gresock?

10 A. I do not.

11 Q. Okay. Thank you. If I asked you the
12 questions in your direct testimony as written today,
13 would your answers be the same as you have revised?

14 A. They would.

15 MR. SETTINERI: All right. Thank you,
16 Ms. Gresock.

17 Your Honors, the witness is available for
18 cross-examination.

19 ALJ HICKS: Thank you, Mr. Settineri.

20 So I'm just going to follow the same
21 order we used yesterday for cross repeating Judge
22 Williams's caution that we are not going to entertain
23 friendly cross, but to the extent there may be
24 questions that would not qualify as that, we'll
25 certainly open it up to parties.

1 them for processes that otherwise require them, but I
2 don't have a total.

3 Q. Well, of those instances where you have
4 worked on visual impact assessments, how many of
5 those have involved solar facilities?

6 A. Two, maybe two.

7 Q. Sorry. Repeat that, please.

8 A. I said two, I believe.

9 Q. Two, okay. Does that include the
10 Kingwood Solar project?

11 A. No. I mean -- no, it doesn't so three.

12 Q. Okay. All right. Did you personally
13 perform the visual impact assessment for Kingwood
14 Solar?

15 A. The visual impact assessment was
16 performed under my direction. As is generally the
17 case, there are a lot of contributors to the process
18 for doing a visual impact assessment due to the
19 different steps along the way and the different tools
20 that are used in that process.

21 Q. So what did you personally do in the
22 Kingwood Solar visual impact assessment?

23 A. So I oversaw the entire framework of it.
24 I directed every person who -- who contributed to the
25 pieces. I was responsible for reviewing all of those

1 pieces and drawing conclusions on the basis of the
2 technical information presented.

3 Q. With respect to the other two solar cases
4 that -- in which you have done visual impact
5 assessments, were those both done on behalf of solar
6 companies?

7 A. They were.

8 Q. Have you ever performed a visual impact
9 assessment on behalf of anyone else in a solar matter
10 other than solar companies?

11 A. No.

12 Q. And how many solar cases have you
13 testified besides this one?

14 A. Three come to mind. I have several that
15 are pending. There may have been more.

16 Q. So you indicated that you had performed
17 or been involved in the performance of two other
18 visual impact assessments and two other -- for two
19 other facilities. Did you testify in both of those
20 cases?

21 A. Not yet for some of them, yeah.

22 Q. So --

23 A. But yes for the other.

24 Q. Oh, okay. So I guess that leaves two
25 more times you've testified on behalf of a solar

1 company; is that right?

2 A. And they would have been in other states
3 where testimony may or may not have focused as much
4 on visual assessment for that particular facility.

5 Q. Okay. What was -- what was the subject
6 matter in those other cases in which you were
7 testifying on behalf of solar companies?

8 A. I don't understand your question.

9 Q. Yeah. In any of those other solar cases,
10 did you testify about a subject matter other than
11 visual assessments?

12 A. I frequently testify broadly with regard
13 to many topics that are reflected in the
14 comprehensive assessments for these types of
15 projects, yes.

16 Q. Did you testify about wildlife issues in
17 any of those cases?

18 A. Yes.

19 Q. What was -- generally speaking what was
20 the nature of the wildlife testimony you provided in
21 those other cases?

22 A. Similar to the testimony I'm providing
23 here in that I typically have testified about the
24 consultation process with U.S. Fish and Wildlife
25 Service and the relevant state agency. I typically

1 will also testify with regard to natural resource
2 studies that have been done on the project site and
3 support conclusions that have been drawn on the basis
4 of that information.

5 Q. Okay. Would you turn to Appendix Q of
6 the application for Kingwood Solar.

7 MR. SETTINERI: And for the record,
8 Mr. Van Kley, are you referencing Exhibit 1?

9 MR. VAN KLEY: Yes. It would have been
10 the application which has been marked as Exhibit 1.

11 MR. SETTINERI: Thank you.

12 MR. VAN KLEY: Appendix Q.

13 A. Appendix Q, yes, I have it.

14 Q. Okay. Would you turn to page 2 of
15 Appendix Q --

16 A. I'm sorry. What page?

17 Q. Page 2.

18 MR. VAN KLEY: That would be PDF page 8
19 for those who are looking online.

20 A. All right.

21 Q. All right. I would like to direct you to
22 the fourth paragraph on page 2 and the first
23 sentence. Do you see there where it's stated that
24 there are 50 residences of non-participating
25 neighbors within 250 feet of the project area?

1 A. I do see that.

2 Q. All right. Now -- and there is -- there
3 are no residences inside the project area, right?

4 A. That's correct.

5 Q. Now, did you -- did you personally --
6 strike that.

7 Now, let's go to page 4 of Appendix Q.

8 A. All right.

9 Q. And I would like you to look at the first
10 bullet point at the bottom that discusses
11 near-foreground views. And tell me when you have
12 found that.

13 A. I have found that.

14 Q. Now, in your own words how would you
15 define a "near-foreground view" of the Kingwood Solar
16 project?

17 A. I'm sorry. I am not sure what you are
18 asking.

19 Q. Yeah. Can you define what a
20 "near-foreground view" is as it relates to the
21 Kingwood Solar project?

22 A. These classifications of viewing
23 distances have been used for a long time as a
24 framework for understanding distances from which
25 views can vary and landscape detail can be seen. The

1 near-foreground view, which is the closest, you know,
2 0 to half a mile away, is considered to be the
3 distance at which views of a specific project would
4 be more likely to be distinguishable.

5 Q. Okay. And with respect to the 50
6 residences within 250 feet of the project area as
7 stated on page 2, those residences would be within
8 the near-foreground views of the project, right?

9 A. Individual impact assessment methodology
10 uses those distances along with the other tools that
11 are reflected in the analysis to identify the
12 potential for visibility but, yes, there are
13 certainly some residences that are -- that are
14 closer.

15 Q. Okay. Well, let's go back to the
16 question I asked. Isn't it true that the 50
17 residences described on page 2 as being within
18 250 feet of the project area are within 0 to .5 miles
19 of the project area?

20 A. That is true.

21 Q. Okay.

22 A. Yes.

23 Q. Let's go to page 8 of Appendix Q.

24 A. Okay.

25 Q. All right. There is a section there

1 entitled "4.1.1 Near-Foreground." Do you see that?

2 A. I do.

3 Q. All right. And then we have some
4 recreational areas listed in that section, correct?

5 A. That is correct.

6 Q. Looking at the first one listed which is
7 John Bryan State Park, I would like to ask you about
8 the statement in the last line of that bullet point
9 where it is stated that "the dense vegetation,
10 present even during winter months, will obscure any
11 potential views of the Project." Do you see that?

12 A. I do see that.

13 Q. Did you draft this report yourself?

14 A. I did. I did.

15 Q. Okay. What did you mean by the term
16 "obscure" as used in this paragraph?

17 A. When a substantial amount of tree
18 vegetation is present, whether it's deciduous or
19 whether it's evergreen, it tends to block line of
20 sight. We, in addition to considering the results of
21 the modeling tool, did have someone visit that
22 location, take photographs. As you can see, the
23 photographs are attached in Attachment A, and those
24 observations supported the fact that visibility was
25 obscured in that -- in that direction and toward the

1 project site.

2 Q. Okay. So going back to my question,
3 what's the meaning of the word "obscure" as you use
4 it in this paragraph?

5 A. So obscure means block.

6 Q. Does that mean completely blocks so there
7 are no views of the solar facility from John Brown --
8 John Bryan State Park?

9 A. The distance and vegetation and the
10 terrain appear to indicate that that would be the
11 case.

12 Q. So going to the second bullet point on
13 page 8 concerning Upper Great Scott Trail, do you see
14 where you use the word "obscure" again in the last
15 line of that bullet point?

16 A. I do.

17 Q. Does "obscure" mean completely block any
18 views of the solar facility?

19 A. Again, based upon the dense vegetation
20 and the characteristics and use of that trail, yes.

21 Q. Why did you use the term "obscure"
22 instead of using the word "block"?

23 A. Narrative choices are made. I can't tell
24 you why we chose a certain word.

25 Q. Let's go to page 31 of Appendix Q which

1 is PDF page 37.

2 A. Okay.

3 Q. All right. Directing your attention to
4 the summary on that page.

5 A. Okay.

6 Q. You state in the first sentence that the
7 "visibility of the solar panels from distances
8 greater than 1,000 feet will generally result in
9 limited visual impacts; most non-participating
10 viewers surrounding the Project would be
11 approximately this far from viewed arrays." Do you
12 see that?

13 A. Yes.

14 Q. But that statement that I just read back
15 to you doesn't pertain to the 50 adjacent homes
16 within 250 feet, does it?

17 A. Well, it's speaking to the distance from
18 the arrays, not the distance of those homes is from
19 the edge of the project area.

20 Q. Yeah. Well, are you saying that the --
21 that homes within 250 feet of the project area will
22 be generally 1,000 feet away from the arrays?

23 A. Some will and some will not.

24 Q. Do you know how many will?

25 A. I do not.

1 Q. Let's go to the last paragraph on page
2 31. And there the report discusses some transmission
3 lines that are in the area, correct?

4 A. That is right.

5 Q. How many, if you know, of the adjacent
6 homes of non-participating neighbors are within
7 250 feet of one of these transmission lines?

8 A. I do not know.

9 Q. Do you know what the closest distance is
10 between any of those 50 homes and a transmission line
11 that you've described in this paragraph?

12 A. I don't know the distance, but I do know
13 that those transmission lines are visible features
14 throughout the project area.

15 Q. But you can't tell me how far away those
16 lines are from any of those 50 homes.

17 A. I do not have that information.

18 Q. Why don't we take a look at the
19 simulations that were performed. I would like to
20 direct your attention to Appendix Q, and the pages
21 for the simulations are not numbered, so I will give
22 you some time to find them.

23 MR. VAN KLEY: For those of you looking
24 at the PDF copy, it would -- we will be starting on
25 PDF page 68.

1 A. And I am assuming you are referring to
2 the figure -- the visual simulations that begin at
3 Figure 10, right?

4 Q. Just a moment. Let me find it myself.
5 Yes, you are correct. This would be Figure 10. Are
6 you there?

7 A. I am.

8 Q. All right. Excellent. All right. So
9 starting at the first page of Exhibit 10, that page
10 would be entitled at the top Viewpoint 1: Clark Run
11 Road, correct?

12 A. That's correct.

13 Q. Okay. So just to give us an idea what we
14 are looking at here, the before photograph is a
15 picture of an area as it exists today, correct?

16 A. That is correct taken during winter
17 conditions.

18 Q. When did -- when were the photographs in
19 Figure 10 taken?

20 A. I don't have the exact date in front of
21 me, but they were taken during the fall-winter
22 conditions when there was no deciduous tree growth in
23 order to reflect the most conservative view of what
24 visibility would be.

25 Q. Did you take the photographs yourself?

1 A. I did not.

2 Q. And then the after photograph is a
3 simulation of the same scene as depicted in the
4 before photograph but with a simulation of a solar
5 array -- solar array added to it, correct?

6 A. That's correct.

7 Q. And that's what you did for all of the
8 viewpoints that are in Figure 10, correct?

9 A. That's correct.

10 Q. And there are a total of seven
11 simulations in all in the application for Kingwood
12 Solar, correct?

13 A. That is correct, selected to show
14 different locations around the project area but also
15 intended to show varying distances from -- between
16 the viewer and the panels.

17 Q. Were the before photographs, were any of
18 the seven simulations taken by a person standing in
19 anybody's yard?

20 A. We are not authorized to trespass on
21 private property. All of the photos were taken from
22 public ways.

23 Q. Public ways being public roads?

24 A. Generally speaking they were public
25 roads, yes.

1 Q. Were there any photographs in the
2 simulations that were taken from any location other
3 than a public road?

4 A. These were all taken from public roads.

5 Q. All right. Now, are you aware of whether
6 or not any of the persons who are leasing land to
7 Kingwood Solar have yards on properties adjacent to
8 the project area?

9 A. I'm sorry. Could you ask the question
10 again?

11 Q. Sure. Do you know whether any of the
12 persons who are leasing their land to Kingwood Solar
13 or the project have yards or houses located adjacent
14 to the project area?

15 A. I am still confused about your question.
16 Sorry.

17 Q. Okay. First of all, let me remark that
18 when we refer in a hearing like this to a
19 "participating landowner," we are referring to a
20 landowner who has or who will lease land to be
21 included in the project area. Is that your
22 understanding of how we use that term?

23 A. That's correct.

24 Q. Okay. Do you know whether any of the
25 participating landowners for this project own land

1 adjacent to the project area on which they have a
2 home or a yard?

3 A. I don't know. I don't know.

4 Q. So you didn't -- you didn't investigate
5 before you took these photographs or before your
6 company took these photographs to find out whether
7 there were any residences owned by participating
8 landowners from which you could take photographs of
9 the project area to use in your simulations.

10 A. I wouldn't consider that to be
11 appropriate under visual methodologies. It's much --
12 photographs are taken either from visually sensitive
13 locations that are public or other public ways in
14 order to characterize a range of potential viewers'
15 potential effects.

16 Q. Well, isn't a person who is living in a
17 residence adjacent to the project area one of those
18 persons who could be affected by the view of the
19 project?

20 A. These are representative locations and
21 there are distances reflected in these simulations
22 that can allow those who are surrounding the project
23 to understand the approximate view they would
24 experience.

25 Q. Okay. Going back to my question --

1 MR. VAN KLEY: Could we -- your Honor, I
2 have forgot the exact wording of my question. Could
3 I have my question reread?

4 ALJ HICKS: Sure. Karen, if you could
5 please.

6 (Record read.)

7 Q. (By Mr. Van Kley) Okay. Could you answer
8 that question, please.

9 A. Certainly a person located adjacent to
10 the project would have one of the more direct
11 potentials for view.

12 Q. So explain to me then why it would be
13 inappropriate to use a photograph taken from the
14 vantage point of a person who lives in a residence
15 adjacent to the project area?

16 A. As I noted before, we have distances that
17 reflect the distances from which those viewers would
18 experience the panels, and so selecting
19 representative viewpoints to capture the potential
20 for both the members of the public using the roadways
21 as well as providing information that allows
22 understanding of views from the residences was the
23 goal.

24 Q. Well, couldn't you take photographs and
25 use them in simulations for -- to depict the

1 perspective of more than one type of viewer, for
2 example, a resident living next to the project area
3 as well as a resident who is traveling a public road?

4 A. Choices can be made about where to --
5 where to conduct simulations, yes.

6 Q. So there's no code or standard that
7 prohibits you from preparing a simulation to depict
8 the view from somebody's residence, correct?

9 A. With landowner permission that would
10 certainly be allowable. However, that view would be
11 more particular to that residence than the generally
12 representative of visual affect throughout the
13 project area.

14 Q. And even though there are 50 homes owned
15 by non-participants within 250 feet of the project
16 area, you didn't think it was important to depict the
17 view from any of those homes in your simulations.

18 A. These are representative views that
19 provide all of those homeowners the information to be
20 able to understand the views they potentially would
21 experience from the project.

22 Q. Are any of the simulations -- let me
23 reword that.

24 Are any of the before photographs
25 included in your simulations taken at a location that

1 is higher in elevation than the location where your
2 simulation is placed at the solar panels?

3 A. I'm not sure what you are asking. Are
4 you asking -- well, I am not sure what you are
5 asking.

6 Q. All right. Let me rephrase. For
7 illustration purposes let's look at simulation 1.

8 A. Okay.

9 Q. And directing your attention to the after
10 picture. Are the -- is the area where the solar
11 panels are depicted in that simulation higher or
12 lower in elevation than the location at which the
13 photograph was taken, or are they on the same
14 elevation?

15 A. There is rolling terrain throughout the
16 project area and certainly the elevation at which the
17 panels would be installed were taken into account in
18 the after simulations. I don't have the specific
19 information in front of me about the relative
20 elevation but those were accounted for in the after
21 simulation.

22 Q. For any of these seven simulations, can
23 you point me to a simulation in which the solar
24 panels were placed on an elevation that was different
25 than the elevation from which the photograph was

1 taken?

2 A. I mean, I would guess that all of them
3 have some minor differences because of the fact that
4 the terrain does change throughout the project area.

5 Q. Do any of the simulations depict
6 locations at which -- well, let me back up a little
7 bit here.

8 What do you mean by a minor change in
9 elevation? Can you quantify that?

10 A. Elevation varies throughout the project
11 area, but it's undulating rather than extremely
12 mountainous so there are changes that occur
13 throughout the project area, and in each instance the
14 elevation of the viewer's position and the elevation
15 at which the layout is placed was true to those
16 locations.

17 Q. So what's the largest difference in
18 elevation between the --

19 A. I don't --

20 Q. -- in your simulations between the solar
21 panel locations and the locations where the
22 photographer was standing?

23 A. I don't remember that information.

24 Q. Are you aware that this project will have
25 a substation?

1 A. I am.

2 Q. Did you do any simulations for the
3 substation?

4 A. We did not.

5 Q. Did you do any simulations in an area
6 where the photographer was standing in a recreational
7 area?

8 A. None of the recreational areas identified
9 had views from which the site could be seen.

10 Q. Do you know that the Little Miami River
11 is located in the vicinity of the project area?

12 A. I do.

13 Q. Do you know how far away it is at its
14 closest location?

15 A. I don't have that measurement in front of
16 me.

17 Q. Is the project area visible from any part
18 of the Little Miami River?

19 A. No.

20 Q. Let's switch topics now and talk about
21 wildlife. Did you personally have any involvement
22 with your company's work on wildlife issues for this
23 application by Kingwood Solar?

24 A. I did.

25 Q. What was that personal involvement?

1 A. Overseeing and in some cases directly
2 corresponding with U.S. Fish and Wildlife Service and
3 ODNR, making sure that the natural resource field
4 team had details of what both of those agencies had
5 identified as listed species prior to going in the
6 field so that signs of appropriate presence or
7 setting could be observed, and reviewing information
8 collected for the discussion of general flora and
9 fauna in addition to the wetland and stream
10 delineations.

11 Q. Are you a biologist?

12 A. I am not a biologist.

13 Q. What kind of training do you have, if
14 any, concerning wildlife?

15 A. Oh, for many years early in my career, I
16 actually did conduct wetland delineations and natural
17 resource assessments. I have over 37 years of
18 experience reviewing similar reports and learning a
19 lot about different habitat characteristics, various
20 protection regimes, and know a lot of the right
21 questions to ask about how best to understand whether
22 a species is present and how it might behave in a
23 given setting.

24 Q. Okay. So you have no formal education,
25 degree in biology.

1 A. I do not.

2 Q. Let me just back up for a moment and ask
3 you another follow-up question while I am still
4 thinking of it, simulations. Are you aware that up
5 to 25-1/2 acres of trees may be cut down in the
6 process of building the Kingwood Solar project?

7 A. Yes.

8 Q. And have you done any study to determine
9 whether cutting down any of these trees will increase
10 the views of the project by non-participating
11 landowners who live adjacent to the project area?

12 A. We did consider the locations of the tree
13 clearing to make sure that the simulations we
14 reflected were not taking credit for trees that would
15 be removed, yes.

16 Q. Okay. I don't understand that answer.
17 Could you explain that, please.

18 A. We were careful to consider the locations
19 where we knew trees would no longer be present so
20 that we could show in our after simulations only the
21 trees that would still remain.

22 Q. What do you -- what are you referring to
23 when you mention "after simulations"?

24 A. So as we were just looking at the figure
25 starting with Figure 10 in the visual documentation,

1 the -- each of the seven viewpoints has a before
2 photograph and an after photograph. And in any
3 instance where tree vegetation appeared to have the
4 potential to obscure views in the after version, we
5 looked to see whether any of those trees that were
6 filtering views of the project were planned to be cut
7 or whether they would remain.

8 Q. Okay. But none of these seven
9 simulations are located on the properties of any
10 nonadjacent -- or any adjacent non-participating
11 landowners, correct?

12 A. I'm sorry. I didn't hear what you said.

13 Q. Yeah. I'll repeat it. None of the
14 simulations in which you took into account trees that
15 would be cut down are performed on land owned by
16 adjacent landowners who are non-participants in the
17 project.

18 A. These are representative views.

19 Q. But none -- none of the views depicted in
20 the simulations are views from any adjacent
21 non-participating landowners' property, right?

22 A. Some of them -- some of them are views
23 from very close to such locations.

24 Q. But not on their properties.

25 A. Not on their private properties, no.

1 Q. Okay. Is there anything that would have
2 prevented your company from asking a participating
3 landowner who lived adjacent to the project area for
4 permission to take a photograph from that person's
5 property?

6 A. There was nothing preventing it other
7 than the design of the study.

8 Q. Now, going back to the question that
9 started off this recent discussion with you, have you
10 determined whether any of the tree cutting for this
11 project will increase the amount of view of the
12 project for any non-participating landowner?

13 A. We haven't done any formal analyses to
14 consider that.

15 Q. All right. Have you done any informal
16 analyses to consider that?

17 A. I would say that the informal analysis is
18 the commitment to the landscaping plan of the project
19 both as reflected in the application and as further
20 enhanced in the Joint Stipulation.

21 Q. So you are saying it's taken into account
22 by providing a landscaping plan that will plant new
23 trees.

24 A. New trees or shrubs depending upon the
25 module, yes.

1 Q. Now, you were talking about your survey
2 of aquatic resources earlier in your testimony.

3 A. Okay.

4 Q. The term "aquatic resources" is a term
5 used in -- in the -- one of your reports in this
6 application, right?

7 A. It tends to be used to refer to wetland
8 and stream delineation, yes.

9 Q. Yes. Now, how were the surveys of
10 aquatic resources conducted? Can you give me the
11 procedure that you used in the field to do those
12 surveys?

13 A. Well, there's work that occurs prior to
14 going in the field as well but do you want me to
15 focus solely on the field activities?

16 Q. No. Let's start with any preparation
17 that you had in order to prepare for the field
18 surveys.

19 A. There are specific delineation manuals
20 for each region of the country and, in fact, there
21 are different places within the state of Ohio that
22 utilize different delineation manuals so making sure
23 that the delineation framework is precisely known is
24 important. Taking a look at available resource
25 mapping to see where streams and wetlands may be

1 indicated by the National Wetland Inventory or the
2 Ohio Wetland Inventory, also taking a look at
3 floodplain mapping that is available all provide
4 important information with regard to particular focus
5 areas that may need to be particularly considered.

6 It's well known that the National Wetland
7 Inventory and Ohio Wetland Inventory wetland and
8 stream mapping is a useful tool but is not generally
9 accurate. And so identifying the presence of those
10 mapped resources allows some special focus in
11 determining whether or not they are present and in
12 what configuration.

13 Once the background information was
14 developed, our wetland team went in the field and in
15 addition to those particular focus areas would have
16 walked transects of the entire -- the entire
17 property.

18 Wetland delineation in particular uses
19 three parameters for adding an area as a wetland.
20 Hydric soils, subsoils would have been looked at
21 ahead of time but also in the field small test pits
22 may be done for comparison with Munsell charts that
23 indicate the hydric nature or non-hydric nature of
24 soils. Vegetation is a factor in a situation like
25 this where a lot of agricultural plantings are

1 present. The kinds of vegetative signs that a
2 wetland delineator would look for would be signs of,
3 you know, areas where the agricultural plantings
4 appear to have been affected by greater levels of
5 water use and other kinds of cues like that. And
6 then hydrology is the third parameter. Our teams
7 have a lot of experience working in these kinds of
8 agricultural settings, and so they take a lot of care
9 to -- to identify where the wetland may or may not be
10 present.

11 When a wetland area was identified in the
12 field, global positioning system coordinates were
13 electronically taken to bound the locations where
14 those resources were found to occur. In addition, in
15 the field there are forms that in the state of Ohio
16 are used to document the quality of both wetland and
17 of streams, and so data were gathered during the
18 field effort to complete those forms as well.

19 Q. So it's routine during aquatic resources
20 to record your findings on a form.

21 A. In states where it is required and
22 locations where it is required, there is something
23 that's recorded on a form. I would say that it is
24 routine in all locations for the field crew to
25 document in some form or fashion field logs of

1 information.

2 Q. Now, let's go to your testimony again
3 which is Kingwood Exhibit 8. And I would like to
4 direct your attention to answer 8 starting at the
5 bottom of page 7 of your testimony. And starting
6 with line 23 on page 7, you mention a field review
7 performed by your company by a professional who has
8 approximately 10 years of field experience observing
9 and documenting habitat conditions on projects of
10 similar scope, et cetera. So here in answer 8, you
11 are talking about a wildlife study that you -- your
12 company performed, correct?

13 A. So this was done during the time of the
14 aquatic resource review but a slightly different
15 focus for the Ohio Power Siting Board application.
16 It was necessary to identify information about
17 particular plant or animal species that are observed
18 both within the project area and for a certain
19 distance outside of the project area and to -- and to
20 consider the information that we also had from the
21 U.S. Fish and Wildlife Service and Ohio Department of
22 Natural Resources with regard to species those
23 agencies had identified as having the potential to be
24 present.

25 So that we could gather during that field

1 reconnaissance information that would allow us to
2 have further communications and correspondence with
3 those agencies.

4 Q. Okay. So during -- let's go to page 8 of
5 your testimony, line 4, where you refer to a
6 "reconnaissance-level survey." What is a
7 "reconnaissance-level survey"?

8 A. So a reconnaissance-level survey would be
9 fairly broad to try to capture the general habitat
10 characteristics and to observe generally specific
11 species observations but also observations of their
12 potential side, you know, whether animal droppings or
13 other characteristics might be observed. A
14 reconnaissance-level survey would be, I guess,
15 contrasted to a specific survey that is focused on an
16 individual species where such -- where such things
17 warranted.

18 Q. During this reconnaissance-level survey,
19 were any forms filled out to record the presence of
20 any forna in the project area?

21 A. A list was created of observed species
22 that were then translated into the tables presented
23 in the Ohio Power Siting Board application. No
24 specific forms were used.

25 Q. Were those forms filled out in the field

1 while the survey was being conducted?

2 A. I am not aware of specific forms that
3 were used for this purpose but rather field notes.

4 Q. Field notes, okay. What was the format
5 for the field notes?

6 A. I don't know. I don't know.

7 Q. The field notes were not included in the
8 application?

9 A. They were not. The results of the field
10 data gathering was included in the application.

11 Q. Uh-huh. Did your consulting company
12 write any reports that were -- that resulted from
13 your reconnaissance-level survey?

14 A. Information from that survey was
15 reflected in the Ohio Power Siting Board application
16 which is a report and also in additional
17 correspondence provided to U.S. Fish and Wildlife
18 Service and Ohio Department of Natural Resources.

19 Q. Do you know what the narrative of the
20 application is?

21 A. Do I know what the narrative is?

22 Q. Yeah, yeah. Do you know what we are
23 referring to when we talk about the "narrative part
24 of the application"?

25 A. I believe so.

1 Q. Okay. All right. Let's go to the
2 narrative, if you have it there. This would be part
3 of Exhibit 1. And it would be the main text to which
4 all of the appendices in Exhibit 1 is attached.

5 A. And where would you like to look?

6 Q. Why don't we look at the wildlife
7 discussion. I believe that that discussion starts on
8 page 77, perhaps with the species literature survey.

9 A. Okay. I'm on page 77.

10 Q. Okay. Let me first ask you then whether
11 there are any reports on wildlife other than what you
12 see in the narrative of the application and --

13 A. There are -- sorry.

14 Q. Okay. All right. First of all, there's
15 Appendix N to the application that includes your
16 correspondence with wildlife agencies, correct?

17 A. That is correct.

18 Q. And then we have a discussion on wildlife
19 in the narrative of the application, correct?

20 A. There is.

21 Q. All right. Are there any other reports
22 included in the application on the results of your
23 surveys of flora and fauna?

24 A. Because neither of the species agencies
25 identified the need for a specific survey, there are

1 no further reports.

2 Q. Now, redirecting -- and just keep that
3 open, please. We'll come back to that in the
4 narrative, page 77. But in the meantime also go back
5 to your testimony, Kingwood Exhibit 8, back to pages
6 7 and 8, and it's stated here that a "field review
7 was completed by a Haley & Aldrich professional who
8 has approximately 10 years of field experience" on
9 the topics that you mentioned in that sentence. Do
10 you see that?

11 A. Uh-huh, I do.

12 Q. Okay. Now, did this same individual
13 perform all of the observations in search of flora
14 and fauna species in the project area?

15 A. He and his team member, yes.

16 Q. One other team member?

17 A. They typically go in pairs, but I have
18 one lead field investigator.

19 Q. So you had one field -- you had one lead
20 field investigator plus one other person who did
21 these observations of flora and fauna?

22 A. Yes, over the several -- over the two
23 visits that they made to the site.

24 Q. And were either of those people
25 ornithologists?

1 A. Well, as noted, the lead field biologist
2 has considerable knowledge and experience relative to
3 wildlife.

4 Q. Okay. Going back to my question, were
5 either of them ornithologists at the time they did
6 this survey?

7 A. I'm not sure what you mean by
8 "ornithologists." They were both people who have
9 experience identifying birds.

10 Q. Did either of -- did either of them have
11 enough experience with birds in order to recognize
12 birds solely by the birds' calls or songs?

13 A. They have enough experience to identify
14 many birds in that way and they have enough
15 experience to know when they are hearing something
16 that may be in a family and that they cannot identify
17 it.

18 Q. Does your list of birds -- let me just
19 direct you to the actual list. So if you go to page
20 88 of the narrative, you'll see Table 08-5?

21 A. I do.

22 Q. And does this table include the names of
23 all species of birds that were detected during this
24 field reconnaissance?

25 A. Yeah. As noted, it says Table 08-5 lists

1 wildlife species observed during field investigations
2 through direct observation or sign, that's right.

3 Q. Okay. And there's no note in here of any
4 species or -- there's no note in here of any families
5 of bird species that could not be identified by the
6 people in the field?

7 A. If a species could not be identified, it
8 would not have been listed.

9 Q. Do you have any idea how many bird calls
10 were detected by the field team of birds that they
11 could not identify?

12 A. I do not know.

13 Q. Are you aware of what are the most common
14 species of birds found in the vicinity of the project
15 area?

16 A. I personally don't have that information.

17 Q. Are you familiar, for example, with the
18 red-winged blackbird?

19 A. I am familiar with the red-winged
20 blackbird which is a little bit of a -- likes a lot
21 of marshy areas in my experience.

22 Q. Are you aware that the red-winged
23 blackbird is one of the most common species in Greene
24 County?

25 A. It may well be. I am not aware.

1 Q. I mean, the red-winged blackbird is
2 perhaps among the five most common species of birds
3 in the United States, isn't it?

4 A. It may not have a lot of suitable habitat
5 in this particular area. I can't speak to why -- to
6 whether it would have been present.

7 Q. Well, I thought you just said that it's a
8 wetlands species, didn't you?

9 A. In my experience it tends to like that
10 habitat.

11 Q. Yeah. How many wetlands did you find in
12 the project area?

13 A. Not very many. Let me... Right. So
14 there were six wetlands, each quite small.

15 Q. So do you know whether a red-winged
16 blackbird needs a large wetland in order to use that
17 area?

18 A. I don't know.

19 Q. There's no red-winged blackbird recorded
20 on Table 08-5 of the application, is there?

21 A. I do not see it listed.

22 Q. Uh-huh. So out of -- in the area of
23 where you have six wetlands recorded, not a single
24 red-winged blackbird was recorded on your list.

25 A. They are very small wetlands.

1 Q. But you don't even know a red-winged
2 blackbird needs a larger wetland, do you?

3 A. I know that this list reflects the
4 specific species that were either seen through direct
5 observation or sound during our field investigations.

6 Q. You do you know what the most common
7 species of birds that utilize pastures in this area
8 of Ohio are?

9 A. In my work I am less focused on -- I'm
10 less focused on species that are not rare,
11 threatened, and endangered, so I wouldn't have
12 information about common species that are not listed
13 by either the U.S. Fish and Wildlife Service or ODNR.

14 Q. You are aware that the project area does
15 include pastureland?

16 A. It includes one area of pastureland, yep.

17 Q. Uh-huh. And do birds use pastureland,
18 any kind of birds?

19 A. Birds -- birds do travel into a lot of
20 different kinds of different habitats, yes.

21 Q. How about living in pasture, any birds
22 live in pasture?

23 A. Some do and certainly some of the species
24 that were identified by Ohio Department of Natural
25 Resources use that type of -- use that type of land

1 which was why we provided additional information and
2 consultation.

3 Q. Are you aware of whether the eastern
4 meadowlark is a very common bird in pastureland in
5 this area of Ohio around the project area?

6 A. All I know is that it was not identified
7 by either of the two agencies consulted.

8 Q. The project area includes forest areas,
9 right?

10 A. There are some small forest areas.

11 Q. In fact, there is at least 25-1/2 acres
12 of trees in the project area because that's the
13 number that may be cut down, right?

14 A. I wouldn't consider all of that forest.
15 Some of that is fencerow area, but 25.5 acres is the
16 clearing.

17 Q. All right. So there is at least 25-1/2
18 acres of trees in the project area.

19 A. Yes.

20 Q. Are you aware that in this area of Ohio
21 the chickadee is a very common species of birds that
22 utilize trees as their habitat?

23 MR. SETTINERI: At this time, your Honor,
24 I am just going to object to the form of the question
25 and specifically saying whether, but the way that

1 question was framed was assuming facts in evidence.

2 MR. VAN KLEY: I just asked whether she
3 knows.

4 MR. SETTINERI: Form of question, your
5 Honor.

6 MR. VAN KLEY: I am just --

7 ALJ HICKS: I'm sorry. Mr. -- go ahead,
8 Mr. Van Kley. I think we all accidentally talked
9 over each other.

10 MR. VAN KLEY: I was just remarking I
11 simply asked her if she knows.

12 ALJ HICKS: Yeah. I will overrule the
13 objection. She can answer.

14 A. Sorry. What was the question again?

15 Q. The question is whether you know whether
16 the chickadee is a very common bird species that
17 utilizes trees in this area of Ohio.

18 A. Chickadees are very common in many
19 locations, but again, it was not my focus as it was
20 not listed by U.S. Fish and Wildlife Service or
21 ODNR's of particular concern.

22 Q. There are no species of chickadees listed
23 in Table 08-5, correct?

24 A. Therefore, would not have been confirmed
25 to have been observed in some way.

1 Q. Okay. So the answer to my question is I
2 am correct that there's no chickadees listed in Table
3 08-5.

4 A. There are no chickadees listed.

5 Q. So what kinds of habitat are in the
6 project area? We've already mentioned trees and
7 wetland and pasture. Obviously there are crop fields
8 in the project area, correct?

9 A. Crop field is the majority, yes.

10 Q. Do you know whether -- whether certain
11 species of birds commonly utilize cropland as part of
12 their habitat in this area of Ohio?

13 A. I do not.

14 Q. Other than the types of habitat we listed
15 as being present in the project area, are there any
16 other types of habitat in the project area?

17 A. There is a map in the application that
18 shows the habitat. Figure 08-10 of the application
19 which extends for three sheets illustrates the
20 various ecological communities that were identified
21 within the project area.

22 Q. So are there any in that figure that are
23 different than the types we've already discussed?

24 A. As noted, active agriculture is a very
25 predominant characteristic. We did speak about

1 trees. We did speak about pasture. There is some
2 very small areas of scrub-shrub habitat, some
3 developed areas, just roads that are crossed, and
4 some small areas where there is herbaceous plantings
5 as well mapped on those figures.

6 Q. Did the people doing the reconnaissance
7 in the field look primarily for endangered and
8 threatened species?

9 A. One focus was looking for threatened and
10 endangered species, but another focus was the
11 knowledge that we needed to generally characterize
12 observations of plants and animals within the area
13 for the Ohio Power Siting Board application.

14 Q. Let's talk about the literature study for
15 plants. And I believe that the narrative of the
16 application has some information about the literature
17 study that you did, right?

18 A. The narrative just describes -- describes
19 the consultation process with the U.S. Fish and
20 Wildlife Service and Ohio Department of Natural
21 Resources. On Table 08-3 the rare plants that were
22 identified within a mile of the project area are
23 noted. And then in Table 08.4 specific field
24 observations of species were provided.

25 Q. On page 81 of the narrative is where you

1 find Table 08-3 that you just mentioned, right?

2 A. That's correct.

3 Q. Now, other than this table, is there any
4 other information in the application that discloses
5 the species of plants that were found in the
6 literature study?

7 A. I'm sorry. Can you say that again?

8 Q. Yeah. Table 08-3 contains a list of rare
9 plants within one mile of the project area, right?

10 A. That's right.

11 Q. Okay. But you state in the text above
12 that that ODNR provided a list of state-listed
13 threatened and potentially threatened plant species
14 with occurrence records within one mile of the
15 project area, right?

16 A. That's right.

17 Q. And that's where you got the list in
18 Table 08-3.

19 A. Yes, as cited in the table, right.

20 Q. All right. So other than the list of
21 state-listed threatened and potentially threatened
22 plant species as indicated on page 81 of the
23 application, does the application include any other
24 list of plant species besides the rare plants
25 included in Table 08-3?

1 A. Yes. On page 83, Table 08-4 provides a
2 list of observed plants. Now, in fact, because the
3 majority of the project area was in active
4 agriculture, the number of these species that are
5 present would be less than the area within which corn
6 or soy would have been planted but there is a list
7 there.

8 Q. Okay. Table 08-4 is a list of the plants
9 that you found in the field, right?

10 A. Those were plants that were observed
11 within and near the project area, yes.

12 Q. Okay. So going back to my question about
13 what was on the literature survey other than the
14 plants listed in Table 08-3 as rare plants, does the
15 application include any other list of plants in the
16 literature survey?

17 A. As active agriculture property, no, there
18 was no additional literature provided relative to
19 corn and soy and pasture.

20 Q. Well, what about -- I mean, was there --
21 does the application include a list of any other
22 species in the literature survey other than the rare
23 plants in Table 08-3?

24 A. There are discussions that follow Table
25 08-4 that provide the context and communities of

1 different plants that are there and that is what is
2 presented in the application.

3 Q. You are referring to the -- generally
4 speaking the types of plants that -- actually let's
5 just look at what follows Table 08-4. Can you point
6 to any language that states that specific species
7 were on the literature -- provided in the literature
8 survey as opposed to those that were found in the
9 field?

10 A. No.

11 Q. So going back to my original question
12 then, does the application include any -- any
13 checklists or other types of lists for plant species
14 other than the rare ones listed in Table 08-3 from
15 any literature survey that you conducted?

16 A. Literature review would have been
17 conducted relative to the vegetation actually
18 observed.

19 Q. So the answer to my question is no,
20 right?

21 A. There is no additional literature review
22 presented.

23 Q. Other than the rare plants in Table 08-3.

24 A. And other than the observed species and
25 the discussion of their context.

1 Q. Did -- did you actually ask anybody for a
2 complete list of plants for the area around the
3 project area other than requesting a list of rare and
4 endangered species?

5 A. No.

6 Q. Did you do any literature survey for
7 bats?

8 A. I am not sure what you mean by a
9 "literature survey for bats." As environmental
10 consultants, we follow literature for species such as
11 that regularly.

12 Q. All right. Does the application include
13 the results of any survey of literature for the bats
14 that might be in the area around the project area?

15 A. The application does not include a
16 specific discussion of bats above and beyond those
17 identified by the two agencies.

18 Q. And the two agencies only identified rare
19 and endangered species of bats in your
20 correspondence, correct?

21 A. That is correct.

22 Q. So no literature survey was conducted in
23 order to identify common species of bats that may be
24 present in the area.

25 A. Although they utilize similar habitat

1 types.

2 Q. So the answer to my question is no.

3 A. The answer is no.

4 Q. And with respect to birds, other than
5 rare and endangered species of birds, did you perform
6 a literature survey to find out what kind of birds
7 may be present in the project area?

8 A. Other than my Staff's general knowledge
9 of bird usage within this part of Ohio, no specific
10 literature review.

11 Q. All right.

12 A. Are we able to take a break shortly?

13 Q. Yeah. You can take a break right now if
14 you would like so far as I'm concerned, subject to
15 his Honor's approval, of course.

16 ALJ HICKS: I was going -- if we had a
17 natural stopping break, I was going to ask myself.
18 It's 10:35. How about we come back at 10:45.

19 MR. VAN KLEY: Sounds good.

20 ALJ HICKS: All right. We are off the
21 record.

22 (Recess taken.)

23 ALJ HICKS: Let's go back on the record.

24 Just took a short break and are coming
25 back.

1 And Mr. Van Kley will continue with his
2 cross-examination of Ms. Gresock.

3 MR. VAN KLEY: Very good. Thank you,
4 your Honor.

5 Q. (By Mr. Van Kley) All right. Let's go
6 back to the narrative of the application. And I
7 would like to direct your attention back to Table
8 08-4 which is entitled "Vegetation Recorded on and
9 Adjacent to the Study Area." Let me know when you've
10 found that, please.

11 A. I have it.

12 Q. Okay. You indicated earlier that your
13 field team walked across the project area, right?

14 A. That's right.

15 Q. Yeah. When they were doing the
16 wetland -- they were doing the aquatic resources so
17 they walked across the project area, right?

18 A. That's right.

19 Q. All right. Did they also walk across
20 the -- any of the area adjacent to the project area?

21 A. They would have observed the area
22 required to be covered by the Ohio Power Siting Board
23 in the application. And it would really depend upon
24 the ownership of that land whether they would have
25 observed it or whether they would have walked it.

1 Q. Uh-huh. Where access was available to
2 them, how far outside the project area did they walk
3 to do their field reconnaissance?

4 A. I am not recollecting the distance in the
5 OPSB rules, but they were -- they were instructed and
6 did go at least that far.

7 Q. So as you sit here today looking at Table
8 08-4, you can't tell me how far outside of the study
9 area is covered by the vegetation recorded in that
10 table?

11 A. I know that it extended at least 100 feet
12 beyond, but I can't tell you any more than that at
13 this time.

14 Q. Okay. Let's go to Table 08-5. That
15 starts on page 88 of the narrative. And can you tell
16 me how far outside of the project area was surveyed
17 for the wildlife species recorded in this table?

18 A. It would be the same area.

19 Q. About 100 feet?

20 A. Based on 100 feet, observations of birds
21 may have been in the vicinity.

22 Q. On the top of that page 88 of the
23 narrative, it states that "An assessment of wildlife
24 species and habitat was conducted within the Project
25 Area in October/November 2020," correct?

1 A. Correct.

2 Q. Now, are you aware that different bird
3 species will be present in this area of Ohio during
4 the different seasons of the year?

5 A. I am and that's why we listed the dates
6 so that the reader could be clear that this was
7 representative of a certain period of time.

8 Q. And that time is October/November 2020,
9 right?

10 A. Correct.

11 Q. So the wildlife species including birds
12 that are recorded in Table 8-5 would not include any
13 birds that are present only during the winter in this
14 area, correct?

15 A. That's correct.

16 Q. And it would not include any birds that
17 are present only during the spring of the year,
18 right?

19 A. That's correct. These were observed in
20 October/November.

21 Q. And it would not include any birds that
22 are present only in the summer of the year, right?

23 A. This is true.

24 Q. Now, do you know when the migration
25 period starts for birds in this area of Ohio?

1 A. It varies. I know by species, but I
2 don't know the dates.

3 Q. Do you know whether some species of
4 breeding birds in this area of Ohio have left the
5 area to migrate south before October of the year?

6 A. I'm sure that some have and some have
7 not.

8 Q. And this list on Table 08-5 would not
9 record any species that are present in the area
10 around the project only during the spring migration,
11 correct?

12 A. These are wildlife observations recorded
13 at the time referenced, correct.

14 Q. Would you go to page 115 of the narrative
15 of the application which is PDF page 127.

16 A. I'm there.

17 Q. I would like to direct your attention to
18 the second paragraph on that page. Do you see where
19 it refers to John Bryan State Park has been located
20 adjacent to the north of the project area on the
21 opposite side of Clifton Road?

22 A. I do.

23 Q. Do you know whether any birds inhabit
24 that John Bryan State Park?

25 A. I have no doubt that they do.

1 Q. Birds fly obviously, right?

2 A. They do.

3 Q. So there could be birds flying back and
4 forth between John Bryan State Park and the project
5 area, right?

6 A. There could be.

7 Q. And then in the paragraph above that,
8 there are a number of other nature preserves listed
9 in addition to John Bryan State Park?

10 A. There are some preserves list, yes.

11 Q. And some of those are located within one
12 mile of the project area?

13 A. That is correct.

14 Q. And the Little Miami River is located
15 about three-tenths of a mile north of the project
16 area?

17 A. Yes. That's what it says, yeah.

18 Q. And did you expect birds would fly back
19 and forth between the project area and the Little
20 Miami River?

21 A. I think it will depend on the type of
22 bird and what their habitat requirements are, but it
23 is possible.

24 Q. Going back to Table 08-4 which you will
25 find starting on page 88 of the application

1 narrative --

2 A. I'm sorry. Do you mean Table 08-5 then?

3 Q. You are correct. I misspoke.

4 A. All right. I'm there.

5 Q. And this is again your list of wildlife
6 species recorded on an adjacent to -- to the study
7 area, right?

8 A. Wildlife species, yep.

9 Q. Yeah. There aren't any great blue heron
10 recorded here; is that right?

11 A. I'm sorry. Can you say that again?

12 Q. Yeah. I don't see that there. The great
13 blue heron is recorded as being present on Table
14 08-5; am I correct that it is not there?

15 A. I do not see it listed.

16 Q. And the bald eagle is not listed?

17 A. I do not see it listed.

18 Q. The sandhill crane is not listed.

19 A. That is correct.

20 Q. Gold finch is not listed?

21 A. I'm sorry?

22 Q. The gold finch is not listed?

23 A. The gold finish is not listed.

24 Q. Do you know how common the gold finch is
25 in the project area and surrounding areas?

1 A. Oh, I imagine quite a few. They didn't
2 happen to be observed.

3 Q. Are you aware of any government guidance
4 that pertains to how to conduct a bird survey?

5 A. There are many guidelines for formal bird
6 surveys for certain types of projects.

7 Q. Okay. And what are the government
8 agencies that provide those guidelines?

9 A. I've seen from the U.S. Fish and Wildlife
10 Service. I can't recollect other guidance agencies.

11 Q. Uh-huh. Does the U.S. Geological Survey
12 have such guidances?

13 A. I don't recollect.

14 Q. Did -- did you follow any government
15 guidance pertaining to bird surveys of the project
16 area?

17 A. This was a reconnaissance-level survey
18 only and so, no, we were not following a specific
19 species study protocol.

20 Q. Would you go back to the narrative of the
21 application page 83 which is PDF page 95. And that
22 is -- Table 08-4 starts there, right?

23 A. That's correct.

24 Q. This is vegetation recorded on an
25 adjacent -- and adjacent to the project area,

1 correct?

2 A. That's right.

3 Q. All right. Now, let's go to the end of
4 at that table on page 86. And I see that the last
5 plant species listed there is corn, correct?

6 A. Corn was certainly present, yes.

7 Q. Lots of corn was present in the project
8 area, right?

9 A. There was -- there were a number of
10 fields, yes, that were planted in corn.

11 Q. Now, are you familiar with the term
12 "carbon sync" as related to plants?

13 A. Not generally.

14 Q. Do you know what the term means?

15 A. No.

16 Q. Do you know whether plants absorb carbon
17 dioxide?

18 A. No.

19 Q. So do you know whether trees, for
20 example, are useful in combating climate change?

21 A. I have no specialized knowledge in that
22 area. I know that plants and trees are important to
23 the overall ecosystem.

24 Q. Do you know whether your reconnaissance
25 team walked through the trees in the project area

1 when looking for aquatic resources in doing their
2 wildlife survey?

3 A. Yes, they did.

4 Q. Okay. Would you pull out what's been
5 marked as Citizens Exhibit 14, please.

6 A. Citizen's Exhibit 14?

7 Q. Correct.

8 A. Okay. I have it.

9 Q. All right. Have you seen this document
10 before right now?

11 A. No.

12 Q. Do you ever patronize the U.S. Fish and
13 Wildlife Service website?

14 A. At times I look things up.

15 Q. Have you ever looked at any page on the
16 U.S. Fish and Wildlife website dealing with solar
17 energy?

18 A. I don't know.

19 Q. Let me direct your attention to the
20 second page of Citizens Exhibit 14 and given that you
21 have never seen this document before, I am not going
22 to ask you to -- to authenticate the document or tell
23 me whether the U.S. Fish and Wildlife Service
24 contains the statements on this page, but I do want
25 to ask you your opinion concerning the subject matter

1 dealt with on this page just from your independent
2 knowledge. So, for example --

3 MR. SETTINERI: Ob -- go ahead. Finish
4 your -- well, I am just going to object to using this
5 document, your Honor. The witness said she was not
6 familiar, had not seen the document, was not aware of
7 visiting Fish and Wildlife Service site on solar, so
8 to refer the witness to a document and read something
9 in the record is not appropriate, your Honor. It
10 has -- there has been no foundation laid to be able
11 to cross this witness on this document.

12 Now, Mr. Van Kley can put the document
13 aside and ask general questions. That is fine. But
14 any reference to the document should not be in the
15 record and the witness should not have to look at
16 this document to answer any questions.

17 MR. VAN KLEY: Well, I think I very
18 carefully set up the question to overcome that
19 objection by telling -- telling her I am not asking
20 her to state whether the statements that I am going
21 to point out are actually on the U.S. Fish and
22 Wildlife website so there is no danger of -- of
23 reading anything into the record that would indicate
24 that this statement is on the U.S. Fish and Wildlife
25 Service website.

1 However, the statements made here which I
2 want to ask her about are very useful for framing the
3 question so that she can -- she can think about the
4 question and as I asked provide her independent
5 judgment as to the topics described on that -- on
6 that page. So there's no danger of poisoning the
7 transcript given how I have phrased the question.

8 MR. SETTINERI: If I may, your Honor.

9 ALJ HICKS: Sure.

10 MR. SETTINERI: Mr. Van Kley can
11 certainly ask questions that are general in nature as
12 to what her opinion is on certain topics, but again,
13 to refer to a document and read from it and then ask
14 her if she agrees with it, he's already put on the
15 record, you know, he -- I don't recall if he put on
16 the record exactly what document it is and where it's
17 from, but he's certainly indicated where it's coming
18 from. And we know what's happening at the end of the
19 cross. There will be a motion to admit this
20 document.

21 So it's very easy to ask questions
22 generally of what the witness's opinion is on certain
23 topics but to have her then look at a document --
24 entire document and have him read a statement into
25 the record and then ask questions is going to poison

1 the transcript. And again, the witness hasn't seen
2 this document before. She shouldn't even be looking
3 at it.

4 I will stop there, your Honor. Thank
5 you.

6 MR. VAN KLEY: Your Honor, I am not going
7 to ask for the admission of this document. That's
8 just completely false. But as I have already
9 indicated, there aren't going to be any questions
10 that prove that this document is from the U.S. Fish
11 and Wildlife Service. But I think it's within the
12 bounds of -- of proper questioning to discuss a
13 statement and simply ask her whether she has
14 independent knowledge of it which is what I asked
15 her.

16 MR. SETTINERI: Your Honor, if I just --
17 one last quick point, if I may.

18 ALJ HICKS: Sure.

19 MR. SETTINERI: The way the questions
20 could easily be framed without referring to any
21 document do you agree with the following statement,
22 read the statement. But you don't need to refer to a
23 document that she's never seen.

24 ALJ HICKS: Well, I don't want to put
25 words in Mr. Van Kley's mouth, but correct me if I am

1 wrong, I thought that's what was proposed.

2 MR. VAN KLEY: Yeah.

3 MR. SETTINERI: Well, that's fine. I
4 have no problem with that, but to say look at page
5 blank of this document and then read the statement,
6 he can simply say do you agree with this statement,
7 your Honor. He doesn't have to refer to this
8 document at all to do that and he -- when he started,
9 he went to Citizens Exhibit 14 and said turn to the
10 second page and let's look at this sentence so that's
11 where my issue is, your Honor.

12 MR. VAN KLEY: Yeah. I think counsel is
13 just quibbling with -- I mean, Mr. Settineri can't
14 tell me how to ask my questions as long as my
15 questions are proper. And I could ask the question
16 the way he suggests, but I believe it's also proper
17 for me to read a statement from a document and ask
18 her whether she agrees with that statement. I don't
19 see the -- I don't see any substantive difference
20 between those two approaches.

21 ALJ HICKS: Let's ask the questions and
22 we'll go from there.

23 MR. VAN KLEY: All right.

24 Q. (By Mr. Van Kley) Ms. Gresock, do you
25 agree that the reflective surfaces of the mirrors in

1 solar panels in solar projects may appear to a flying
2 bird to be a body of water?

3 A. There are no mirrors associated with this
4 project.

5 Q. All right. Let's limit the question then
6 to solar panels. Do you agree that the reflective
7 surface of solar panels may appear to a flying bird
8 to be a body of water?

9 A. I do not.

10 Q. You don't agree with that statement?

11 A. No.

12 Q. And why don't you agree with that
13 statement?

14 A. In work that I have done on wind
15 projects, I have come to understand birds are pretty
16 smart. They -- looking at solar installations like
17 the one proposed in the field, especially trackers
18 that are moving continually throughout the day, could
19 not have that shiny characteristic that I believe
20 would attract birds to believing they are water.

21 Q. What about a bird that's flying over a
22 solar project at night? Do you believe that a bird
23 can mistake a large area of solar panels as a body of
24 water during the darkness?

25 A. I do not believe that would be common,

1 although birds do hit obstructions all the time.

2 Q. You would expect that birds would hit
3 obstructions all the time including solar panels,
4 right?

5 A. Generally speaking the obstructions they
6 hit are ones that are more vertical like windows.

7 Q. Aren't solar panels often in the vertical
8 position up to 14 feet tall in this project?

9 A. Not at a great height though.

10 Q. So you think that the -- that a bird
11 won't collide with a solar panel that is up to
12 14 feet in height?

13 A. I am not saying it couldn't happen, but I
14 don't believe they would be specifically attracted to
15 cause it to happen.

16 Q. Are you aware of any studies that have
17 been performed at solar facilities to determine
18 whether birds fly into the solar panels?

19 A. I haven't reviewed that in detail.

20 Q. Have you reviewed it at all?

21 A. No.

22 Q. Would you look at what's been marked as
23 Citizens Exhibit 15.

24 A. Okay.

25 Q. All right. For the record Exhibit 15 is

1 entitled "Mortality Monitoring Design for
2 Utility-Scale Solar Power Facilities." Do you see
3 that title on the first page?

4 A. I do see that title, although I have
5 never seen this document before.

6 Q. Okay. Do you also see on the title page
7 the lower left-hand corner it states "U.S. Department
8 of the Interior and U.S. Geological Survey?"

9 A. I do.

10 Q. And in light of the fact you said you
11 have never seen this before, can you tell me whether
12 this document has the appearance of being a guidance
13 document?

14 A. Well, it appears to be a guidance
15 document, but I cannot tell for what type of
16 facility.

17 Q. All right. Well, the title says
18 "Monitoring Design for Utility-Scale Solar Power
19 Facilities." Is a --

20 A. Yes.

21 Q. -- solar-powered facility a type of
22 facility?

23 A. Although in the list of figures the
24 reference all appears to be desert locations which
25 appear to be a very different habitat type and

1 potentially a different technology. I don't know
2 without having the opportunity to review this.

3 Q. All right. Well, let's go to page 3.

4 A. I am really not too comfortable answering
5 questions about this without having the opportunity
6 to read the document.

7 Q. Okay. Well, I just want to give you the
8 opportunity to correct any misstatements that you've
9 made.

10 MR. SETTINERI: I'll just object. Your
11 Honor, I am just going to object. The witness said
12 she's not comfortable answering questions without
13 reviewing the document. I think it would be
14 appropriate since she has been given a document that
15 is apparently quite -- 25 pages long, the witness
16 should be allowed the opportunity to read the
17 document before she's asked questions about it, your
18 Honor, especially since she said she had never seen
19 it before.

20 And if so, depending on the amount of
21 time the witness needs, I would ask that we either
22 take a break to allow her to read it by herself, or
23 we sit here until she is done reading it completely.

24 MR. VAN KLEY: I would point out that
25 this document was provided to all counsel two days

1 ago. And counsel could have asked the witness to
2 review this document before now, apparently chose not
3 to.

4 I have no problem in allowing the witness
5 to read the document over a break. So if that's --
6 if that's what counsel wishes to do, we could finish
7 the rest of her cross-examination and take a break
8 for lunch, if the Bench is okay with that, or proceed
9 with another witness while she reviews the document
10 and then call her back to finish her testimony, if
11 that's what the Bench would prefer.

12 MR. SETTINERI: If I may briefly, your
13 Honor.

14 ALJ HICKS: Sure.

15 MR. SETTINERI: Just so you know, our
16 practice with exhibits for the witness is we get them
17 from Mr. Van Kley, we put them in folders, and we do
18 not talk about them with the witnesses, and we don't
19 provide them to the witnesses. So this is the first
20 time Ms. Gresock is seeing this document.

21 I am willing -- I did not object to the
22 fact that she had never seen the document before.
23 She can answer questions about it, but she certainly
24 deserves the time to read it. Rather than taking a
25 break where we are, you know, over lunch, I would

1 prefer to simply let her read the document, and then
2 we can proceed with the cross, but I would like to
3 finish the cross so we -- that way if he is going to
4 ask her questions about it, she is in the room by
5 herself. She can read it and answer questions, and I
6 think that's the best way to go here.

7 If Mr. Van Kley wants to ask questions,
8 let her read the document, ask her how long she
9 thinks it will take her, and then we can just proceed
10 and get done.

11 MR. VAN KLEY: I'm okay with that. If
12 the Bench is okay with that, I'm okay with that.

13 ALJ HICKS: Can we go off the record just
14 a second?

15 (Discussion off the record.)

16 ALJ HICKS: Let's go back on the record.

17 Q. (By Mr. Van Kley) All right.
18 Ms. Gresock, you can set Citizens Exhibit 15 aside
19 for the moment.

20 A. Thank you.

21 Q. I just had a few other questions about
22 your direct testimony and the testimony you've given
23 today. Going back to the questions I asked about the
24 opportunities to view the project from recreational
25 areas, I have a few follow-up questions on that

1 topic. If you could go back to the narrative of the
2 application, page 6, I have a question or two there.
3 Tell me when you have found that.

4 A. Okay.

5 Q. All right. Directing your attention to
6 Table 1 which is entitled "Public Lands" --

7 A. On page 6 of the narrative?

8 Q. Oh, wait a minute.

9 A. Oh, you are talking about Appendix Q.

10 Q. I am indeed. That's the second time
11 you've managed to successfully correct me today. I
12 don't think any other witness in this hearing will be
13 able to accomplish, I assure you. You are right.
14 Appendix Q, page 6.

15 A. Okay. I am there.

16 Q. All right. Very good. Now we are
17 looking at Table 1 entitled "Public Lands and
18 Recreational Areas and Trails within the VSA." Do
19 you see that?

20 A. I do.

21 Q. And the VSA stands for visual --

22 A. Study area.

23 Q. Thank you. And it states there for
24 Clifton Gorge dedicated nature preserve there is a
25 potential visibility of the project area, right?

1 A. Based upon the results of the
2 conservative mapping tool, yes.

3 Q. Okay. And the same is true for John
4 Bryan State Park, right?

5 A. That is correct.

6 Q. And the same is true for Little Miami
7 Jacoby Road state route access, right?

8 A. Right.

9 Q. And if we go to page 7, same is true for
10 Upper Great Scott Trail?

11 A. That is correct.

12 Q. Yeah, uh-huh. And also for the Glen
13 Helen natural area south?

14 A. That is why additional investigation for
15 each of these with potential was carried forward in
16 the following narrative, yes.

17 Q. And rather than reading the rest of them
18 from this table, there are a number of other areas
19 that you would regard as recreational areas from
20 which the visibility of the project area is
21 potential, right?

22 A. Based upon those conservative model
23 results, that's correct.

24 MR. VAN KLEY: Okay. Your Honor, at this
25 time the only questions I have left for the witness

1 pertain to Citizens Exhibit 15.

2 ALJ WILLIAMS: You are on mute, David.

3 ALJ HICKS: Sorry. My first gaff of the
4 day. Just for the record with respect to Ms. Gresock
5 and the Citizens Exhibit 15, and folks can correct me
6 if I am wrong, but the plan is she is going to have
7 some time to review that document, and Mr. Van Kley
8 will resume his cross-examination of her with respect
9 to that hopefully later this afternoon. I'm seeing
10 nods. Take that as confirmation.

11 And so with that you would be done other
12 than that for now, Mr. Van Kley, correct?

13 MR. VAN KLEY: That's correct, your
14 Honor.

15 ALJ HICKS: Okay. Thank you. Next in
16 the list for cross-examination would be Miami
17 Township.

18 MR. SLONE: Thank you, your Honor. Just
19 a couple of questions.

20 ALJ HICKS: Sure. Go ahead.

21 - - -

22 CROSS-EXAMINATION

23 By Mr. Slone:

24 Q. I would like to turn your attention,
25 please, to, let's see, Exhibit 8 which is your direct

1 testimony, page 5, answer 7 which starts at line 11.

2 A. Thank you.

3 Q. Let me know when you are there.

4 A. I'm there.

5 Q. It says "Under my direction, Haley &
6 Aldrich conducted a detailed study, including a field
7 delineation, to determine the boundaries of wetlands
8 and other aquatic resources for the Project Area."
9 What is the detailed study?

10 A. The detailed study was documented in the
11 report attached as Appendix M and involved the
12 background research and review and then the field
13 delineation efforts associated with identifying
14 whether and where wetland and streams are located
15 throughout the site.

16 Q. And I'm sorry if Mr. Van Kley already
17 covered this but what is the -- what was the
18 background review?

19 A. The background review involved a review
20 of available mapping information such as mapped
21 soils, National Wetland Inventory mapping, Ohio
22 Wetland Inventory mapping, floodplain mapping, and
23 also confirming and re-reviewing ahead of time the
24 appropriate delineation methodology as established by
25 the Army Corps for this particular region of Ohio.

1 Q. Is it fair to say that the background
2 review was conducted remotely, that is, not on-site?

3 A. That's correct.

4 Q. Is a background review also commonly
5 referred to as a desktop analysis?

6 A. It would be called a desktop analysis,
7 correct.

8 Q. Further down that same page starting on
9 line 15, it says "Per the study report, wetland areas
10 and other waters, including streams and agricultural
11 ditches, were delineated." What does "delineated"
12 mean?

13 A. So the delineation methodologies are
14 outlined in the referenced Wetland Delineation
15 Manual, but in accordance with those standards, the
16 presence or absence of wetland or streams were noted.
17 Global positioning system points were electronically
18 collected to establish the boundary of wetlands, and
19 data were collected in accordance with Ohio's
20 requirements to identify that quality and rankings of
21 the various resources identified.

22 Q. So I understand that to mean essentially
23 that you found where wetlands were and found their
24 boundaries.

25 A. That is correct.

1 Q. And that was done on site, correct?

2 A. That was done on site.

3 Q. Line 20 of that same page, page 5, it
4 says "Wetland classifications" -- I'm sorry.

5 "Wetland classification was completed in accordance
6 with the commonly-used Cowardin classification system
7 as well as the Ohio Rapid Assessment Method for
8 Wetlands (Version 5.0)." What is "wetland
9 classification"?

10 A. So the Cowardin system essentially
11 establishes whether a wetland is considered to be a
12 forested versus scrub-shrub versus emergent
13 vegetation. There are a lot of nuances in the
14 classifications as well but those are the
15 fundamentals and then the classifications using the
16 Ohio Rapid Assessment Method, ORAM, which is Ohio's
17 tool, has a scoring -- a series of scoring metrics
18 that result in a numerical designation to rate those
19 wetlands with -- with No. 3 being the highest quality
20 wetland and No. 1 being the lowest quality wetland.

21 Q. Okay. So the word "classification"
22 you've used here, would that also be called
23 categorization? Wetland categorization as in
24 category 2 or category 3 wetland?

25 A. With regard to the ORAM, it is category.

1 With regard to Cowardin, I do think they refer to
2 them as classes. So but, yes, I mean, those are
3 substantially similar terms.

4 Q. Was the delineation around the
5 classification or categorization done at the same
6 time for each wetland?

7 A. The -- the data required to be collected
8 for the classification was done at the same time. I
9 don't know whether the actual numerical addition
10 that's necessary to achieve, you know, the actual
11 score of the wetland under the ORAM categories was
12 done in the field or whether that was done upon
13 returning.

14 Q. Same page, page 5, line 14, it says "The
15 field work for this study was performed
16 October 13-21, 2020; November 17-18, 2020; and
17 March 8-11, 2021"; is that correct?

18 A. That is correct.

19 Q. And during those times were the wetlands
20 delineated and categorized?

21 A. I'm sorry. I didn't hear you.

22 Q. Sure. When during those periods that are
23 outlined in lines 14 and 15 of Exhibit 8 were the
24 wetlands delineated and classified or categorized?

25 A. Yeah. I'm not sure I completely

1 understand your question. There are date ranges
2 specifically listed, October 13 through 21, 2020;
3 November 17 and 18, 2020; and March 8 through 11,
4 2021. And in each of those instances there may have
5 been specific areas of the site to which access was
6 not available until that later period of time or
7 additional areas that were associated with collection
8 line corridors may have been specifically identified
9 that also needed to have information collected so all
10 throughout that period but for different portions of
11 the project area covered each time.

12 Q. Okay. So let me -- let's go at it a
13 different way. Do you know how many wetlands were
14 delineated by the field study?

15 A. Yes. There were six wetlands
16 identified -- identified and delineated.

17 Q. And let me turn your attention to it
18 should be Kingwood Exhibit 1, which is the
19 application, Appendix M as in mom.

20 A. Got it.

21 Q. You are not looking at a PDF version, are
22 you?

23 A. I'm not, I'm sorry.

24 MR. SLONE: Okay. For the folks looking
25 electronically, it should be page 144 of the PDF.

1 Q. For you it would be directly after the
2 stream inventory which it looks like it's a little
3 more than halfway through.

4 A. So under "Section 5.2 Delineated
5 Streams"?

6 Q. There's a series of stream inventory data
7 forms.

8 A. Oh, oh, you are in the -- you are in the
9 attachment to the appendix. Got it. So it's
10 Appendix C of Appendix M? Excellent. Stream and...
11 All right. Possibly I'm at the end of this stream
12 inventory data forms.

13 Q. Okay. The page which is 144 of the PDF
14 has a -- looks like a form that is labeled
15 "Background Information." Is that what you are
16 looking at?

17 A. I have found one that says that, yes.

18 Q. And the date for that form is October 15,
19 2020?

20 A. Yes, that is the date.

21 Q. Okay. It looks like further down, maybe
22 five or six lines down, from October 15, 2020, gives
23 the name of the wetland as MMC. Are we on the same
24 page?

25 A. That's -- yes.

1 Q. Okay. So would it be fair to say that
2 this wetland was -- a field study was conducted of
3 this wetland on October 15, 2020?

4 A. It does appear so.

5 Q. Wetland MMC?

6 A. Correct.

7 Q. I'm scrolling down. There's an ORAM form
8 attached to this background information; is that
9 right?

10 A. Yes.

11 Q. Okay. The next wetland, and I really
12 wish I could give you page numbers.

13 A. I know. Unfortunately I have my computer
14 screen otherwise occupied.

15 Q. Certainly.

16 A. So are you looking at MMD?

17 Q. Yes.

18 A. Okay.

19 Q. For the electronic record would be
20 Appendix M PDF 154. And I don't necessarily want to
21 belabor this too much, but MMD appears to have been
22 studied in the field on October 16, 2020; is that
23 correct?

24 A. That's right. That's correct.

25 Q. Okay. I'm scrolling down to the next

1 wetland which I believe is MME.

2 A. Yes.

3 Q. That was studied on October 16, 2020?

4 A. That's right.

5 Q. And the next is MMG.

6 A. Yes.

7 Q. And that was studied on October 19, 2020;
8 is that correct?

9 A. That was delineated then, yes.

10 Q. Delineated and categorized then?

11 A. I believe so. It appears that the
12 characterization and scoring was also done in the
13 field, yes. Date, yes, it has the same date. Thank
14 you.

15 Q. Thank you. And the next wetland is MMH.

16 A. Yep.

17 Q. Do you agree with me?

18 A. I am there.

19 Q. Okay. And that was studied on
20 October 20, 2020?

21 A. Correct.

22 Q. Thank you. And the next one is wetland
23 MMI.

24 A. I'm there.

25 Q. And it looks like the date of that field

1 study was March 10, 2021.

2 A. Yes.

3 Q. I haven't been counting. I am hoping --

4 A. I know.

5 Q. I hope that we reached six because I
6 don't see any other.

7 A. I haven't been counting either.

8 Q. So would it be fair to say from these
9 ORAM forms that the wetlands were delineated and
10 categorized in the project area between October 15
11 and October 20 and on March 10, 2021?

12 A. And it's not expressed that way because
13 the entirety of the rest of the project area was also
14 evaluated but within which no wetlands were
15 identified or delineated so the -- the fieldwork for
16 the study encompassed those broader dates; but, yes,
17 the dates on which each of those resources was
18 specifically delineated is as you note.

19 Q. Uh-huh. Okay. So how did the field team
20 determine which wetlands to study in October?

21 A. It all had to do with properties that
22 were available for access and/or project areas that
23 were known to require a survey. For example, and it
24 could be the case, and I don't specifically remember
25 when -- when the initial field effort was done in

1 October, there may have been some participating
2 landowners who were not ready to yet have the surveys
3 conducted on their property; and, therefore, you
4 know, the prior month they were ready to have that
5 activity conducted. And I believe that the 2021
6 delineation reflected the final configuration of the
7 interconnecting collection line corridor and that
8 would have been what was delineated at that point in
9 time.

10 Q. Okay. So I think I understand you to say
11 that your field team only had access to the wetlands
12 to delineate and to categorize them in October and in
13 March; is that what you said?

14 A. No, no. So, you know, even though these
15 are participating landowners, we still respect what
16 activities they have going on on their sites, and we
17 want to coordinate with them to the greatest extent
18 we possibly can. So this field effort over the
19 1,500-acre project area was broken up in terms of
20 which areas were specifically evaluated with --
21 with -- with the field effort during -- during
22 different periods of time. Does that make sense?

23 Q. I think so. Did the team study wetlands
24 at any other time of the year within the project
25 area?

1 A. Just during those three periods of time.

2 Q. Are you familiar with the Ohio Rapid
3 Assessment Method for wetlands?

4 A. I haven't implemented it, but I am
5 generally familiar.

6 Q. What do you mean by implemented?

7 A. I haven't done scoring myself based on
8 field conditions.

9 Q. Have you read the Ohio Rapid Assessment
10 Method?

11 A. Not recently but I have in the past.

12 Q. Is time of year important to ORAM
13 categorization?

14 A. Growing season can certainly be a factor,
15 particularly for sitings with natural vegetation.

16 Q. What is growing season?

17 A. Growing season typically is a period of
18 time that allows plant life to be identifiable. And
19 that would typically start sometime in April when
20 plants are beginning to grow after the winter season
21 and can extend depending upon the site through --
22 through freezing conditions at a site such as this
23 where the vast majority is in active agricultural use
24 and the importance of identifying specific vegetation
25 is a little bit less of a factor. You know, we are

1 still careful not to extend out past the freezing
2 period, but we can extend the growing season a little
3 bit.

4 Q. In your research did you determine the
5 growing season for the project area?

6 A. I did not, but my wetland expert did.

7 Q. What's the growing season for the project
8 area?

9 A. I don't have that information, but I know
10 we would have reviewed it, discussed it, and he would
11 not have undertaken the survey outside of an
12 appropriate season.

13 Q. Did your field team walk the entire
14 project area in March?

15 A. They probably did not walk the entire
16 project area. I do know that I asked for them to
17 make general observations to see differences, but we
18 would not have necessarily had permissions to go back
19 on all of the properties.

20 Q. How about in October? Did your field
21 team walk the entire project area in October?

22 A. As I stated previously, only the parcels
23 we had access availability to.

24 Q. Okay. Just a couple more questions.
25 Exhibit 8, your direct testimony, page 6, line 21.

1 Let me know when you are there.

2 A. I am there.

3 Q. It says "A total of 27 stream segments
4 (including four different segments of Clark Run) were
5 also identified during field investigations within
6 the Project Area."

7 A. Yes, I see that.

8 Q. "Totaling 18,287 linear feet of
9 waterway"?

10 A. I see that.

11 Q. What is a waterway?

12 A. So a waterway is a channel that has the
13 potential at certain times to convey water, a way for
14 water to go. As you can see, classification of those
15 segments indicated that 14 of those stream segments
16 were ephemeral, 9 of them intermittent, and only
17 Clark Run, which reflected 4 different segments
18 identified, only Clark Run was considered to be a
19 perennial stream.

20 Q. Is an ephemeral stream only -- I'm sorry,
21 an ephemeral waterway only a waterway that runs at
22 certain times in the season?

23 A. Generally speaking, yes, and sometimes
24 after -- just after rain events depending upon the
25 specific waterway.

1 Q. And intermittent likewise doesn't run all
2 the way?

3 A. Does not.

4 Q. Maybe runs after a large rain event?

5 A. Or during certain seasons. They are more
6 likely to be affected by seasonality, yeah.

7 Q. Okay. Thank you. Perennial -- does a
8 perennial stream run all the time?

9 A. I suppose it's possible for perennial
10 streams to have periods of drought and dry up, but
11 typically they would be considered to be streams that
12 would always have water present.

13 Q. Does the entire project area drain to
14 Clark Run?

15 A. I don't have that specific information.

16 Q. Where does Clark Run drain to?

17 A. Yeah. I don't have broader drainage
18 information.

19 Q. Do you know whether Clark Run drains to
20 the Little Miami River?

21 A. I don't have that information with me.

22 Q. Do you know whether the project area --
23 the entire project area is in the Little Miami River
24 watershed?

25 A. I haven't conducted that kind of drainage

1 study.

2 Q. Do you know in linear feet how far within
3 a waterway the project area is from the Little Miami
4 River?

5 A. In linear feet?

6 Q. Yes.

7 A. Within -- I'm sorry. I didn't understand
8 that question.

9 Q. Sure. Let me ask it a different way.

10 A. Yeah.

11 Q. Do you know how many linear feet of
12 waterway -- excuse me. There is a siren in the
13 background.

14 Do you know how many linear feet of
15 waterway is between the project area and the Little
16 Miami River?

17 A. I don't quite understand the question.

18 Q. What I am trying to figure out is how far
19 water has to run to get from the project area to the
20 Little Miami River.

21 A. Yeah. I don't have that distance. I do
22 know that the Little Miami River is on the opposite
23 side of the road, so it would need to cross the road
24 and travel a little distance, but I think as we -- as
25 we previously noted, we had a distance of

1 three-tenths of a mile to the Little Miami in the
 2 application.

3 Q. And I'm sorry to belabor it, when you say
 4 cross the road, a stream can go under a road too,
 5 can't it?

6 A. If drains are there, they can go under
 7 roads, correct, culverts are present.

8 MR. SLONE: I have no further questions.
 9 Thank you.

10 ALJ HICKS: Thank you.

11 Next is the Greene County Board of
 12 Commissioners.

13 MR. SHAMP: Thank you, your Honor. I
 14 don't have any further questions on cross.

15 ALJ HICKS: Thank you. Next is Xenia
 16 Township.

17 MR. DUNN: No cross for Xenia Township.

18 ALJ HICKS: Next up is Cedarville
 19 Township.

20 MR. BROWN: No cross for Cedarville
 21 Township as well.

22 ALJ HICKS: We have In Progress LLC.

23 MR. HART: No questions, thank you.

24 ALJ HICKS: And I don't know if
 25 Mr. Swaney is on, Micah, for the Tecumseh Land

1 Preservation Association.

2 MR. SCHMIDT: He is. I just unmuted him.

3 Mr. Swaney.

4 MR. SWANEY: No questions --

5 ALJ HICKS: Thank you.

6 MR. SWANEY -- your Honors.

7 ALJ HICKS: Thank you. Then we have

8 Board Staff.

9 MS. BAIR: Thank you, your Honor. I have
10 a couple of questions of Ms. Gresock.

11 ALJ HICKS: Please go ahead.

12 MS. BAIR: Thank you.

13 - - -

14 CROSS-EXAMINATION

15 By Ms. Bair:

16 Q. Ms. Gresock, my name is Jodi Bair, and I
17 represent the Staff of the Power Siting Board. And I
18 would like to ask you to look at your testimony,
19 which is Kingwood Exhibit 8, and specifically on page
20 6, you have discussed the Ohio Wetland Inventory
21 tended to overstate the extent of the wetlands found
22 on site. Do you see that in your testimony?

23 A. Can you tell me what line that is just
24 to?

25 Q. Yeah. Sorry. That's lines 12 and 13, I

1 think --

2 A. Thank you.

3 Q. -- on page 6. Do you see that there?

4 A. I do see that, yeah.

5 MR. SETTINERI: And I will just object to
6 mischaracterizing the testimony. It says I think
7 "OWI mapping" just to be clear for the record. Thank
8 you.

9 MS. BAIR: Okay.

10 Q. (By Ms. Bair) So you think that mapping
11 that's created by some state agency in Ohio says that
12 there are more wetlands on the project site than
13 there actually are?

14 MR. SETTINERI: I am just going to object
15 again. I hate to be a stickler, but for the record
16 we haven't laid a foundation OWI is a state agency.

17 Q. (By Ms. Bair) Okay. Well, whatever OWI
18 is, you think that it overstates the amount of
19 wetlands on the project area?

20 A. It's very common that both the National
21 Wetland Inventory and similar tools like OWI would
22 not necessarily reflect what was found and what is
23 observed in the field, and it is true that based upon
24 the field delineation we found that the OWI mapping
25 did seem to show more wetlands to be present than

1 were actually there.

2 Q. Do you know who creates the OWI mapping?

3 A. I do not.

4 Q. When you were looking at this project,
5 are you aware of when that map was created that you
6 are referencing here?

7 A. The OWI map?

8 Q. Yes.

9 A. It would be whatever the most recent one
10 is that is available for desktop review, but I do not
11 know the date it would have been developed.

12 Q. As a matter of practice, and I think you
13 are an expert in this field, how often do they
14 revisit those types of maps?

15 A. I don't think it's very common which
16 is -- which is why we are unsurprised when there are
17 differences between what is field delineated versus
18 what we see in that mapping background.

19 Q. Okay. How many visits to the site did
20 you make?

21 A. Me personally? I've only been -- I've
22 been there once. I sent a lot of other staff.

23 Q. Okay. So did -- did you -- how did you
24 develop your opinion that OWI's maps weren't
25 necessarily accurate? Was that your opinion or

1 someone that worked for you?

2 A. The wetland expert who did the
3 delineation in consulting with me and preparing my
4 testimony confirmed what I believed to be the case
5 which is what is expressed here, yes.

6 Q. Okay. And further down on line 20 of
7 that same page, page 6 of your testimony, you have
8 stated that "No impacts are proposed to any" -- okay.
9 I see the distinction, "delineated wetlands." Is
10 that your testimony?

11 A. That is my testimony.

12 Q. Okay. So those -- does that mean the OWI
13 mapped wetlands, or did you disregard those when you
14 were speaking of the delineated?

15 A. So the NWI and the OWI wetland desktop
16 information is very important as an element of what
17 is looked at to plan for a field delineation like
18 this because it certainly indicates areas where at
19 one point in time, some indication of wetland
20 presence had been mapped.

21 And so I think that we look very
22 carefully at the entire project area but we look even
23 more carefully in locations where this type of
24 mapping occurs but we do not see the three parameters
25 present that would identify this area as a wetland.

1 So once a field delineation is completed, then that
2 would make the prior mapped desktop information no
3 longer relevant.

4 Q. Okay. So there could be areas where
5 wetlands were a part of the Ohio wetland mapping;
6 because of the field visits, that wouldn't be
7 considered by your firm to be a wetland. So those
8 could be impacted, correct?

9 A. Typically those mapped resources are done
10 using aerial imagery, and so it is not likely that
11 anybody knows whether -- what was indicated as
12 potential wetlands were actually wetlands or some
13 other type of -- some other type of flag that would
14 have -- would have identified it as such.

15 The only wetlands that are real at the
16 state are those that are delineated in accordance
17 with the three parameter approach identified and
18 established by the Army Corps of Engineers for this
19 region of Ohio.

20 MS. BAIR: Okay. Thank you. I don't
21 have any more questions.

22 ALJ HICKS: Thank you.

23 So I believe that is it for parties to
24 cross. Understanding our unique arrangement here
25 with we will be bringing Ms. Gresock back hopefully

1 later this afternoon, I think the Bench's inclination
2 would be to hold off doing any type of redirect,
3 recross until that is completed.

4 And so with that, I think -- I know we
5 are approaching -- well, let's go off the record

6 (Discussion off the record.)

7 (Thereupon, at 12:05 p.m., a lunch recess
8 was taken.)

9 - - -

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Tuesday Afternoon Session,
March 8, 2022.

- - -

ALJ HICKS: We will go ahead and go back on the record.

We are reconvening after a lunch break, and in accordance with our plan from earlier, we will be resuming Mr. Van Kley's cross-examination of Ms. Gresock who had time to review an exhibit from the Citizens.

And just quickly before I turn it over to you for the cross, Mr. Van Kley, can we just officially mark these on the record so it's clear what's being referred to?

MR. VAN KLEY: Sure.

ALJ HICKS: Okay. Go ahead on the ones you've referenced thus far this morning.

MR. VAN KLEY: Okay. Well, the one I am getting set to question Ms. Gresock on momentarily is Citizens Exhibit 15, so I would ask that that exhibit be marked.

ALJ HICKS: It is so marked.

(EXHIBIT MARKED FOR IDENTIFICATION.)

MR. VAN KLEY: And previously I discussed with the witness Citizens Exhibit 14 which was the

1 web page from the U.S. Fish and Wildlife Service, so
2 I would ask that that document be marked.

3 ALJ HICKS: That is so marked.

4 (EXHIBIT MARKED FOR IDENTIFICATION.)

5 MR. VAN KLEY: And those are the only two
6 documents I have introduced into the discussion so
7 far.

8 ALJ HICKS: Okay. Thank you for that.

9 And with that I will turn it back over to
10 you to finish your cross-examination.

11 MR. VAN KLEY: Okay. Thank you, your
12 Honor.

13 - - -

14 CROSS-EXAMINATION (Continued)

15 By Mr. Van Kley:

16 Q. Ms. Gresock, do you have Citizens
17 Exhibit 15 in front of you?

18 A. I do.

19 Q. And during the lunch break, did you have
20 the opportunity to read that document?

21 A. I did.

22 Q. And can you tell me whether this is a
23 guidance document from the U.S. Department of
24 Interior and the U.S. Fish and Wildlife Service?

25 A. It is, although I note that in the cover

1 page it says "Findings and conclusions do not
2 necessarily represent the views of the U.S. Fish and
3 Wildlife Service."

4 Q. All right. Did you see any such
5 statement as to whether the views or the findings and
6 conclusions in this article reflect the views of the
7 you United States Geological Survey?

8 A. No.

9 Q. All right. I would like to ask you to
10 take a look at page 4 of the document.

11 A. I'm there.

12 Q. Okay. And look under the heading of
13 "Goal and Objectives," please, the second sentence
14 where it is stated as follows: "The overall
15 objective of this document is to provide guidance on
16 how to conduct wildlife mortality monitoring to
17 estimate the total number of bird and bat fatalities
18 occurring at a solar facility." Do you see that
19 sentence?

20 A. I see that sentence.

21 Q. All right. Now, based on your review of
22 the document, do you concur that that is the overall
23 objective of the document?

24 A. It does outline protocols for doing so
25 but does not state how one determines the necessity

1 to do so.

2 Q. All right. Now, let's look at page 3 of
3 the document. And I would like to direct your
4 attention to the second paragraph on that page. And
5 the first sentence of that paragraph states as
6 follows: "We address study design and suggest
7 protocols for conducting monitoring studies to
8 estimate the abundance of dead animals at each of the
9 three types of solar facility: Power tower -- power
10 tower (PT), photovoltaic arrays (PV), and solar
11 trough (ST), and in particular, for each potential
12 source of mortality within a facility." Do you see
13 that sentence?

14 A. I do.

15 Q. Okay. Now, the Kingwood Solar project is
16 designed to have photovoltaic arrays, correct?

17 A. That is correct.

18 Q. And, in fact, let's look at page 7 of the
19 document. And I would like to direct your attention
20 to Table 1 which is entitled "Project features on
21 different solar technology types that represent
22 different sources of mortality." And in that table
23 do you see that under the heading of "Group" there
24 are types of or categories of facilities listed that
25 appear in different types of solar facilities.

1 A. I see that.

2 Q. All right. And then the second column
3 which is labeled "Source of mortality" lists specific
4 equipment or structures that are deemed to be a
5 source of mortality, bats and birds, correct?

6 A. They list different components that could
7 be potential sources of mortality, yes.

8 Q. Okay. And then if you look at the last
9 column on the right side of that table, you will see
10 a heading for "Photovoltaic (PV) array," right?

11 A. I do.

12 Q. And there is an X in that column for each
13 type of source of mortality that appears or that is
14 used in a photovoltaic array, correct?

15 A. Depending on its design, it may or may
16 not have those features or may not warrant such a
17 study but, yes, I see those features.

18 Q. Okay. And so for the source of mortality
19 labeled as "Solar collectors/reflector area," does
20 the King -- is the Kingwood Solar project designed to
21 have any solar collectors?

22 A. There are solar panels that are
23 associated with the facility, yes.

24 Q. Okay. And those are -- those are an
25 example of solar collectors, right?

1 A. They are, although I would say that they
2 are lower reflectivity than are shown in the example
3 in Figure 2 in this report.

4 Q. And also there's a notation under "Source
5 of mortality" for reflector area --

6 A. I'm sorry. Could you say that again?

7 Q. Yeah. In the second column under "Source
8 of mortality," there is a reference to reflector
9 area. Do you see that?

10 A. Yeah. I don't know what they mean by
11 reflector. That may -- that may be associated with a
12 different type of technology, I assume.

13 Q. Okay. And then under that same heading
14 under "Source of mortality," there is an
15 identification of gentile -- gen-ties. Do you see
16 that?

17 A. I do.

18 Q. And do you know whether Kingwood Solar
19 has any gen-ties in its design?

20 A. Extremely short because the substation is
21 adjacent to the existing electric transmission lines.

22 Q. Okay. So the answer to my question is
23 yes?

24 MR. SETTINERI: Object, asked and
25 answered.

1 MR. VAN KLEY: It wasn't answered. I
2 think I deserve a yes answer if the answer is yes.

3 A. Yes, it is a short --

4 ALJ HICKS: Overruled.

5 A. -- line.

6 Q. And then do you know whether the Kingwood
7 Solar project is designed to have fences?

8 A. There will be fences.

9 Q. And those fences will be around the
10 entire project area, right?

11 A. There will be individual fencing areas
12 around clusters of the panel areas.

13 Q. Let's go to page 8 of Citizens
14 Exhibit 15. Under the heading for
15 "Collector/Reflector Field," the first sentence
16 states "Solar collectors/reflectors cover the
17 majority of the land area for utility-scale solar
18 projects (Fig. 1) creating opportunity for avian
19 interactions and, thus, risk for birds." Do you see
20 that?

21 A. I see that sentence.

22 Q. Now, you don't disagree with the
23 statement in that sentence, do you?

24 MR. SETTINERI: I would just object.
25 It's argumentative. The form of the question was

1 argumentative.

2 MR. VAN KLEY: I think proper
3 classification of my question is leading, not
4 argumentative; and leading questions are appropriate
5 for this witness.

6 MR. SETTINERI: It was a do you on the
7 end.

8 MR. VAN KLEY: Yeah. It's a leading
9 question.

10 ALJ HICKS: Overruled. She can answer.

11 A. I don't agree with for all projects. I
12 think it's a statement that could be true for some
13 projects.

14 Q. Okay. And then the second sentence
15 states "Birds may collide with collectors/reflectors
16 that reflect the sky and clouds and are misconstrued
17 as safe passage." Do you see that sentence?

18 A. I see that sentence.

19 Q. All right. Do you agree or disagree with
20 that sentence?

21 A. Again, Figure 2 which is above is
22 certainly illustrating a project that has that kind
23 of reflectivity. A project as technology is
24 advancing, lower and lower reflectivity panels are
25 coming into use, and I would not expect the project

1 to have that type of reflectivity shown in this
2 desert installation used as an example.

3 Q. Yeah, but that Figure 2 is just one
4 example of the types of solar facilities that this
5 guidance pertains to, correct?

6 A. And the sentence says "birds may collide"
7 and the may would really depend greatly upon the
8 design and setting of a given project.

9 Q. Okay. So going back to my question,
10 Figure 2 is just an example of the -- of a photograph
11 of a solar facility, but the entire guidance pertains
12 to more than just the type of facility that's
13 depicted in Figure 2, correct?

14 A. Well, the guidance pertains to how to
15 design a study when it's appropriate to do so based
16 upon whatever the finding is, whether it's to
17 identify whether there is some rare threatened and
18 endangered species that were to be at risk or -- or
19 whatever the case may be. This guidance is not a
20 blanket statement that is requiring any of this
21 action or stating that every project has these
22 impacts.

23 Q. Yeah, I get that but that wasn't the
24 question I asked. The question I asked is whether
25 this guidance document pertains to monitoring

1 procedures that can be used for any type of solar
2 facility at which monitoring is deemed to be
3 appropriate, right?

4 A. It does, yes.

5 Q. Okay. The next sentence in page 8 states
6 "Horvath and others (2009) hypothesized the "lake
7 effect," where polarized light produced by PV solar
8 facilities triggers maladaptive behaviors in birds
9 and other wildlife, including attempting to land and
10 forage on solar panels as though they were a body of
11 water (Fig 2)." Are you familiar with the studies by
12 Horvath and others referenced in this sentence?

13 A. I am not.

14 Q. And then the next sentence states
15 "Injuries from collisions with collectors/reflectors
16 may result in immediate death due to fatal blunt
17 trauma (Kagan and others, 2014) or stranding, that
18 is, the inability of a bird to take flight." Do you
19 see that?

20 A. I do see that.

21 Q. Are you familiar with the study by Kagan
22 and others in 2014 that makes -- makes such
23 statement?

24 MR. SETTINERI: Objection,
25 mischaracterizes language. There's no reference that

1 was a study. It's just a parenthetical saying Kagan
2 and others. There's no foundation laid that was a
3 study.

4 MR. VAN KLEY: I think the witness has
5 read this -- read the study. We can go back to the
6 record at the end.

7 Q. (By Mr. Van Kley) Ms. Gresock, do you
8 know whether this is referring -- the Kagan reference
9 is referring to a study or report of some sort?

10 A. I do not know. I do not know whether the
11 Kagan and others study if it's a -- study is solar
12 specific or whether it is pertaining to some other
13 type of potential for collision.

14 Q. Okay. Would you take a look at page 30
15 of the exhibit.

16 A. Okay. Mine only goes to 24.

17 Q. Oh. Just a second here.

18 ALJ HICKS: Mr. Settineri, are you able
19 to get her the whole --

20 MR. SETTINERI: I am checking right now.
21 Just a moment, please.

22 ALJ HICKS: Let's go off the record.

23 (Discussion off the record.)

24 ALJ HICKS: Let's go back on the record.

25 Go ahead, Mr. Van Kley. I don't remember

1 actually if -- was there a question pending?

2 MR. VAN KLEY: Yeah, there was. I will
3 reask it though.

4 ALJ HICKS: Okay.

5 Q. (By Mr. Van Kley) So, Ms. Gresock, if you
6 could visit page 30.

7 A. Again, okay.

8 Q. And do you see a reference for Kagan and
9 others on that page?

10 A. I do. I see that it's a Southern
11 California solar energy facility avian mortality
12 study.

13 Q. Okay. And it's a -- the title is that --
14 the title states "Avian mortality at solar energy
15 facilities in Southern California-A preliminary
16 analysis: National Fish and Wildlife Forensics
17 Laboratory"; is that correct?

18 A. That is what it says, yes.

19 Q. And that's the reference -- that is the
20 document to which the reference on page 8 to Kagan
21 and others 2014 refers?

22 A. Yes. That appears to be so.

23 Q. And I take it then you haven't read that
24 paper by Kagan and others?

25 A. I have not read that study nor do I know

1 what the type of facility that was or what type of
2 facilities were evaluated in southern California.

3 Q. Do you agree that injuries from
4 collisions with collectors may result in immediate
5 death due to fatal blunt trauma?

6 A. I'm sorry. I didn't hear you.

7 Q. Yeah. Do you agree that injuries from
8 collisions by birds with collectors may result in
9 immediate death due to fatal blunt trauma?

10 MR. SETTINERI: I will just object as to
11 ambiguous as to a collector. We have collection
12 lines in this project. We have -- I just don't know
13 what you mean by collector.

14 MR. VAN KLEY: She's already defined
15 collector to include solar panels in this discussion.
16 She did that in connection with our discussion about
17 Table 1 referring to solar collectors.

18 ALJ HICKS: The witness can answer. If
19 you need clarification, the witness is certainly free
20 to ask for such from Mr. Van Kley.

21 A. Avian mortality can occur at any time a
22 bird flies into an object.

23 Q. Do you agree that birds sometimes attempt
24 to land and forage on solar panels as if -- as though
25 they were a body of water?

1 A. I don't have knowledge of that. I don't
2 believe they do.

3 Q. So you would disagree with the statement
4 made in the first paragraph on page 8 under the
5 heading "Collector/reflector field" that is in the
6 third sentence of that paragraph starting with the
7 word "Horvath"?

8 A. As previously stated, I believe it
9 relates very much to the design and the location of a
10 given project.

11 Q. The second to the last sentence of the
12 first paragraph under --

13 A. I'm sorry. What page?

14 Q. It's page 8, the paragraph -- the first
15 paragraph under the title "Collector/reflector
16 field." And I would like you to look at the second
17 to the last sentence of that paragraph. That
18 sentence says "Stranding can occur when an individual
19 crippled by collision impact is unable to take off,
20 or when a water bird (for example, cormorant, loon,
21 etc., that can reach take-off velocity only after
22 running on the surface of a water body) lands safely
23 but, without a sufficiently large body of water,
24 cannot take off and may succumb to heat exhaustion."
25 Do you see that sentence?

1 A. I do.

2 Q. Do you have any knowledge about what
3 stranding is relative to bird's disease?

4 A. It seems like a fairly commonsense
5 concept, but I do not have any specific technical
6 knowledge.

7 Q. Let's go to page 9 of Citizens
8 Exhibit 15. And there is a paragraph here labeled
9 "Linear Features."

10 A. Okay.

11 Q. All right. And the first sentence of
12 that paragraph states "Linear features such as
13 generator-tie lines, collector lines, interior and
14 perimeter fences, present collision hazard to birds,
15 and electric lines represent a potential
16 electrocution hazard." Do you see that sentence?

17 A. I do see that sentence.

18 Q. Do you agree with that sentence?

19 A. Only if these features are electrified
20 which in this instance the fencing does not plan to
21 be.

22 Q. What was the word you used to describe
23 the feature?

24 A. I'm not sure what you are asking, but in
25 order to have something be a potential electrocution

1 hazard, it would need to be electrified. It would
2 need to be an electric feature.

3 Q. Okay. So gen-tie line would qualify as a
4 linear feature that is electrified, correct?

5 A. Similar to the above overhead
6 transmission lines that currently extend through the
7 site, yes.

8 Q. All right. And the first part of that
9 sentence states that generator-tie lines and fences
10 present a collision hazard to birds. Do you agree
11 with that statement?

12 A. I'm sorry. Where are you?

13 Q. The first part of the sentence that I
14 just read to you. The very first sentence of the
15 paragraph under "Linear Features."

16 A. They are structures and so, therefore,
17 there is a potential resource for collision.

18 Q. So let's read the second sentence of that
19 paragraph which states "Similar to solar -- solar
20 collectors/reflectors, mortality can be from fatal
21 blunt force trauma or non-fatal injury that results
22 in grounding." Do you see that sentence?

23 A. I do.

24 Q. And would you agree that if a bird
25 collides with a fence or a gen-tie line that that can

1 result in blunt force trauma that is fatal or -- for
2 a non-fatal injury?

3 A. I suppose it's possible.

4 Q. Okay. Now, are you familiar with the
5 size, that is, the height of the fences that are
6 being proposed for Kingwood Solar?

7 A. I believe they are 7 feet tall.

8 Q. Okay. And do you know how -- how tall
9 the fences are in the project area today?

10 MR. SETTINERI: Object, lack of
11 foundation.

12 MR. VAN KLEY: I asked her if she knew.

13 MR. SETTINERI: Your question assumed the
14 fences exist. You need to lay a foundation.

15 ALJ HICKS: Take a step back, Mr. Van
16 Kley, and then you can continue.

17 MR. VAN KLEY: That's fine.

18 Q. (By Mr. Van Kley) Ms. Gresock, are you
19 familiar with any -- are you aware of whether or not
20 there are fences in the project area?

21 A. I am not.

22 Q. Is it common for there to be fences in
23 agricultural areas?

24 A. Some agricultural areas may have fences.

25 Q. Do you know whether it's common to have

1 fences in agricultural areas in Ohio?

2 A. Some agricultural areas have fences.

3 MR. VAN KLEY: All right. Your Honor,
4 that concludes my questions at this time.

5 ALJ HICKS: Thank you, Mr. Van Kley.

6 I believe that wraps up cross.

7 Mr. Settineri, I know we just came back, but do you
8 need a few minutes?

9 MR. SETTINERI: Yeah, if I could, your
10 Honor, that would be helpful.

11 ALJ HICKS: Sure. 10 minutes?

12 MR. SETTINERI: 10 minutes would be
13 great.

14 ALJ HICKS: All right. Let's look at
15 1:43.

16 MR. SETTINERI: Thank you.

17 ALJ HICKS: We are off the record.

18 (Recess taken.)

19 ALJ HICKS: We will go ahead and go back
20 on the record.

21 We are back on record. Took a short
22 break. Mr. Van Kley finished his cross, and I will
23 turn it over to Mr. Settineri if he has any redirect.

24 MR. SETTINERI: Thank you, your Honor,
25 just a few questions.

REDIRECT EXAMINATION

1
2 By Mr. Settineri:

3 Q. Ms. Gresock, you were asked questions
4 about growing season related to wetlands, I believe.
5 Could you delineate a wetland outside of the growing
6 season?

7 A. Yes, you can.

8 Q. Okay. And then you were asked a number
9 of questions about the "USGS Mortality Monitoring
10 Design" document, Citizens Exhibit 15. Do you know,
11 when was that document issued? Do you know?

12 A. You said Citizens Exhibit 15?

13 Q. Oh, Citizens Exhibit 15, yes.

14 A. It notes that it was published in 2016.

15 Q. Okay. And did you have a chance to
16 review that document?

17 A. I did.

18 Q. Okay. And does your review of that
19 document change your conclusions in answer A10 of
20 your direct testimony?

21 A. It does not.

22 Q. And why?

23 A. This document is -- is a guidance
24 document for developing study designs and frankly
25 appears to be biased to facilities that are located

1 in the west. It's unfortunate that birds do collide
2 frequently with structures of all types, and I am not
3 aware of anything about this project that makes the
4 risk of that more likely than for any other
5 structure.

6 MR. SETTINERI: Okay. All right. No
7 further questions, your Honor. Thank you.

8 ALJ HICKS: Thank you.

9 Now I will go through and see if anyone
10 has any recross. We will go back to you,
11 Mr. Van Kley.

12 MR. VAN KLEY: Thank you, your Honor.
13 Just very briefly.

14 - - -

15 RE-CROSS-EXAMINATION

16 By Mr. Van Kley:

17 Q. Ms. Gresock, do you know whether there
18 are photovoltaic solar projects in the western United
19 States?

20 A. I expect there are.

21 MR. VAN KLEY: Okay. Thank you. Nothing
22 further.

23 ALJ HICKS: Thank you, Mr. Van Kley.

24 Any recross from Miami Township?

25 MR. SLONE: No, thank you.

1 ALJ HICKS: And recross from Staff?

2 MS. BAIR: No, thank you, your Honor.

3 ALJ HICKS: Okay. With that I believe we
4 are concluded with Ms. Gresock. We will go ahead and
5 excuse and thank you for your time and for coming
6 back after lunch.

7 THE WITNESS: Thank you.

8 ALJ HICKS: We can now move to see --
9 well, we will see if anyone would like to move any
10 exhibits into evidence.

11 MR. SETTINERI: Thank you, your Honor.
12 At this time we would move -- Kingwood Solar will
13 move for the admission of Kingwood Exhibit 8, the
14 direct testimony of Lynn Gresock into the record,
15 please.

16 ALJ HICKS: Okay. Any objections to the
17 admission of Kingwood Exhibit 8?

18 Hearing none, it is admitted.

19 (EXHIBIT ADMITTED INTO EVIDENCE.)

20 ALJ HICKS: Mr. Van Kley, any?

21 MR. VAN KLEY: Yes, your Honor. We would
22 move into evidence Citizens Exhibit 15.

23 ALJ HICKS: Any objections to the
24 admission of Citizens Exhibit 15?

25 MR. SETTINERI: Yes, your Honor.

1 Kingwood Solar objects to the admission of Citizens
2 Exhibit 15. Ms. Gresock is an expert. She was
3 crossed on this document that she was not familiar
4 with until she reviewed it and statements were read
5 into the record but there is no need to put the
6 entire document into the record at all here.

7 As is typical for experts, statements can
8 be read, but documents should not be admitted. In
9 this case Mr. Van Kley only read a portion --
10 portions of the document and asked her questions
11 about portions. The entire document should not be
12 admitted into the record. The transcript is
13 sufficient, your Honor.

14 MR. VAN KLEY: Your Honor, the witness
15 did acknowledge that this document appears to be a
16 guidance document from the U.S. Geological Survey and
17 the U.S. Fish and Wildlife Service or the Department
18 of Interior. And we didn't hear any evidence that --
19 well, I would just say that I believe that this
20 document, given that it does pertain to mortality
21 monitoring at solar facilities that do include the
22 type of solar facility being used at Kingwood Solar,
23 and also by virtue of the fact that Staff's original
24 set of proposed conditions did -- does include a
25 request for mortality monitoring at the Kingwood

1 Solar site, that this document is relevant and should
2 be admitted.

3 MR. SETTINERI: Your Honor, if I may
4 respond?

5 ALJ HICKS: Go ahead.

6 MR. SETTINERI: Yeah. This document, as
7 Ms. Gresock testified to, was a guidance document as
8 to designing monitoring protocols, all right? This
9 document, if it's submitted into the record, on brief
10 could then be cited to various portions that were not
11 asked about as for proposition that certain things
12 happen to certain animals on the site. All right?

13 I think sufficient questions have been
14 asked. Mr. Van Kley had the opportunity to ask every
15 question he wanted to about the document. He was
16 able to cite to the portions of the document and for
17 those portions he didn't cite to, clearly were not
18 relevant.

19 And I would also say this document is
20 not -- I don't think there is any way this document
21 talks about the property being similar to the
22 projects related to this document because I don't
23 think this document identifies specific projects as
24 far as I can see other than certain pictures, so
25 again, it's not relevant. He's able to ask his

1 statements into the record. Those are in the record.
2 There's no need to put a document in the record that
3 then opens the door to every paragraph, every
4 sentence in the document, your Honor. Thank you.

5 ALJ HICKS: Anything further from anyone
6 else?

7 Sorry to go off the record. Give me just
8 2 or 3 minutes.

9 (Recess taken.)

10 ALJ HICKS: We will go ahead and go back
11 on the record.

12 We are going back on the record. Took a
13 quick break to get some things set up with our next
14 witness.

15 When we last were on the record, there
16 had been a motion made by Mr. Van Kley for the
17 admission of Citizens Exhibit 15 and some discussion
18 as to whether it should be admitted into the record.
19 The Bench finds that Citizens Exhibit 15 was
20 available for all the parties to review and ask
21 questions on. The witness identified it as being
22 from a reputable government source; and, therefore,
23 we are going to admit Citizens Exhibit 15 into the
24 record.

25 (EXHIBIT ADMITTED INTO EVIDENCE.)

1 ALJ HICKS: And with that, I will hand it
2 over to Ms. Sanyal to call the Applicant's next
3 witness.

4 MS. SANYAL: Thank you, your Honor. May
5 we please promote Andrew Lines to the virtual stand.

6 MR. SCHMIDT: Mr. Lines, you've been
7 promoted. If you can enable your audio and video.

8 ALJ HICKS: There. I can see and hear
9 you. If you can just raise your right hand.

10 (Witness sworn.)

11 ALJ HICKS: Thank you. Please go ahead,
12 Ms. Sanyal.

13 MS. SANYAL: Thank you, your Honor.

14 - - -

15 ANDREW LINES

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

18 DIRECT EXAMINATION

19 By Ms. Sanyal:

20 Q. Good afternoon, Mr. Lines.

21 A. Good afternoon.

22 MS. SANYAL: At this time, your Honor, I
23 would like to mark an exhibit. May I please mark
24 Kingwood Exhibit 9 which was the direct testimony of
25 Mr. Andrew lines.

1 ALJ HICKS: It is so marked.

2 (EXHIBIT MARKED FOR IDENTIFICATION.)

3 MS. SANYAL: Thank you, your Honor.

4 Q. (By Ms. Sanyal) Mr. Lines, do you have a
5 copy of Kingwood Exhibit 9 in front of you?

6 A. I do.

7 Q. And what is Kingwood Exhibit 9?

8 A. My direct testimony.

9 Q. Okay. And was this exhibit prepared by
10 you or under your direction?

11 A. It was.

12 Q. Okay. And do you have any changes to
13 your direct testimony today?

14 A. I do.

15 Q. Okay. If you would go ahead and let us
16 know those changes and if you could speak slowly so
17 Ms. Gibson can accurately capture them.

18 A. Absolutely. Page 2, line 22, I need to
19 add before the words "Big Plain Solar," I will add
20 "Alamo Solar I LLC (Case No. 18-1578) and Angelina
21 Solar I LLC (Case No. 18-1579-EL-BGN)."

22 Q. And do you have any other changes to your
23 direct testimony today?

24 A. I do not.

25 Q. And if I asked you the questions that are

1 in your direct testimony, subject to the revisions
 2 you've made, would your answers remain the same?

3 A. They would.

4 MS. SANYAL: Okay. At this time, your
 5 Honor, Mr. Lines is available for cross-examination.

6 ALJ HICKS: Thank you. Once again, we
 7 will just follow the same order that we've done for
 8 the previous two witnesses. So I will open it up
 9 first to the Ohio Farm Bureau Federation.

10 MS. MILAM: No cross, your Honor.

11 ALJ HICKS: Okay. I will turn it over to
 12 Mr. Van Kley on behalf of the Citizens for Greene
 13 Acres. And you are muted, I think, Mr. Van Kley.

14 MR. VAN KLEY: That was just a great
 15 introduction too. Don't know if I can recreate that.
 16 Thank you, your Honor.

17 - - -

18 CROSS-EXAMINATION

19 By Mr. Van Kley:

20 Q. And good afternoon, Mr. Lines.

21 A. Good afternoon, Mr. Van Kley.

22 Q. Yeah. How many property value impact
 23 studies have you performed to determine whether solar
 24 projects have an impact on property values?

25 A. Over 25 and less than 30.

1 Q. Okay. And how many of those studies have
2 been paid for by solar companies?

3 A. All of them.

4 Q. How many times have you testified about
5 the potential impacts of solar projects on property
6 values?

7 A. Over 100.

8 Q. And how about the number of times have
9 you -- that you've testified about the potential
10 impacts of solar projects on property values?

11 A. Over 100.

12 Q. Okay. And how many of those testimonies
13 were paid for by solar companies?

14 A. All of them.

15 Q. How many property value impact studies
16 have you performed for Vesper Energy or a subsidiary
17 of Vesper Energy?

18 A. One for Vesper and I believe one for
19 Lendlease before the name conversion.

20 Q. Okay. And what was the name of the solar
21 companies that -- or the solar projects that you've
22 just referenced?

23 A. Kingwood which is this one and there was
24 one in Kane County, Illinois, and I just can't
25 remember the name of it. I'm sorry, Kankakee County.

1 Q. All right. And has either Vesper Energy
2 or a subsidiary of Vesper Energy paid your employer
3 for both of those testimonies?

4 A. Yes.

5 Q. Would you go to Appendix F of the
6 application in this case.

7 A. Okay.

8 Q. All right. And just keep your finger on
9 that and also go to your written direct testimony
10 that has been marked as Kingwood Exhibit 9.

11 A. Okay.

12 Q. When you get to that, go to page 4,
13 please.

14 A. Okay.

15 Q. All right. I would like to direct your
16 attention to answer 8 and please start at line 9
17 where it states "Properties adjacent to existing and
18 established solar energy plants were researched and
19 analyzed." Do you see that?

20 A. I do.

21 Q. Okay. Why did you select adjacent
22 properties, that is, properties adjacent to existing
23 and established solar energy plants for the work you
24 describe in this testimony?

25 A. We are trying to track the influence of a

1 presupposed deleterious use based on a principle that
2 the most proximate a property is to an established
3 and existing solar farm, that the most impact would
4 be seen by the properties that are most proximate.

5 Q. And then if you go down to line 12 with
6 the sentence starting there where it states as
7 follows: "Those sales located physically contiguous
8 to the solar farms, or the Target Group, are then
9 compared to similar properties that are removed from
10 any solar facility influence, referred to as the
11 Control Group." My question there is by
12 physically -- first of all, by "physically
13 contiguous," does that mean the same thing as the
14 reference to "properties adjacent" in the prior
15 sentence?

16 A. Essentially.

17 Q. And why -- why is it important to compare
18 those projects to those that are removed from any
19 solar facility influence?

20 A. Again, we are trying to understand the
21 influence based on proximity thinking that -- or
22 hypothesizing that the closer one is to a proposed
23 deleterious use, the most impact would be seen.

24 Q. Now, is there any rule of thumb that you
25 use to determine how far away a control sale should

1 be before you consider its inclusion in a paired sale
2 analysis?

3 A. No.

4 Q. So would it be okay then, let's say, for
5 a control sale to be on a property that's as close as
6 a mile away from a solar facility?

7 A. It depends.

8 Q. And what does it depend on?

9 A. The number of available control sales in
10 a given area and other locational or geographical
11 items that might pop up that would suggest that that
12 sale wasn't appropriate to utilize.

13 Q. And what are those other factors that
14 you've just referenced?

15 A. Again, just because it's located a mile
16 away does not necessarily mean that it is the best
17 control sale to use within our framework and so we
18 are looking at a number of factors. One, its
19 relevancy with regard to physical characteristics and
20 another would be whether or not that particular sale
21 has any other concerns around it that would
22 disqualify it.

23 Q. Is there a particular distance that the
24 control sale property should be located away from a
25 solar project in order to satisfy you that the price

1 of that sale was not influenced by the presence of
2 the solar project?

3 A. It should not be physically contiguous.

4 Q. So as long as it's not physically
5 contiguous to the solar project, that sale would be
6 suitable for inclusion in a paired sales analysis as
7 long as it met the other criteria that you used to
8 determine whether it's appropriate.

9 A. I would go so far to say it is the
10 minimum requirement.

11 Q. All right. Now, let's go to Appendix F.
12 We will start off on page 12. All right. Directing
13 your attention to the third paragraph on that page.
14 This paragraph discusses a study by the University of
15 Rhode Island, correct?

16 A. It does.

17 Q. And looking at the fourth line of that
18 paragraph, it states that "A significant weakness of
19 the study is that the data points in the Test Area
20 group extend up to a mile away from solar
21 installations, and the preparer of the study
22 acknowledged that view of a solar farm was not a
23 tracked attribute of the sales." Do you see that
24 sentence?

25 A. I do.

1 Q. Okay. Now, first of all, are you the
2 author of Appendix F?

3 A. I am a coauthor of Appendix F.

4 Q. Okay. And so you're familiar with all of
5 the statements in Appendix F?

6 A. I am.

7 Q. Now, with regard to the sentence that I
8 just read, why did you say that a significant
9 weakness of the study is that the data points in the
10 test area group extend up to a mile away from solar
11 installations?

12 A. Especially in the area where Corey Lang,
13 who is the author of the University of Rhode Island
14 study, and who I have spoken to, one of the issues as
15 part of this as it relates to the studies that was
16 conducted in the northeast where topography is not
17 necessarily flat and there are a number of properties
18 or geographical concerns where a test area group or a
19 test sale that they considered would be so far
20 removed from an existing solar that, you know, we
21 believed that it wasn't a reliable data point to use
22 in -- in comparison to control sale data.

23 Q. So is -- is one of the facts that pertain
24 to the answer you just gave me that there were sales
25 used as test sales of properties that had no view of

1 the solar farm?

2 A. That's true.

3 Q. So is it also true that in order for a
4 sale to be considered as a valid test sale, the
5 property being sold has to have a view of the solar
6 project?

7 A. No.

8 Q. Under what other circumstances would it
9 be valid to use a property sale of property that does
10 not have a direct -- a view of the project?

11 A. It being physically contiguous.

12 Q. Do you know off the top of your head
13 approximately how many control sales were utilized in
14 the University of Rhode Island study?

15 A. Tens of thousands.

16 Q. And approximately how many of those do
17 you believe suffered from the weakness that you
18 described in the third sentence of the third
19 paragraph on page 12 of Exhibit F?

20 A. I do not know. Mr. Lang would not
21 provide us with his background data.

22 Q. How many control sales do you believe
23 it's necessary to have for a solar project in order
24 to determine -- in order for there to be a valid
25 paired sales analysis?

1 A. I don't have that number.

2 Q. Is it more than one?

3 A. Yes.

4 Q. Is it more than 20?

5 A. I don't know.

6 Q. More than 10?

7 A. I just think it depends.

8 Q. What does it depend on?

9 A. So the instruction that we have from
10 Dr. Randy Bell, MAI, is real estate damages treatise
11 informs that we're supposed to measure data to see
12 not only if it's measurable but that it's repeated in
13 order to clarify or conclude that something has an
14 impact on adjacent property. So it may be that you
15 are able to have a repeated conclusion under
16 circumstances that makes sense with a bear minimum of
17 control sales; but, you know, I couldn't give you the
18 exact number nor is there an exact number listed by
19 Dr. Bell as to how many you need in order to validate
20 a study.

21 Q. Do you believe that you would need at
22 least five control sales in order to have a valid
23 paired sales analysis?

24 A. For our studies we generally have a bear
25 minimum of -- of, you know, around five control sales

1 in comparison to one test sale. That's what we've
2 done. But more importantly to that is that we just
3 don't do the one study. We do multiple studies to
4 identify whether there's a consistent and measurable
5 difference.

6 Q. How many -- how many test sales are
7 necessary for there to be a valid paired sales
8 analysis?

9 A. We can't make up data so where we found
10 existing solar farms where we can only find one test
11 sale, we have gone ahead and done a study of that one
12 sale.

13 Q. And how -- how useful is a sale that --
14 how useful is a paired sales analysis that has only
15 one test sale?

16 A. Again, we are performing multiple
17 studies, and so the aggregate number of sales
18 compared with control sales provides us with some
19 indication as to whether or not there is a consistent
20 and measurable distance.

21 Q. So is it -- is it possible then to
22 include multiple -- is it -- is it possible to
23 include test sales for more than one solar project
24 and put them together to create one paired sales
25 analysis? In other words, is it valid to do that?

1 A. We have individual studies that align
2 that have similar circumstances. We don't
3 necessarily aggregate test sales from different solar
4 farms into -- into one. We do look at the average
5 and median differences between our test and control
6 sales and each individual solar farm case, but it's
7 about doing the cases multiple times and seeing if
8 there is a trend.

9 Q. Uh-huh. Would you agree that the results
10 of a paired sales analysis are more reliable if you
11 have a greater number of test sales to use in that
12 analysis?

13 A. So long as your methodology is
14 appropriate and you are doing your due diligence.

15 Q. Okay. All right. So with that
16 qualification, the answer is yes to my question?

17 A. We love data, not going to lie so the
18 more data the better, but we can't make up data, and
19 we have to study what's available to us.

20 Q. So going back to my question then, if you
21 have more data points, that is, because of a greater
22 number of test sales, would you have more comfort in
23 feeling that the results of your paired sales
24 analysis is accurate?

25 A. That's exactly why we've done over 25

1 studies.

2 Q. Would you go to page 2 of Appendix F and
3 look at page 3. I will ask you some questions about
4 both pages simultaneously here. Is this information
5 on pages 2 and 3 about the study you performed that's
6 in Appendix F?

7 A. Yes. These are short summaries about
8 each of the impact studies and each solar facility
9 with test sales, control sales that we aggregated for
10 this consulting report.

11 Q. And you utilized paired sale analyses
12 from 11 solar farms, right?

13 A. That's correct.

14 Q. So for solar farm No. 1, which is for the
15 North Star solar farm, you utilized five test sales,
16 right?

17 A. That's correct.

18 Q. For solar farm No. 2, which is the
19 Innovative Solar 42, you utilized, I guess, one test
20 sale.

21 A. That's correct.

22 Q. And then we can read the number of test
23 sales for all the rest of the projects, but it's in
24 writing, so I'll spare you that.

25 A. Why thank you.

1 Q. Who paid for the study that is described
2 on pages 2 and 3 of Appendix F?

3 A. Are you -- do you mean all of them
4 combined or each individual one?

5 Q. All of them combined if that's -- if
6 that's -- if it's the same company.

7 A. Vesper paid for this consulting report
8 which is established and offered in this exhibit.

9 Q. Okay. Now, did you do all of the work on
10 paired sales analyses for the 11 solar farms that are
11 listed on pages 2 and 3 just for the purpose of
12 Appendix F, or had you done some of these analyses
13 prior to the time that Vesper hired your company to
14 prepare Exhibit F?

15 A. These have been conducted over time and
16 predates my engagement with Vesper.

17 Q. Okay. Are all of the analyses that are
18 listed for solar farms 1 through 11 on pages 2 and 3
19 paid for by solar companies?

20 A. Yes.

21 Q. Let's go to page 6 of Appendix F and I
22 would like to direct your attention under
23 "Conclusions" to a list of six elements. Do you see
24 those?

25 A. I do.

1 Q. Now, let's go to the sentence after that
2 which states we have also reviewed studies prepared
3 by other real estate valuation experts that
4 specifically analyzed the impact of solar facilities
5 on nearby property values. Do you see that?

6 A. I do.

7 Q. Okay. Now, are all of the studies
8 referenced in this sentence prepared for solar
9 companies?

10 A. I know one that is, and I believe I know
11 of one that was not.

12 Q. Which is the one that was not?

13 A. It was conducted by an appraiser in
14 Michigan, and I am -- I just can't remember his name
15 off the top of my head, but it will come to me.

16 Q. Did that study conduct paired sales
17 analyses?

18 A. The one -- I'm sorry. Yes. So the
19 answer is Mike MaRous, Mike MaRous who is an MAI in
20 Illinois, as well as Richard Kirkland who is an MAI
21 out of North Carolina. They both have conducted
22 paired sales analyses to understand the influence of
23 solar farms in adjacent property values.

24 Q. Now, Mr. MaRous is a person who testifies
25 on property valuation for solar -- for energy

1 companies, correct?

2 A. He does impact studies for a wide variety
3 of reasons but, yes.

4 Q. In fact, are you aware Mr. MaRous has
5 testified on behalf of wind companies at the Ohio
6 Power Siting Board?

7 A. I am not aware.

8 Q. Let's go to page 105 of Appendix F. And
9 here we have a list of market commentaries, and I
10 just -- rather than going through all of them, I
11 would just like to concentrate on the ones that were
12 provided by people in Ohio which are the first three,
13 I believe, on page 105. Let's start with the first
14 one pertaining to Bill Nichols, Chief Appraiser with
15 the Trumbull County Auditor in Ohio. Can you tell me
16 how many solar farms there are in Trumbull County
17 Ohio?

18 A. I don't -- I don't know.

19 Q. Do you know whether Trumbull County has
20 any utility-scale solar facilities?

21 A. I'm not sure.

22 Q. And going to the second market commentary
23 by -- this one by Beth Fritz in Wood County, Ohio, do
24 you know whether there are any solar facilities in
25 that county?

1 A. There are solar facilities in that
2 county. We wouldn't have included them in our market
3 commentary if there weren't any solar because those
4 valuation specialists or assessors wouldn't be able
5 to see any data around them, so we specifically pick
6 out assessors that we know have solar. I am just not
7 sure how much solar there is in Wood County off the
8 top of my head.

9 Q. To your knowledge, what's the largest
10 facility in Wood County?

11 A. I'm not sure.

12 Q. So do you know whether there are any
13 utility-scale solar facilities in Wood County?

14 MS. SANYAL: Objection, asked and
15 answered. The witness has already mentioned that he
16 is not aware.

17 MR. VAN KLEY: I think he said he wasn't
18 aware of the maximum size so. This question --

19 ALJ HICKS: Go ahead and answer and it
20 will dispose of the issue.

21 A. I'm not sure.

22 Q. The third commentary is by Jarra
23 Underwood with the Wayne County Auditor in Ohio. Do
24 you know whether there are any utility-scale solar
25 projects in that county?

1 A. I'm not sure.

2 Q. Do you know why the location near the one
3 solar farm in that county near residential properties
4 mentioned in this commentary is not a highly sought
5 after location?

6 A. It's just additional commentary by that
7 particular assessor so I know that -- strike that.

8 I believe that this particular auditor
9 was just noting that this particular solar farm is
10 near residential properties and that they still have
11 not seen an effect on property values.

12 Q. It also states, and I quote, "while it is
13 not a highly sought after location," right?

14 A. Correct.

15 Q. And does that indicate -- do you
16 understand that statement to mean that the
17 residential properties there are not in a highly
18 sought after location?

19 A. I think that the auditor is referring to
20 the general area, not just the area that's located
21 around the solar farm.

22 Q. What did you do to prepare for your
23 testimony today?

24 A. I reviewed my exhibits. I reviewed my
25 direct testimony. I've reviewed a lot of the other

1 exhibits and some of the exhibits that are part of
2 this. I drove the site twice, the proposed site, and
3 investigated online some additional sales
4 information. I continued to look at data and tried
5 to have conversations with people who might see
6 transactions to have a general understanding of how
7 things are trending for -- for not only residential
8 homes in general but homes around solar farms and
9 thought about all of the wonderful questions that you
10 might ask me.

11 Q. Well, I hope I am not disappointing you.

12 A. You are doing a great job so far.

13 Q. Appreciate it. You are too. All right.

14 In your evaluation of potential solar project impacts
15 on property values, did you rely on conversations
16 with county auditors?

17 A. County auditors and assessors are one of
18 the important parts of our methodology and
19 understanding what the impact might be on adjacent
20 property as caused by the development of solar.

21 Q. County auditors have a financial
22 incentive to avoid reducing their appraisals of
23 property in order to avoid a loss of revenue,
24 correct?

25 A. I'm not a county auditor. I wouldn't

1 know.

2 Q. In performing a paired sales analysis, is
3 it necessary to select control sales of properties
4 that have similar characteristics to the properties
5 in the test sales?

6 A. Yes.

7 Q. Why is that?

8 A. Because you're trying to compare apples
9 to apples.

10 Q. In the control sales included in your
11 study that is contained in Appendix F, did you
12 control -- did you compare any test sales in one
13 state to control sales in another state?

14 A. No.

15 Q. Do you know approximately how many solar
16 projects have been constructed in the United States?

17 A. As of December 2020, 4,519.

18 Q. And for how many of those solar projects
19 have you conducted any paired sales analysis?

20 A. As I stated earlier, somewhere between 25
21 and 30.

22 Q. How did you go about selecting the ones
23 that you used in the paired sales analysis?

24 A. That's a great question. So it's a
25 painstaking methodology where first we go to the EIA

1 website and use their GIS tool to look in a
2 particular state and look in a particular region and
3 see what solar has been developed.

4 Then we use aerial programming to
5 highlight the areas around those particular solar
6 facilities and we see whether or not there is any
7 adjacent homes or adjacent residences that we can
8 track. You know, the big key is here we need to make
9 sure there's data for us to -- for us to review.

10 So at that point once we see an aerial
11 that looks like there is some residences that are
12 immediately adjacent, we might drill down into a
13 county website to try to determine whether or not
14 there has been any sales immediately touching that
15 particular solar facility.

16 And so in this way we painstakingly go
17 solar facility by solar facility to see where there
18 have been transactions since that solar facility
19 began operations. Once we've identified test sales,
20 at that point we are verifying them to make sure that
21 they are market transactions.

22 And at that point we can kind of take a
23 step back, okay, this looks like it might be a good
24 area for study and then we either decide to move
25 ahead or may look at some other reasons why we might

1 discount.

2 Q. Out of all the solar facilities in the
3 United States, how many of those facilities
4 approximately have you looked at in an effort to find
5 facilities that would be suitable for paired sales
6 analysis?

7 A. I don't know how many or can't recall how
8 many solar farms there are that are greater than 1 or
9 2 megawatts, and when you get really small, then it
10 really limits the number of properties that can be
11 around one. So, you know, especially in the last
12 couple of years, our focus has mainly been on larger
13 utility-scale projects.

14 So just depends on the region that you
15 are talking about. In some regions there are a few
16 and so it's easy to navigate and look at multiple
17 ones and that's one of the reasons why we explain in
18 the report we have to look across state lines. So I
19 couldn't give you an exact number, but we've looked
20 at -- looked at a whole lot of them.

21 Q. Uh-huh. And what are the reasons why you
22 decided not to do paired sales analyses at solar
23 farms where you looked at the information you've just
24 described?

25 A. Sure. There was one that we looked at

1 that was built over a former landfill and so we were
2 concerned with any previous influence that the
3 landfill may or may not have had on adjacent
4 residential properties.

5 There was another one that had, you know,
6 a train line and some rail that was going over the
7 north part that was also immediately adjacent to what
8 would have been test sales. And so we were also
9 concerned about any influence that that might have.

10 We've looked at sales or looked at solar
11 farms that were developed on this same land area that
12 there's an existing coal-fired power plant. And so
13 we were concerned about looking at those sales that
14 were immediately adjacent to both solar and a
15 cold-fired power plant in worrying about isolating
16 the particular influence and that's pretty key.

17 Q. Now, paired sales analysis does not
18 reveal whether an adjacent landowner has tried to
19 sell a property but has not been successful in
20 selling it; is that correct?

21 A. I'm not 100 percent understanding your
22 question.

23 Q. Well, a paired sales analysis, as the
24 term suggests, compares sales of properties, right?

25 A. It does.

1 Q. And in order to have test sales, you have
2 to actually have sales, right?

3 A. That is very true.

4 Q. Okay. So my question is whether the
5 paired sales analyses that you've conducted have
6 revealed whether or not a landowner tried to sell a
7 property but was not successful.

8 A. Are you asking whether or not data in my
9 tables in tracking the differences for paired sales
10 also includes listings of properties that don't sell?

11 Q. That wasn't exactly what I asked but I
12 would like to know the answer to that question too.

13 A. The answer is no. The exact sales that
14 are in the paired sales table that we used to
15 determine differences do not include sales that don't
16 exist.

17 Q. Yeah. And so rephrasing my prior
18 question, which may not have been worded very
19 clearly, when you do your paired sales analysis, do
20 you look at any information to determine whether
21 landowners adjacent to a solar farm have tried to
22 sell their property but couldn't sell it?

23 A. There's a -- that's the question I can
24 answer. Great. Yeah, that is true. We do look at
25 general market data and review, you know, some

1 listings and some of the other sales and not so sales
2 information that's in a general area. Sometimes the
3 information is relevant. Sometimes it isn't.

4 We pay far closer attention to the days
5 on market because if you do have test sales that are
6 selling and it's taking substantially longer to sell
7 those homes than your control sales and that might be
8 a factor of influence and so we pay a lot of
9 attention to that.

10 Q. So in your study did you have data to
11 show whether any properties adjacent to the solar
12 project were offered for sale but were not sold?

13 A. We don't specifically cite cases of
14 adjacent properties on solar farms that were listed
15 but don't sell.

16 Q. Have you ever conducted -- do you also
17 conduct appraisals of property?

18 A. I do.

19 Q. Okay. Have you ever conducted an
20 appraisal of a property of which you discovered
21 the -- the view from that property had reduced its
22 value?

23 A. I'm going -- I am going to ask you a
24 question to help me understand how to -- your
25 question a little bit better. So there are many

1 different kinds of appraisals and then there is
2 methodology within appraisals. Are you asking did I
3 do an appraisal of a property where I showed
4 diminution of value because of a loss of view, or are
5 you asking me did I appraise a property where I
6 adjusted for view based on certain circumstances and
7 in comparison to other properties or comparable
8 sales?

9 Q. Yeah. Both of those are great questions.
10 Maybe we should switch chairs here, have you ask the
11 questions.

12 So let's start with the first scenario,
13 the question you just asked me, and if you could
14 answer that question first, that would be great.

15 A. The first question that you asked me that
16 I rephrased is whether or not I've conducted an
17 appraisal on a property where I have specifically
18 looked at a diminution of value based on the change
19 in view, and the answer is yes.

20 Q. Okay.

21 A. And then the second question that you
22 asked me that I rephrased for you is whether or not
23 I've adjusted comparable sales in the process of
24 appraising based on a view, and the answer is also
25 yes.

1 Q. Okay. Would you agree that a property
2 with a view considered to be undesirable would
3 generally be valued at a lower value than a similar
4 property with a desired view?

5 A. No.

6 Q. Why not?

7 A. It depends on whether the market in that
8 particular area would -- is a -- where view is a
9 factor that results in a quantifiable payment.

10 Q. So is the reason for your answer due to
11 the fact that not all properties are purchased based
12 on having nice view?

13 A. I think I'm suggesting that a view, that
14 while it may be a consideration, there might be a lot
15 of other priorities that are easily or easier to
16 quantify by appraisers and there are priorities that
17 some buyers have that don't necessarily have a market
18 value.

19 Q. Would you agree that a desirable view can
20 be a reason why a person would buy a property?

21 A. It depends.

22 Q. Okay. So, for example, let's say that
23 you're -- you're trying to market for sale a property
24 on the ocean. Do you think the oceanview would
25 increase the value of that property?

1 A. Yes, because it's protected.

2 Q. Because it's protected?

3 A. Correct. It's a public -- it's a public
4 thing that everyone wants to look at. Water is a
5 very specific kind of view. The serenity involved
6 with particular water and generally our public bodies
7 of water are protected which is why individuals might
8 want to position themselves to have a view if you are
9 talking about a residence or sometimes an office
10 building. We are familiar with this in Chicago.

11 Q. Okay. And there are other types of views
12 as well other than views of water that would make a
13 person more likely to want to purchase a property of
14 that nature, right?

15 A. It depends.

16 Q. So, for example, a nice view of a wooded
17 area may be a desirable feature that may increase the
18 price at which that property is sold?

19 A. It depends. It depends on whether or not
20 that wooded area is a protected view. Will it go on
21 into perpetuity? Is somebody responsible for the
22 upkeep of those trees? Where you are looking at
23 private property, I don't necessarily think that
24 there's always a market value for that.

25 Q. Well, let me ask you this, would the same

1 thing be true that a person may be willing -- let me
2 start over.

3 Might a person be willing to pay extra
4 for a property that has a nice view that the buyer
5 does not expect to lose after purchasing the
6 property?

7 A. I would say it depends on whether or not
8 that view is protected.

9 Q. Well, do you think that, for example,
10 with regard to a property that has a nice view of a
11 treed area, do you think that the buyer necessarily
12 takes into account whether that treed area is
13 protected if the buyer is not aware of any signs that
14 would indicate that the trees will be cleared?

15 MS. SANYAL: Objection.

16 A. An appraiser -- sorry.

17 MS. SANYAL: I think Mr. Van Kley is
18 asking about what buyers think. I don't think -- I
19 think Mr. Lines has already responded to what he
20 means by "protected views."

21 ALJ HICKS: Sure. I don't know if you
22 can rephrase, Mr. Van Kley, but I will give you
23 another shot. But I do think we are kind of treading
24 the same ground here on this point. If you can move
25 towards wrapping this line of questioning up.

1 MR. VAN KLEY: Yeah.

2 Q. (By Mr. Van Kley) Well, Mr. Lines, what I
3 am exploring here is the value of a view to -- or the
4 influence of a view on purchase price that may not be
5 protected by law but which the buyer has no reason to
6 expect will change. And my question is whether that
7 kind of view can augment the purchase price of that
8 property.

9 MS. SANYAL: Same objection as before,
10 your Honor. I don't think Mr. Lines can opine on
11 expectations of buyers on something that is not
12 protected.

13 MR. VAN KLEY: I would differ from that
14 certainly. Mr. Lines is an expert in appraisals, and
15 I think he can very well answer that question.

16 ALJ HICKS: Mr. Lines can answer to the
17 extent in his experience he has a response to it, but
18 I would again encourage forward progress here. I
19 feel like we've had the same question asked a few
20 times now.

21 Go ahead, Mr. Lines

22 THE WITNESS: Thank you, sir.

23 A. All appraisers when they appraise a home
24 or a land or whatever property have to assume as part
25 of the market value definition that the buyers and

1 sellers are equally informed, so I can't opine on a
2 buyer who might think something but doesn't know all
3 of the facts and circumstances surrounding whatever
4 they are looking at.

5 Q. In your paired sales analysis or
6 analyses, did you exclude sales of properties
7 adjacent to solar projects that have been sold to
8 employees of those solar projects?

9 A. There is one transaction of a home in the
10 North Star or around the North Star solar facility,
11 which we detail in our report, and in that case the
12 homeowner who sold his house for a pretty substantial
13 premium above market value so that the development
14 could proceed was asked to be a caretaker for some of
15 the other homes that were in the area for the solar
16 developer, technically an employee.

17 Q. I assume you excluded that property from
18 your analysis?

19 A. We excluded the first one, and I think we
20 did also exclude the second one because of the
21 relationship involved between the buyer and seller
22 who were then reversed.

23 Q. In doing your paired sales analyses,
24 would you necessarily know whether or not a test sale
25 had been made to an employee of the nearby solar

1 farm?

2 A. We attempt to do the proper due diligence
3 on our sales as much as possible.

4 Q. So going back to my question, would you
5 necessarily know whether it was an employee that
6 purchased the property?

7 A. Again, if you are able to speak to a
8 broker or one of the buyers and sellers, then you can
9 ask whether or not there is an arm's length
10 relationship which, again, is one of the requirements
11 that our appraiser usually has when they are
12 conducting their appraisal assignments.

13 Q. So out of the -- out of all the test
14 sales that you included in your study, how many of
15 those sales were discussed with the real estate
16 broker that made the sale?

17 A. A good number of them. I couldn't give
18 you an exact number.

19 Q. Can you give me an approximate
20 percentage?

21 A. Probably over half.

22 Q. Now let's go back to your direct
23 testimony page 7. And I would like to direct your
24 attention to the testimony starting with line 17
25 where you discuss some sales made in the area around

1 Hillcrest Solar in Ohio.

2 A. Yeah.

3 Q. And that is in Ohio, right, Hillcrest
4 Solar?

5 A. It is.

6 Q. Okay. And you state there that there
7 were no home sales adjacent to the project boundary
8 of Hillcrest Solar, right?

9 A. Correct.

10 Q. But then you say there are approximately
11 three home sales nearby to the project boundary that
12 sold between late January 2020 and the date of your
13 written testimony, right?

14 A. That's correct.

15 Q. Okay. Now, by "approximately three," do
16 you mean there may have been more, may have been
17 less, or you think it's -- are there only three that
18 you know of?

19 A. There were three that were relatively
20 close by. There were more sales as you drifted
21 further -- farther away but there were three that
22 were relatively close by. It was difficult to tell
23 whether or not they were immediately adjacent. We
24 studied them on aerial and then I personally visited
25 them and they are not immediately contiguous to that

1 solar farm.

2 Q. And earlier in your testimony do you
3 recall stating that in order to -- to -- for a
4 property to serve as a valid test sale, it would have
5 to be on a property that is contiguous to the solar
6 farm, right?

7 A. That is the methodology we've been
8 employing.

9 Q. And none of these three sales qualify
10 pursuant to that criterion, right?

11 A. That's correct.

12 Q. How far from the Hillcrest Solar facility
13 are the properties sold in these three sales?

14 A. Within half a mile to three-quarters of a
15 mile. I am not exactly sure of the distance but well
16 within a mile.

17 Q. In line 23 on page 7 of your testimony,
18 you state that the homes we're discussing do not have
19 any direct views of the solar project, right?

20 A. That's correct.

21 Q. Was there any view of the solar project
22 from those properties?

23 A. The ones that I say in my testimony do
24 not have any direct views.

25 Q. Yes.

1 A. No.

2 Q. Okay. Do you know whether any homes on
3 land adjacent to the Hillcrest Solar project have
4 been abandoned based on your visit to the area?

5 A. I'm not sure.

6 Q. Did any of the homes or land adjacent to
7 the project area appear not to be lived in?

8 A. There were some old barns in the area as
9 you usually see in rural areas. I can't recall if
10 there was a specific residence or property that
11 appeared abandoned or not looked lived in.

12 MR. VAN KLEY: All right. I have no more
13 questions at this time.

14 ALJ HICKS: Thank you.

15 Up next will be Miami Township.

16 MR. SLONE: Nothing from Miami Township
17 for this witness. Thank you.

18 ALJ HICKS: Okay.

19 Next is Greene County Board of
20 Commissioners.

21 MR. BOGGS: Thank you, your Honor. If I
22 might have just a moment to consult my notes, I may
23 have just a couple of questions for Mr. Lines.

24 ALJ HICKS: Sure.

25 MR. BOGGS: So, thank you, your Honor.

CROSS-EXAMINATION

1
2 By Mr. Boggs:

3 Q. Mr. Lines, my name is Thad Boggs. I
4 represent the Board of Commissioners in this
5 proceeding. Thank you for being with us this
6 afternoon. I will try to be brief with my questions
7 here.

8 I am looking in particular at Appendix F
9 and your examination of solar farm 8 which is the
10 S-Power Shoreham Solar farm in Suffolk County, New
11 York.

12 MS. SANYAL: Mr. Boggs, do you have a
13 page number for us just so we can follow along?

14 MR. BOGGS: I do. It's page 74 of
15 Appendix F.

16 MS. SANYAL: Thank you so much.

17 MR. BOGGS: That's by the internal
18 numbering. I think it's page 76 as a PDF.

19 Q. (By Mr. Boggs) I notice when you describe
20 the surrounding area as we go on to page 75 of the
21 report, you say that "Shoreham is a costal area just
22 south of the Long Island Sound in the State of New
23 York, with a rural character, residential development
24 dispersed with agricultural land." What led to you
25 describing this area as having a rural character?

1 A. There are some agricultural properties
2 that are nearby in this part of Long Island.

3 Q. Now, when you say "nearby," what do you
4 mean by that?

5 A. As you can see on page 76, it's
6 immediately next to two pieces of large undeveloped
7 land.

8 Q. Okay.

9 A. Page 74.

10 Q. Okay. Well, we can look at the map on 76
11 because I think it's a little bit larger.

12 A. Sure.

13 Q. Your test sale for this facility was
14 parcel No. 5; is that correct?

15 A. That's correct.

16 Q. And it appears that that is across a road
17 from the project; is that correct?

18 A. That is true.

19 Q. Do you know what the width of that -- or
20 do you know how many lanes that road has?

21 A. I think it's four.

22 Q. Four. In your experience are four-lane
23 roads typical for rural areas?

24 A. It depends where they are. In Michigan
25 they have got some big roads.

1 Q. And the facility at the I guess you would
2 call it catty-corner to parcel 2 there, do you know
3 what that facility is?

4 A. I think there was a school bus lot.

5 Q. I see. I also notice that there are a
6 few cul-de-sacs indicated on this photo that we have
7 here. Are you aware of what the character is of
8 development beyond the scope of this picture?

9 A. So to the north and really close is -- is
10 the waters edge, so this one is built up on the north
11 side of Long Island. So there are undeveloped
12 tracts. As you move further east, you do get more
13 agricultural and wooded area. As you move west
14 closer to New York City, it gets increasingly more
15 suburban until it turns urban in character.

16 Q. Approximately how far is this from --
17 well, let's strike that.

18 I want to turn your attention next to the
19 table that I am scrolling to here now, and I will
20 share the page number. The table on page 104 of
21 Appendix F. In the far right-hand column of that
22 table, if you're there. Are you there?

23 A. I am.

24 Q. There in the far right-hand column of
25 that table it talks about the average distance from

1 panels to improvements in feet. When you use
2 "improvements" in this sense, are you talking about
3 residential structures or any structure?

4 A. Any structure.

5 Q. I see it would range from 105 with
6 S-Power all the way up to 915 with Miami-Dade; is
7 that correct?

8 A. Average distance, correct.

9 Q. Average distance. Do you know what the
10 average distance is from -- do you know what the
11 average distance would be from panels to improvements
12 for the Greene -- for the Kingwood project?

13 A. My understanding is that the stipulated
14 agreement suggests that no closer than 250 feet from
15 the fence to adjacent residential structures that are
16 non-participating. I might be wrong.

17 Q. And how many of your test sales in this
18 study involved separate -- separation from we'll say
19 the project to the house study of 250 feet or less?

20 A. So I would refer you to page 112 which
21 details each of the individual studies and shows the
22 average feet from panel to lot for the test sales.
23 And it ranges from a low of 110 to a high of 675 for
24 the studies with residential improvements.

25 I would say generally, as we've been

1 conducting these kinds of studies, that, you know, we
2 generally find most of them are, you know, within 2
3 to 3 hundred feet of non-participating owners. So,
4 you know, the Kingwood application and the
5 Stipulation at 250 seems like a fairly reasonable
6 number.

7 I will say that the shortest that we've
8 seen has been in the 70 to 80 feet. And generally
9 you see most of them that are, you know, minimum of
10 100.

11 MR. BOGGS: And I would ask to strike the
12 witness's answer stating that 250 feet in the
13 Stipulation seems like a fairly reasonable number.

14 MS. SANYAL: Your Honor, Mr. Boggs asked
15 him to explain the average distances, and the witness
16 was just trying to explain that based on the study
17 and his experience.

18 MR. BOGGS: And I am just asking to
19 strike his statements of opinion on the
20 reasonableness of the proposed stipulated setback in
21 this particular case.

22 MS. SANYAL: Mr. Lines is here to do
23 exactly that, opine based on his expert opinions.

24 MR. BOGGS: He is here to opine on the
25 impact of a project on property values.

1 MS. SANYAL: But Mr. Boggs did raise the
 2 question of how far away residences are from
 3 projects.

4 ALJ HICKS: Karen, can you read back what
 5 the question was.

6 (Record read.)

7 ALJ HICKS: So I will strike everything
 8 from "So, you know, until "I will say."

9 MS. SANYAL: Your Honor, may we have that
 10 answer reread so it is clear on the record.

11 ALJ HICKS: Yes. I would appreciate that
 12 as well just to make sure that my notes jive with
 13 what Karen read.

14 (Record read.)

15 ALJ HICKS: Please continue, Mr. Boggs.

16 MR. BOGGS: Thank you. I have no further
 17 questions for Mr. Lines.

18 ALJ HICKS: Thank you.

19 Up next I believe is Xenia Township.

20 MR. DUNN: No cross for Xenia Township.

21 ALJ HICKS: Thank you. And now
 22 Cedarville Township?

23 MR. BROWN: Yes, your Honor.

24 - - -

25

CROSS-EXAMINATION

1
2 By Mr. Brown:

3 Q. Good afternoon, Mr. Lines. This is Dan
4 Brown. I have some questions about page 12 of your
5 report that has been previously discussed in the
6 cross. Do you have it there?

7 A. I do. Thank you, sir.

8 Q. All right. It's the one that starts off
9 with "We note there have been two academic studies."
10 Are we on the same page?

11 A. We are.

12 Q. Okay. All right. So this is part of the
13 way through your report and in the previous pages you
14 talk about coming to a conclusion that there's no
15 observable diminution in property value for
16 properties near solar farms, but then on page 12, you
17 note that there have been two academic studies
18 completed that attempt to quantify the effect of
19 property values due to the proximity to solar. So I
20 guess my first question is why do you note there are
21 two academic studies? Is that unusual?

22 A. It's unusual because there aren't 20.

23 Q. Okay.

24 A. And as of this date, there are three that
25 I am aware of. This was done over a year ago.

1 Q. Okay. So there's been another academic
2 study since the date this report was created?

3 A. There was one that was -- that we didn't
4 put in here because we didn't have the full
5 information but we have the study now and we're
6 typically referencing it.

7 Q. Okay. So I think Mr. Van Kley asked you
8 about your experience, which is extensive, testifying
9 in solar projects on a property value analysis; is
10 that true?

11 A. True.

12 Q. All right. So you've done extensive
13 search of the literature on property value diminution
14 near solar projects?

15 A. I have.

16 Q. All right. Good. So my question is are
17 you aware of any property value studies funded by
18 property owner groups or realtors, board of realtors,
19 or anything related to property owners versus
20 developers of the solar project?

21 A. I am aware of two.

22 Q. Can you tell me what they are?

23 A. Sure.

24 Q. Okay.

25 A. It was a poorly done study by a man named

1 Mark Heckman in Pennsylvania.

2 Q. Okay.

3 A. And there was another informal study done
4 by an appraiser named Fred Beck who has since
5 rebutted his own conclusions.

6 Q. And where was that done just for
7 reference? You said the other one was Pennsylvania.

8 A. It was Kentucky.

9 Q. Okay. So do you have any opinion on why
10 there aren't more academic studies available in your
11 review of all of the academic studies and articles on
12 this issue?

13 A. Professionally, no. Personally, I just
14 think that it's because solar is now being developed
15 in areas where people consider it a concern.

16 Q. All right. Would you agree that a -- to
17 conduct a diminution of property value study such as
18 this is an expensive endeavor?

19 A. It can be.

20 Q. Would you agree that that's probably one
21 of the reasons that property owners don't engage in
22 having these studies done?

23 MS. SANYAL: Objection.

24 A. I can't --

25 MR. BROWN: I am just asking his opinion

1 as an expert in the field having seen a thousand.

2 ALJ HICKS: Let Ms. Sanyal get the
3 objection out first.

4 MS. SANYAL: Thank you, your Honor. I
5 think Mr. Brown is requesting the witness to
6 speculate on what homeowners should be doing.

7 ALJ HICKS: Mr. Brown.

8 MR. BROWN: I am not asking him to
9 speculate on what homeowners should be doing. I am
10 asking in his professional opinion where the cost of
11 doing one of these studies is an impediment for
12 homeowners to undertake such an activity.

13 MS. SANYAL: Mr. Lines is not an expert
14 on how much homeowners can pull together resources
15 for such studies.

16 Q. (By Mr. Brown) Can I ask the question how
17 much did -- did this study cost? How much did this
18 study for Vesper cost?

19 A. 10,000.

20 Q. Okay. Thank you. So can I assume that
21 the fact that you included a discussion of both the
22 University of Texas at Austin study and the
23 University of Rhode Island study in -- in your
24 report, you believe that it's worthy of at least
25 considering?

1 A. I think both studies have elements about
2 them that are important in helping to develop my
3 conclusion.

4 Q. All right. And would you agree that you
5 found issues with both studies that you believe make
6 it not necessarily applicable to this particular
7 project?

8 A. No, I wouldn't say that.

9 Q. Okay. What would you say is the biggest
10 defect in the University of Texas at Austin study?

11 A. I felt that the survey questions were
12 somewhat leading and that some of the answers that
13 were provided by back -- of the assessors that
14 responded which by the way was about 10 or 14 percent
15 of the total assessors that they had reached out to,
16 that there was a feeling that the hypothetical
17 questions as to whether or not there would be more
18 damage for houses located closer to solar than
19 farther away were based only on hypothetical.

20 The reality is that all of the
21 respondents who actually had solar in their backyards
22 had no empirical evidence that suggests that solar
23 farms cause any diminution in value at all, and I
24 think that's what's really important about
25 understanding that study.

1 Q. Okay. So what you are saying is the
2 reason there's defect in this study is it wasn't
3 based on actual sales; it was based on assessors'
4 opinions.

5 A. That's -- that's partially true and what
6 is good about the study is that University of Texas
7 declared that they believe somebody, a real estate
8 professional, should undertake a more rigorous study
9 using actual transactions which is what I have done.

10 Q. All right. And then the University of
11 Texas study, was -- was there also a mention that
12 there were not many homes located very close to the
13 facility?

14 A. Yeah. They did a -- essentially a
15 density study of areas around existing solar farms
16 and what I extracted from that information is that
17 most solar developers are looking for inexpensive
18 land and not necessarily because people don't like
19 solar.

20 Q. All right. So would you say that in the
21 Kingwood project that the housing density near the
22 facility -- proposed facility is higher than what was
23 in the University of Texas at Austin study?

24 A. I can't remember exactly all the farms
25 that they looked at and the density. I would still

1 describe the area around the Kingwood area as
2 generally rural.

3 Q. And based on my reading of the University
4 of Texas at Austin study, I'm just going to ask if
5 you agree with what I got out of it, would you agree
6 that of the 18 responses providing opinions regarding
7 the impact on property values within 500 feet of a
8 102-megawatt facility, 8 of the 18 assessors
9 estimated a drop of 10 percent or more?

10 A. Without any empirical evidence.

11 Q. All right. But that's how -- 8 of the 18
12 thought there was a 10 percent drop or more.

13 A. Hypothetically they assumed it.

14 Q. All right. And then would you agree that
15 9 of the remaining 10 assessors assumed a drop of
16 between 0 and 9 percent?

17 A. Yes.

18 Q. Okay. Okay. Moving on then to the
19 University of Rhode Island study, it appears that the
20 major critique to this study in your report is that
21 the test area was up to 1 mile so that's a pretty far
22 distance from the facility; is that true?

23 A. It is true.

24 Q. All right. And so you're thinking that
25 it's not really representative of how property values

1 would be -- would be affected if you're looking at a
2 property right next door and another one that's 1
3 mile away; is that your critique of this report?

4 A. That's part of it. You know, with some
5 of these multiple regression studies which is the
6 University of Rhode Island is conducting. It's a
7 macro study. It takes a ton of data and it throws it
8 into a pot and it uses a series of qualifying
9 equations to understand whatever the statistical
10 anomalies are for whatever factor they are trying to
11 isolate.

12 My study is very granular. It gets into
13 the little nooks and crannies of transactions. It's
14 far on the micro side, and so when we spoke to Corey
15 Lang, we asked him a few questions. And one of them
16 was, you know, well, how far away are the test sales
17 from, you know, these solar arrays; and he said,
18 well, we just take everything that's within a mile.

19 But Corey Lang also dismissed any test
20 sale homes that were within a mile of two solar
21 properties so why would you dismiss those that --
22 wouldn't those have more impact? Wouldn't you want
23 to see those? So that was another issue.

24 And we just had an issue he was also
25 using solar installations that were really small,

1 some that were mounted on, you know, commercial
2 properties or on, you know, next to shopping centers
3 so very suburban characterization. And so it is
4 noteworthy that the 1.7 percent, which I don't think
5 is very large, is really related to suburban areas
6 that have populations over 850 persons per square
7 mile and that comes right out of the University of
8 Rhode Island report and that's obviously not the
9 density that we see here in Kingwood and the Rhode
10 Island study, although it kind of shocked Corey Lang
11 noted that there was no empirical evidence they had
12 to suggest that there was a measurable difference in
13 rural communities, again, any community that's less
14 than 850 persons per square mile.

15 Q. Okay. My last question really is about
16 the Rhode Island study, and I see that the last line
17 of your report on that study you reference the
18 1.7 percent decline as a nominal amount which you
19 believe to be immaterial, I understand; is that true?

20 A. Yes.

21 Q. But would you also agree that this same
22 study found a substantially larger decline of
23 7 percent for properties located within 528 feet of
24 the solar site?

25 A. I believe that the study also noted that

1 the size of the solar facility did not impact the
2 percentage or the statistical variance, so while it
3 may be true that they felt that the distance was, the
4 size of the solar facility had no impact.

5 Q. All right. But you would agree that this
6 study at least found that the 0.1 miles which
7 converts to 528 feet which is far, you know, double
8 the amount of setback that we have at this project,
9 did result in a 7 percent decline.

10 A. Again, that's -- that's for suburban,
11 high density areas, and not the case for rural.

12 MR. BROWN: That's all the questions I
13 have. Thank you very much.

14 ALJ HICKS: Thank you.

15 Next is In Progress.

16 MR. HART: No further questions. Thank
17 you.

18 ALJ HICKS: Okay. And the Tecumseh
19 Preservation Land Association. I am not sure. Is he
20 still a panelist, Micah?

21 MR. SWANEY: No questions, your Honor.

22 ALJ HICKS: Thank you.

23 And Board Staff.

24 MS. BAIR: No questions, your Honor.

25 ALJ HICKS: Thank you. Ms. Sanyal, I

1 don't know if you need a few minutes to confer or.

2 MS. SANYAL: I do, your Honor. May we
3 come back around 3:35?

4 ALJ HICKS: Perfect. We will go off the
5 record until 3:35.

6 (Recess taken.)

7 ALJ HICKS: Karen, let's go ahead and go
8 back on the record.

9 - - -

10 REDIRECT EXAMINATION

11 By Ms. Sanyal:

12 Q. Mr. Lines, during cross Mr. Hart asked
13 you about a third academic study, and you noted that
14 that study had not been included in the report you
15 prepared for Kingwood Solar, but could you -- do you
16 know the results of that study? And if so, could you
17 tell us about those results?

18 A. Sure. Yes. There was a paper called
19 Utility-Scale Solar Farms and Agricultural Land
20 Values by Nino Abashidze, A-B-A-S-H-I-D-Z-E, who was
21 doing their postdoctoral research at the School of
22 Economics, Georgia Institute of Technology. The
23 paper was released in October 2020 and reviewed
24 almost 1,700 sales within 5 miles of 300 solar farms
25 and determined that proximity to solar farms after it

1 is built there is no statistically significant effect
2 on agricultural land values.

3 Q. Okay. And did that conclusion further
4 support the conclusion you reached in the property
5 value study you conducted for this project?

6 A. It did, and it confirmed the research
7 that we did on agricultural and residential lot sales
8 next to and adjacent to solar farms.

9 MS. SANYAL: Thank you.

10 And, your Honor, that is -- those were
11 the only questions I had.

12 MR. HART: Your Honor, this is John Hart.
13 If I may just correct the record, I had not asked the
14 question.

15 MS. SANYAL: I'm sorry. You're right.

16 MR. HART: I had wanted to ask about
17 Suffolk County because I grew up there and hadn't
18 considered it rural, so I was interested to learn a
19 different perspective. But to move this forward, I
20 declined, so just correct the record.

21 MS. SANYAL: Thank you, Mr. Hart. It's
22 Mr. Brown.

23 ALJ HICKS: Okay. Thank you for the
24 correction.

25 You said that was your only question,

1 Ms. Sanyal?

2 MS. SANYAL: Yes, yes, your Honor.

3 ALJ HICKS: Thank you.

4 Mr. Van Kley, any questions on recross?

5 MR. VAN KLEY: Yes, your Honor.

6 - - -

7 RE-CROSS-EXAMINATION

8 By Mr. Van Kley:

9 Q. Mr. Lines, with respect to the study you
10 just mentioned, was that a paired sales analysis?

11 A. It was a regression study.

12 Q. What is that?

13 A. Hedonic regression, so hundreds of data
14 points and a sophisticated statistical equation to
15 determine what the difference is between tests and
16 control areas.

17 MR. VAN KLEY: All right. Thank you. No
18 further questions.

19 ALJ HICKS: Thank you, Mr. Van Kley.

20 Any recross for the Greene County Board
21 of Commissioners?

22 MR. BOGGS: No, your Honor.

23 ALJ HICKS: Thank you.

24 And any recross for Cedarville Township?

25 MR. BROWN: I am going to ask -- I am

1 having some technical slow down. Is it everyone or
 2 just on my end? I don't see anybody's faces.

3 ALJ HICKS: You appear to be coming
 4 through fine at least to me, and I assume others.

5 MR. BROWN: All right. It's starting to
 6 populate one at a time off the top and as it -- so I
 7 may be having a slow down. As long as you can hear
 8 me, I only have one follow-up question.

9 ALJ HICKS: Okay. Go ahead.

10 MR. BROWN: All right.

11 - - -

12 RE-CROSS-EXAMINATION

13 By Mr. Brown:

14 Q. Mr. Lines, you just mentioned that third
 15 study. And I think in -- in the redirect at first
 16 you said that it confirmed your position on valuation
 17 of agricultural land, and then later I think you said
 18 agricultural and residential lots. Can you clarify
 19 that?

20 A. It's a study of land values. It's study
 21 of land values next to solar farms.

22 Q. Just land though.

23 A. I -- yes. Land, it's a study of land
 24 values.

25 Q. All right. So if a home was sitting on

1 the land, it wouldn't have been part of this study.

2 A. Correct.

3 MR. BROWN: All right. Thank you.

4 ALJ HICKS: Thank you, Mr. Brown.

5 I believe that wraps us for recross and
6 wraps up things with Mr. Lines, so we will cut him
7 loose, and we thank you for your time this afternoon.

8 THE WITNESS: Thank you very much for
9 your time.

10 ALJ HICKS: Ms. Sanyal, would you like to
11 move anything?

12 MS. SANYAL: Thank you, your Honor. At
13 this time I would like to move Kingwood Exhibit 9
14 which is the direct testimony of Andrew Lines into
15 the record.

16 ALJ HICKS: Any objections to the
17 admission of Kingwood Exhibit 9?

18 Hearing none, it is admitted.

19 (EXHIBIT ADMITTED INTO EVIDENCE.)

20 MS. SANYAL: Thank you, your Honor.

21 And I believe our next witness is
22 Mr. Alex Odom, and Mr. Settineri will be handling
23 that witness, but we may need a couple of minutes,
24 yes?

25 MR. SETTINERI: Yeah. If we could take a

1 break, your Honor, just to get a witness swap and
2 exhibits organized.

3 ALJ WILLIAMS: Is 5 okay?

4 MR. SETTINERI: 5 is fine.

5 ALJ WILLIAMS: We will come back at 3:46.

6 We are off the record.

7 (Recess taken.)

8 ALJ WILLIAMS: Go back on the record.

9 Mr. Settineri, I will let you call your
10 next witness.

11 MR. SETTINERI: Thank you, your Honor.

12 At this time we will call Mr. Alex Odom to the stand,
13 please.

14 MR. SCHMIDT: Mr. Odom, you have been
15 promoted. If you can enable your audio and video.

16 MR. ODOM: I've enabled the video, audio.

17 ALJ WILLIAMS: We can hear you. Would
18 you raise your right hand, sir.

19 (Witness sworn.)

20 ALJ WILLIAMS: Please proceed.

21 MR. SETTINERI: Thank you.

22 - - -

23

24

25

1 ALEX ODOM

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

4 DIRECT EXAMINATION

5 By Mr. Settineri:

6 Q. Good afternoon, Mr. Odom.

7 A. Good afternoon.

8 MR. SETTINERI: And, your Honor, at this
9 time before we start, I would like to mark two
10 exhibits when you are ready.

11 ALJ WILLIAMS: Go ahead.

12 MR. SETTINERI: I would like to mark as
13 Kingwood Exhibit 10 the direct testimony of Alex
14 Odom, and I would note for the record this was filed
15 February 24 on the docket per leave from the Bench to
16 attach an -- to include an attachment that was left
17 off on the first filing.

18 ALJ WILLIAMS: The exhibit is so marked.

19 (EXHIBIT MARKED FOR IDENTIFICATION.)

20 MR. SETTINERI: Thank you, sir. Next,
21 mark as Kingwood Exhibit 11 the supplemental
22 testimony of Alex Odom filed in this proceeding on
23 March 4.

24 ALJ WILLIAMS: Also so marked.

25 (EXHIBIT MARKED FOR IDENTIFICATION.)

1 MR. SETTINERI: Thank you.

2 Q. (By Mr. Settineri) Good afternoon,
3 Mr. Odom.

4 A. Good afternoon.

5 Q. All right. Do you have before you what's
6 been marked as Kingwood Exhibit 10?

7 A. I do.

8 Q. And can you identify that for the record,
9 please.

10 A. That's my direct testimony.

11 Q. Was that prepared by you or at your
12 direction?

13 A. Yes.

14 Q. And do you have before you what's been
15 marked as Kingwood Exhibit 11?

16 A. Yes.

17 Q. And was that prepared by you or at your
18 direction?

19 A. Yes.

20 Q. Okay. Turning back to your direct
21 testimony, Kingwood Exhibit 10, do you have any
22 revisions or changes to that testimony at this time?

23 A. I do. I do have two revisions.

24 Q. If you can slowly and carefully walk
25 through those for the court reporter, please.

1 A. So the first revision is on page 8,
2 starting on line 10, where it reads "Sycamore Creek,"
3 that should be struck and replaced with "AEUG Union."

4 On the following line where it reads
5 "20-1762," it should read "20-1405."

6 And the second change is in Exhibit A, my
7 resume. This is just a minor change about midway
8 down the page under "Representative Projects
9 Power/Energy" sector, the first line item reads "1690
10 Revere Beach Parkway, solar, Everett, Massachusetts."
11 This should instead read "Kingwood Solar Farm, Greene
12 County, Ohio." This was just a -- I provided a
13 project number, and our marketing department swapped
14 two numbers and caught a different project.

15 Q. Okay. Any other revisions to your direct
16 testimony at this time, Mr. Odom?

17 A. No.

18 Q. And if I asked you the questions in your
19 direct testimony as written, would your answers today
20 be the same as you have revised?

21 A. Yes.

22 Q. You can put that to the side, sir, and if
23 we could turn to what's been marked as Kingwood
24 Exhibit 11. Do you have any changes or revisions to
25 that testimony at this time?

1 A. Yes, I do.

2 Q. Okay. Could you carefully walk us
3 through those revisions, please.

4 A. Yes. So I have one revision on the first
5 page on line 16, I would add a sentence that reads "I
6 reviewed the Joint Stipulation which includes
7 Condition 31 which remains unchanged from the
8 proposed revisions to Condition 30 of the Staff
9 Report in my direct testimony."

10 Q. And for me, maybe for some others, could
11 you just read that one more time, please.

12 A. Sure. "I reviewed the Joint Stipulation
13 which includes Condition 31 which remains unchanged
14 from the proposed revisions to Condition 30 of the
15 Staff Report in my direct testimony."

16 Q. And do you have any other changes or
17 revisions to your supplemental testimony at this
18 time?

19 A. No, I do not.

20 Q. And if I asked you the questions as
21 written in that direct testimony today, would your
22 answers be the same as you have revised today?

23 A. Yes.

24 MR. SETTINERI: Thank you.

25 Your Honor, at this time the witness is

1 available for cross-examination, and I would move for
 2 the admission of Kingwood Exhibit 10 and Kingwood
 3 Exhibit 11, subject to that cross-examination.

4 ALJ WILLIAMS: Thank you, Mr. Settineri.
 5 We will begin with the Ohio Farm Bureau.

6 MS. MILAM: No questions, your Honor.

7 ALJ WILLIAMS: Thank you, Ms. Milam.
 8 Citizens for Greene Acres.

9 MR. VAN KLEY: Thank you, your Honor.

10 - - -

11 CROSS-EXAMINATION

12 By Mr. Van Kley:

13 Q. Good afternoon, Mr. Odom. Mr. Odom, will
 14 you turn to your direct testimony marked as Kingwood
 15 Exhibit 10.

16 A. Yes.

17 Q. Directing your attention to answer 3 on
 18 the first page, I have a few questions about the
 19 information in that answer. This answer talks about
 20 your education and professional background and let me
 21 first ask you on that topic to tell me about your
 22 experience as a consultant at Trinity Consultants,
 23 and the first question there is how many years were
 24 you with Trinity Consultants?

25 A. I was with Trinity for a little over a

1 year, from June 2016 to September 2017.

2 Q. And did that work include any noise
3 assessments?

4 A. It did.

5 Q. How many?

6 A. Somewhere between -- between 5 and 10
7 would be an estimate.

8 Q. So how much of your time approximately
9 did you spend on noise issues for Trinity Consultants
10 as opposed to other topics of work?

11 MR. SETTINERI: Just object as to
12 ambiguity, the phrase noise issues versus noise
13 assessments.

14 ALJ WILLIAMS: If the witness understands
15 the question, we will let him respond.

16 A. I would say less than 5 percent of my job
17 was related to noise.

18 Q. And so then your next job was at
19 Acentech; is that correct?

20 A. It's Acentech.

21 Q. All right. So the answer is yes?

22 A. Yes.

23 Q. All right. And how many years have you
24 been with that company?

25 A. I have been there for over four years,

1 since October of 2017.

2 Q. Do you work on any other types of
3 projects besides projects involving noise at
4 Acentech?

5 A. Yes.

6 Q. What percentage of your time at Acentech
7 has been spent on projects involving noise?

8 A. I would say noise factors into probably
9 99 percent of my projects.

10 Q. How many projects have you had where you
11 have conducted noise assessments for solar projects?

12 A. I would estimate around 10.

13 Q. Have any of those projects been built?

14 A. Yes. I believe some of them have, but I
15 don't -- I have not done any post-construction
16 measurements.

17 Q. Have you ever visited an operating solar
18 facility?

19 A. No, I have not myself.

20 Q. Are you aware that under the proposed
21 Stipulation in this case solar panels can be located
22 as close as 250 feet from a neighbor's house?

23 A. I am aware.

24 Q. And if pile driving is being conducted
25 250 feet from a person's house, do you know how loud

1 the noise in the pile driving will be at the
2 neighbor's house?

3 A. I would refer to Appendix K of the
4 application where we conducted that assessment.

5 Q. Yes. Please do that.

6 A. So on page 5 of our report, Table 7
7 provides our estimates of construction sound.

8 Q. Just a second. Let us all find that,
9 please. So you are on page 5 of Appendix K?

10 A. Yes, that's correct.

11 Q. Okay. All right. Now you can proceed
12 with your answer.

13 A. So Table 7 shows our estimates of
14 construction sound at different phases of the
15 project. Phase 2 is when pile driving is anticipated
16 to occur. And so we have estimated sound levels at
17 275 feet to be 85 dBA which is a combination of pile
18 driver, backhoe, and dump truck noise.

19 Q. Did you say 85?

20 A. That's correct, 85 dBA at 275 feet.

21 Q. All right. Have you ever testified as an
22 expert on noise before today?

23 A. No. Today is my first.

24 Q. And were you the person or one of the
25 persons who prepared Appendix K to the application?

1 A. Yes. I was the project manager for
2 Kingwood Solar project and was overseen by Mike
3 Bahtiararian who is CCed on the report.

4 Q. Have you visited the Kingwood solar
5 project area?

6 A. I have.

7 Q. When did you do that?

8 A. I did that in February of 2022.

9 Q. How many times have you visited it?

10 A. I have been there once.

11 Q. And what did you look at when you went
12 there?

13 A. I looked at the three monitoring
14 locations that we measured at.

15 Q. Did you look at anything else?

16 A. No. Those were the three locations I
17 visited.

18 Q. How much time did you spend in the
19 project area?

20 A. I would guess about an hour in total.

21 Q. Did you take any sound measurements while
22 you were there?

23 A. No, I did not.

24 Q. So I take it then, and based on your
25 report as well, that you did not set up the sound

1 measurement equipment that your company used to
2 measure sound in the project area?

3 A. I did not personally set it up, but I
4 oversaw the installation virtually in the field as
5 described in my direct testimony.

6 Q. And -- and who was it that set up that
7 equipment?

8 A. That was Kathryn Lindenschmidt, a field
9 geologist from Haley & Aldrich who was local to the
10 area, local to Ohio.

11 Q. And she was a geologist at the time?

12 A. Yes.

13 Q. She wasn't an acoustic engineer?

14 A. No. That is correct. She was a field
15 geologist.

16 Q. Do you know what a tracker motor is?

17 A. I understand that it's the motor that
18 rotates the solar panels.

19 Q. Do you know whether tracker motors are
20 expected to be installed at Kingwood Solar?

21 A. We were informed by Haley & Aldrich of
22 locations throughout the project area that they
23 estimated the track motors to be located.

24 Q. So the answer to my question is, yes, you
25 do expect them to be installed there?

1 A. Yes.

2 Q. Do you know how close to the edge, the
3 outside edge of the solar arrays the tracker motors
4 will be installed?

5 A. I don't know that information. I am more
6 aware of the 500-foot setback to inverters which are
7 the more major noise producer in the project.

8 Q. So with respect to the tracker motors,
9 are they installed on the solar panels or near the
10 solar panels or where?

11 A. I mean, I think they are within the area
12 that the solar panels are located. I don't know the
13 exact location. I have not seen a schematic.

14 Q. So you don't know whether tracker motors
15 will be as close as 250 feet to neighbors' houses?

16 A. I don't know offhand. I know we have
17 modeled it, but I haven't measured that distance from
18 all the tracker models we measured -- we modeled.

19 Q. So are you aware that tracker motors then
20 create noise?

21 A. Yes. And that's why we included them in
22 our noise model.

23 Q. Yeah. What's your understanding of the
24 reason that they cause noise?

25 A. I mean, the motor has rotating equipment

1 and produces noise in its rotation of the solar
2 panels.

3 Q. Do you know whether those panels are
4 continuously rotating or whether they rotate a step
5 at a time?

6 A. I understand that the operation of the
7 tracker motors is intermittent.

8 Q. Okay. So when you say that you
9 understand that the movement is intermittent, does
10 that mean that the panels move intermittently?

11 A. I mean, at times the panels are fixed in
12 their position, stationary, and at other times they
13 are moved. I don't know at which -- their rate that
14 they move. But all I know is that these tracker
15 motors don't contribute -- distinguish from sources
16 that operate continuously all of the time.

17 Q. So is it true then that each time the
18 solar panel moves, it creates a noise?

19 A. The tracker motor does.

20 Q. Yeah.

21 A. I understand.

22 Q. Okay. And how often does the panel move?

23 MR. SETTINERI: Object, asked and
24 answered. He said intermittent previously. The
25 question has been asked and answered.

1 MR. VAN KLEY: No, it hasn't. I asked
2 him how much it moves.

3 ALJ WILLIAMS: Certainly entitled to more
4 in depth with regard to that level of response so
5 objection is overruled.

6 A. I don't know the particulars about
7 Kingwood Solar. I know that I've heard that other
8 solar farms it may operate for 8 seconds, once a
9 minute, but I think this is entirely up to the
10 optimized movements for Kingwood in particular and
11 the technology being used.

12 Q. Do you know whether all tracker motor
13 models produce the same volume of sound?

14 A. No. I would not assume that.

15 Q. You don't know, or you assume that they
16 do not produce the same level of sound?

17 A. I would say it's a fact that different
18 models produce different amounts of sound.

19 Q. Do you know what causes them to produce a
20 different amount of sound, that is, what are the
21 differences between the models that create a
22 different amount of sound than other models?

23 A. I would say at a high level it may have
24 something to do with the size of the motor but
25 probably more importantly is the -- other design

1 choices from that particular manufacturer on how to
2 reduce elements of noise from that equipment. It's
3 entirely up to manufacturers to design their
4 equipment, and you have different lawnmowers make
5 different amounts of noise.

6 Q. And what are those elements with respect
7 to tracker motors?

8 A. I don't know -- I am not familiar with
9 the different components of the motors themselves and
10 what -- what sources are associated with those.

11 Q. Did you model the noise anticipated and
12 produced by the trackers, the tracker motors at
13 Kingwood Solar?

14 A. Yes, we did. We did not within our
15 report present those levels in isolation, but
16 something that is helpful to refer to is perhaps in
17 Exhibit 11, my supplementary testimony in Attachment
18 A. Attachment A includes two figures that are called
19 sound contour levels. They show lines of equal sound
20 estimated based on our modeling. The first page the
21 first figure is daytime sound levels which includes
22 tracker motors. And the second one is nighttime
23 sound contours and those do not include tracker
24 motors.

25 Tracker motors were the only source we

1 assumed was not operating at night, and you could see
2 generally by comparing the two figures they are
3 almost indistinguishable. Similarly, if you prefer
4 to look at Attachment B in this same -- the first
5 table in Attachment B is a summary of project only
6 sound levels in both our initial analysis and in the
7 revised layout with the 500-foot inverter setback.
8 And if you focus on the revised layout, there's two
9 columns, one daytime and one nighttime. And if you
10 scan down that -- that list of numbers, the sound
11 levels are identical between daytime and nighttime
12 indicating that the tracker motors are not seen to be
13 a significant noise producer in relation to other
14 project equipment.

15 Q. Besides the fact that tracker motor noise
16 was not modeled in your nighttime studies, were there
17 any other differences between your nighttime study
18 and your daytime study or your day -- are there any
19 differences in your daytime model versus your
20 nighttime model that could have produced a difference
21 in the amount of noise?

22 A. No. I do not believe there is any
23 difference in our modeling.

24 Q. So you assumed that the amount of noise
25 from the inverters at night would be the same amount

1 of noise as produced during the day from -- from the
2 inverters?

3 A. Yes. And this is a conservative
4 assumption in our modeling because, you know,
5 equipment like inverters are transformers that have
6 cooling fans on it. We expect those cooling fans to
7 operate at lower speed at night when temperatures are
8 lower and cooling needs are less. It's one component
9 of the sound that may change overnight.

10 The other kind of component of the sound
11 is described in my direct testimony on pages -- the
12 end of page 5 starting at line 22 continuing onto
13 page 6 where we describe the reactive power. We
14 understand that the -- I understand that the project
15 can provide reactive power at night using either
16 60 percent of all inverters or -- 60 percent of all
17 inverters operating at 100 percent capacity or
18 instead 100 percent of all inverters operating at
19 60 percent capacity.

20 And we did not have data for what -- what
21 that inverter sound level would be at 60 percent
22 capacity, so we had to model our kind of most
23 conservative assumption of 100 percent of inverters
24 operating at 100 percent capacity at night even
25 though that is a -- not a realistic scenario of --

1 for this project.

2 Q. So under the scenario you just described,
3 the inverters would make noise at night, right?

4 A. That is correct. Under reactive power
5 they would produce noise at night and transformers
6 regardless of whether they -- whether the project is
7 providing reactive power, transformers stay energized
8 at night and produce noise at night. Most solar
9 farms that do not provide reactive power don't have
10 inverters producing noise at night.

11 Q. So is it your understanding then that
12 Kingwood Solar would have inverters in its project
13 that have transformers in them?

14 A. It's either -- it's either within them or
15 next to them. It is expected that there would be
16 some function of a transformer located throughout the
17 project site, but they are distinguished from the
18 substation transformer, and we provide the sound
19 levels we assume for the distribution transformer
20 substrate that we've labeled it that there would
21 exist scattered throughout the project on the
22 inverter pads if it is modeled separately from the
23 inverter. It's possible -- we would from the
24 selection that that transformer could be within the
25 same unit that the inverter was.

1 Q. You are aware that the project design for
2 Kingwood Solar includes a substation?

3 A. I am aware, yes.

4 Q. And substations produce noise; is that
5 right?

6 A. That's correct.

7 Q. And what's -- what are the sources of the
8 noise in the substation?

9 A. I believe it is the transformer itself
10 that is producing noise.

11 Q. Okay. Does your modeling for the
12 Kingwood Solar project include a model of the
13 substation noise?

14 A. Yes. We have -- we have modeled a
15 substation transformer described in the sound power
16 levels described in Appendix K.

17 Q. Can you show me where that is contained?

18 A. Yes. So page -- page 3 of Appendix K,
19 Table 3, and it's the third line item in Table 3.,
20 sound power level for the substation transformer.

21 Q. All right. I believe I'm on page 3, but
22 I'm not seeing the reference that you just mentioned.
23 Can you say that again?

24 A. So this is our report, Appendix K, page 3
25 of 14. We have got a section here titled

1 "Operational Noise Evaluation." In the center of the
2 page there is Table 3, Equipment Octave Band Sound
3 Power Level, and in that table the third line in the
4 table is labeled "Substation Transformer" and
5 provides the octave and sound power levels, so it's
6 the overall sound power level for that equipment.

7 Q. Okay. So is there any information in the
8 application that shows us what the sound levels from
9 the substation will be at adjoining property lines?

10 A. We have only reported overall sound
11 levels of all practicate equipment combined.

12 Q. So you combined the noise from the
13 substation with noise from other sources at the
14 project when you did your modeling?

15 A. Yeah. Basically every single receiver
16 we -- every single residence that we have added a
17 receiver in our model, we're predicting the
18 combination of sound from every single project --
19 project source in our model aside from nighttime
20 operation where tracker motors are not included.

21 Q. How did you go about selecting the sites
22 or measuring background noise in the project area?

23 A. So in planning the study I reviewed both
24 Google Earth imagery like aerial imagery as well
25 as -- as well as some, where available, street view

1 on Google. But in general the macro selection of
2 these locations was -- was based on trying to grab --
3 the project is quite large, and so we want to grab a
4 diversity of areas of the project to identify sound
5 levels in those different areas. The location 1
6 is -- is close to Clifton. That north, northeastern
7 portion of the project is close to Clifton. We
8 expected sound levels closer to a town to be
9 different than sound levels in a more rural portion
10 of the project.

11 For location 1 we didn't pick a location
12 directly on the edge of the project but something
13 more in the center of that northeast region of the
14 project. Location 2 is separated from both Clifton
15 and from Cedarville and so, therefore, represents a
16 good -- is a good representation of the south,
17 southeastern portion of the project that is not
18 located close to Cedarville. Location 3 was selected
19 to represent a portion of the western project,
20 western portion of the project.

21 Q. Was site 1 located near a public road?

22 A. Yes.

23 Q. Which public road was it located near?

24 A. I do not have in front of me a list of
25 the roads and their names in the project area.

1 Q. How far from that road was the microphone
2 used in that measuring -- that measurement station?

3 A. It was about -- about 50 to 70 feet away
4 from the property line based on GPS locations -- from
5 the road, sorry, correction.

6 Q. Oh.

7 A. 50 to 75 feet away from the road.

8 Q. Okay. And did you do any review of
9 traffic statistics for that road or any of the roads
10 in the project area before you set your measurement
11 stations?

12 A. No, I did not.

13 Q. So do you know how much traffic occurs on
14 the road that was located 50 to 75 feet away from
15 measuring station 1?

16 A. I do not know -- I do not know of annual
17 statistics of road data. I only know based on my
18 experience on the site in seeing a handful of cars
19 pass while I was there.

20 Q. Uh-huh. How much time did you spend at
21 measurement station 1 during your visit?

22 A. Around 5 to 10 minutes.

23 Q. And what time of the day were you at that
24 measurement station?

25 A. Around -- around noon.

1 Q. Talking now about measurement station 2,
2 was that station also located along a road?

3 A. Yes.

4 Q. I assume that you don't know which road
5 that was.

6 A. I do not.

7 Q. How many feet from the road was the
8 microphone for that measurement station?

9 A. I would estimate 30 to 50 feet.

10 Q. How much time did you spend at that
11 measurement station?

12 A. A similar amount of time, 5ish minutes.

13 Q. And how -- what time of the day were you
14 there at that station?

15 A. Similar time of day, a little after
16 12:15.

17 Q. And then with regard to the location for
18 the third measurement station, was that station
19 located near a road?

20 A. This was well separate from a road and
21 actually behind a hill so it was well shielded from
22 the road.

23 Q. How far from the road was it located?

24 A. Probably in excess of a thousand feet.

25 Q. Did you drive through other parts of the

1 project area while you were there besides the
2 locations of these three measurement stations?

3 A. If I did, it was not intentional. It was
4 in -- in my, you know, navigating between these
5 locations and then back to Columbus. I may have
6 driven through other portions of the project.

7 Q. But you would not have recognized whether
8 or not you were driving through the project area?

9 A. Only that I was aware of some local
10 opposition to the project so assume it was near the
11 project and within that -- within that area.

12 Q. So with respect to the hill at
13 measurement station 3 behind which the microphone for
14 the measurement station was located, could you
15 describe that hill.

16 A. I would approximate that hill's height
17 from the bottom of the hill where the meter was
18 placed which the meter was not placed directly at the
19 bottom of the hill but a little further beyond it,
20 and I would estimate the height of that hill at maybe
21 30 feet would be a guess, 40 feet perhaps. The road
22 was not visible from the location.

23 Q. When you were in the area around the
24 three measurement stations, did you notice any other
25 hills?

1 A. When you say -- the other two locations?

2 Q. Yes.

3 A. No, no hills at those two locations.

4 Q. Were any of your measurement stations in
5 a location where there was a house between the
6 measurement station and the nearby road?

7 A. Are you referring to all three locations?

8 Q. Yes.

9 A. Location 3 there was a home between its
10 location and the road. Between location 2 and the
11 road there was no home in that 20 -- in that 30 to
12 50 feet. And location 1 there was no home in that --
13 in that distance in the road.

14 Q. All right. So let's go to back to your
15 direct testimony marked as Kingwood Exhibit 10. And
16 I would like you to go to page 4, answer 10. Feel
17 free to refer to Appendix K of the application to
18 answer this question if you need to, but can you tell
19 me in that first sentence -- let me just back up a
20 little bit here.

21 When you just testified about the first,
22 second, and third locations of the measurement
23 stations, are those the same numbers as you used for
24 locations 1, 2, and 3 in your answer to the question
25 10?

1 A. Yes, that is correct.

2 Q. So the measurement station behind the
3 hill in that first sentence of answer 10 had a -- an
4 average ambient nighttime Leq of 37 dba, correct?

5 A. That is correct.

6 Q. So in the first sentence of answer 10 you
7 state that "The measured average ambient nighttime
8 Leq at Locations 1, 2, and 3 were 46 dBA, 42 dBA, and
9 37 dBA, respectively," right?

10 A. Yes.

11 Q. All right. Now, let's compare that to
12 the information in the third sentence of answer 10
13 where it's stated that "The measured average ambient
14 nighttime L90 at Locations 1, 2, and 3 were 31 dBA,
15 28 dBA, and 29 dBA, respectively." Did I read that
16 right?

17 A. That's correct.

18 Q. Okay. So with regard to location 1, you
19 found an average ambient nighttime Leq to be 46 dBA,
20 right?

21 A. Yes.

22 Q. And you found the average ambient
23 nighttime L90 at location 1 is 31 dBA, correct?

24 A. That's correct.

25 Q. Now, what causes -- what -- what has

1 caused the difference in the numbers for the Leq and
2 the L90 as stated for location 1?

3 A. Well, the Leq is -- is a measure of the
4 kind of total sound exposure. That's called an
5 energy average, so it's the kind of the average of
6 all sound energy experienced measured throughout --
7 throughout that one hour. So the Leq will always be
8 greater than the L90 unless the -- unless the sound
9 was just the same for the entire hour. Then you
10 would have kind of all statistical metric, the L max,
11 L min, the Leq, L90, L50 would all be the same. But
12 the L90, what it is seeking to measure is the
13 quietest -- the sound level that is a quiet portion
14 of the hour which is exceeded 90 percent of the time.
15 So they are two different metrics, and we would
16 expect to get a difference between Leq and an L90.

17 Q. Does using the L90 in a situation like
18 this have the effect of filtering out the noise from
19 passing cars?

20 A. It would depend on how frequently the
21 cars pass, but in general the L90 can only be
22 described as cutting out all sound levels that the
23 sound level that was exceeded 90 percent of the time,
24 so it's only a measure of the quietest 10 percent of
25 the hour. It is -- it does not -- it does not matter

1 where that 10 percent occurs through the hour. You
2 can be pulling 10 seconds from the first minute, 10
3 seconds from the fifth minute, and so on to compose
4 your L90.

5 Q. So the effect of using the L90 is to
6 disregard spikes in noise during the measured time
7 period?

8 A. I mean, I think the -- my understanding
9 that the word ambient is often applied to Leq and
10 that's a description of all the sounds that are
11 existing and that element does seek to identify a
12 quieter portion of the hour, and so it disregards not
13 just spikes but even steady state sounds that may
14 only occur for a portion of the hour that it's not in
15 excess of 90 percent of the hour.

16 Q. Based on what you know about the project
17 area, what types of noises would be filtered out or
18 disregarded in an L90 measurement?

19 A. Well, I can certainly say that some high
20 level noises from traffic may be eliminated. We did
21 remove from our analysis of the Leq at location 3 two
22 high level sounds that we thought were to be
23 correlated with a residential gun range that we were
24 informed of. That's a type of sound that would be
25 most likely not seen in an L90.

1 But again, that's one if that gun range
2 was in use for the whole hour, it would show up in an
3 L90. You know, other sources of sound in this area
4 may include agricultural equipment that operates
5 during the day that is not operating consistent
6 throughout the day. That may not appear in the L90.
7 We intentionally sought to locate our sound level --
8 our sound monitors away from any -- any livestock but
9 that is certainly something in certain areas of the
10 project I imagine you could have some intermittent
11 sound from livestock.

12 Q. With respect to location 1, which you've
13 indicated was located near the Village of Clifton,
14 right?

15 A. That's correct.

16 Q. Okay. What kinds of sounds would you
17 expect to occur at that location, if any, that would
18 not be found in the rest of the project area?

19 A. So sounds -- sounds of traffic from
20 Clifton itself are most likely to appear in that area
21 of the project. That isn't to say they couldn't be
22 heard elsewhere. I doubt they would reach location
23 3. Similar there are just roads in that -- northeast
24 of the project that I would expect to be -- to be
25 heard or measured along the eastern edge of the

1 project including both, you know, the southeast and
2 northeast portions of the project.

3 Q. Did you notice a house near the
4 measurement station 1?

5 A. Not in direct proximity and while we had
6 access to certain parcels of land, I was not aware of
7 our access to measure at an actual home in the area,
8 and in general an area like this we would avoid
9 placing a sound monitor very close to a home to avoid
10 measuring sounds coming specifically from that home
11 such as their air conditioning or just general
12 outdoor recreation or their vehicles.

13 Q. Yeah. I think you assumed I asked a
14 different question.

15 A. Sorry.

16 Q. Let me just ask the question a different
17 way. How far was that home from the road?

18 A. There was no home right next to location
19 1.

20 Q. Oh, okay. I thought you said there was
21 one somewhere in the area but maybe not.

22 A. I was just speaking about why we didn't
23 set a monitor up near any home.

24 Q. Okay. For measurement station 2 was
25 there a home near that measurement station?

1 A. There was certainly homes within sight
2 distance but you could see homes from at that
3 location but I -- there was not a home like within
4 50 feet of that location.

5 Q. And what about measurement station 3? I
6 think you indicated there was a home there?

7 A. Yeah, there was a home and it was
8 located -- I don't know the distance but it was
9 located close to the road there. Maybe 50 to
10 100 feet back by my estimation.

11 Q. With respect to the number of homes that
12 you did see in any area that, you know, was in the
13 project area, how far were those homes away from the
14 roads?

15 A. I've not calculated the average or range
16 of distances from -- from the roads enclosing the
17 project, so I don't have that information.

18 Q. Let's go back to Appendix K of the
19 application. Please go to page 4.

20 A. Okay.

21 Q. Okay. All right. Let's look at the
22 paragraph just above Table 6.

23 A. Okay.

24 Q. And looking at the last sentence in that
25 paragraph, it states "For our analysis, we have

1 assumed that near any given non-participating
2 receiver, only one of each piece of equipment listed
3 will be operating simultaneously at that particular
4 location." Do you see that sentence?

5 A. I do.

6 Q. And what was that referring to, that
7 sentence?

8 A. So this is referring to kind of our --
9 the assumptions baked into these estimates of sound
10 levels that we have presented of construction and
11 at -- in terms of, you know, we connected our
12 operational noise analysis in the software CadnaA
13 where we can place sources at different locations
14 throughout the project, associate sound levels with
15 those, and then estimate sound levels all around the
16 project area.

17 For construction noise it is much, much
18 more challenging to predict because the equipment
19 moves throughout the site. We don't know how many
20 pieces of equipment may be in operation. But so a
21 simplification of our analysis was -- was to show QR
22 sound levels for equipment we expect to be -- major
23 equipment we expect to be operating during each phase
24 and rather than spread out throughout the entire
25 project and do this calculation like we did but in

1 CadnaA.

2 Rather, we are saying let's assume one of
3 each of these is close to 1 particular home. Now
4 let's estimate sound levels at a particular distance.
5 And so all of these calculations could be -- could be
6 updated with detailed information about -- about the
7 number and location of equipment but that's just not
8 information we ever receive from a construction team.

9 Q. So Table 6 under the paragraph we've been
10 discussing provides the equipment sound levels for
11 one piece of equipment?

12 A. So let's go through just like the first
13 example of phase 1 of this table. So phase 1 we
14 assumed that a grader would be operating. That has a
15 sound pressure level of 85 dBA and this is a maximum
16 sound pressure level based on some EPA guidance. A
17 grader alone produces a sound pressure -- maximum
18 sound pressure level of 85 dBA at a distance of
19 50 feet. A backhoe produces sound level of 83 dBA at
20 50 feet and a dump truck 85 dBA at 50 feet.

21 And now in the far right column of this
22 table we are presenting the sum total of each of
23 those pieces of equipment so combined a grader, dump
24 truck would produce 89 dBA maximum sound pressure
25 level at 50 feet. This assumes like all three pieces

1 of equipment are collocated which is not in reality.
2 They may not be operating within 50 feet at the same
3 location. They may not be within 50 feet of each
4 other but this is merely to kind of give an estimate
5 of these maximum sound levels at different distances.

6 Q. So if you calculated a combined maximum
7 sound pressure level for all three of those equipment
8 operating at a time in phase 1 of Table 6, then why
9 did you state in the sentence just before that that
10 you assumed that only one piece of equipment would be
11 operating simultaneously at a particular location.

12 A. Our sentence reads "Only one of each
13 piece of equipment." So we are intending that to be
14 one of a grader, one of a backhoe, and one of a dump
15 truck.

16 Q. Okay. I see. Yeah, I see. Thank you.
17 Then how is the information in Table 6 different than
18 the information in Table 7 on page 5 of Appendix K?

19 A. So Table 6 was intended to kind of detail
20 the assumptions of equipment used in each phase and
21 then provide that total sound pressure level at
22 50 feet from that combination of equipment. Table 7
23 the second column reproduces the third column of
24 Table 6, so it was combined maximum sound pressure
25 levels of equipment in each phase that's identical to

1 the previous table, but now we've shown our estimates
2 at different distances based on how close we
3 anticipated certain activities in each of those
4 phases to occur to the -- to the neighboring
5 residences, so it shows basically both estimates at,
6 you know, 30 feet, 165 feet, 275 feet, and 1,500 feet
7 for each different phase.

8 Q. Let's go to Table 4 on page 10 of
9 Appendix K.

10 A. Yes. I'm there.

11 Q. All right. Now, this is a table of
12 modeling results for the Kingwood project during the
13 daytime, right?

14 A. That and it also lists the ambient sound
15 level that we measured.

16 Q. So how did he decide which of the ambient
17 sound measurements to designate for each receiver?

18 A. It was based on the geographic location
19 of -- both the receiver and the mile locations. And
20 so for location 1 which we tend to represent the most
21 northeast portion of the project, we selected
22 receivers -- we assigned that ambient level to
23 receivers in that northeast area of the project and
24 then repeated similar processes for the other two
25 locations.

1 Q. So you made -- you assigned the ambient
2 level for each receiver based on which measurement
3 station it was the closest to; is that correct?

4 A. That is correct.

5 Q. Did you differentiate between houses that
6 were closer to the road versus houses that were
7 further away from the road in determining whether the
8 ambient level of the closest measurement station was
9 appropriate for that site, or did you just pure --
10 use only the distance as a reason to assign the
11 ambient level for that receiver?

12 A. We -- we only used the geographic
13 location of the receiver in relation to the
14 monitoring locations because those are closest to
15 the, you know, also -- there are many sources of
16 noise, not just the local roads that -- that are
17 influencing the sound levels. So we also -- we
18 basically choose it to represent that area of the
19 project.

20 Q. Well, did you -- did you determine
21 whether all of the receivers assigned to the ambient
22 level found by a specific measurement station had the
23 same exposure to the sound sources in that area?

24 A. No. We didn't measure any of the
25 locations. We only have that data. And we -- and

1 similar to I don't know how -- how -- I don't have
2 anything about the traffic data in the area. I can't
3 make any assumptions about exposures in different
4 areas of the project.

5 Q. The term receiver as used in Table 4
6 refers to what?

7 A. So that is a receiver of noise in our
8 model which we have placed at the residences and so
9 these are labeled NP1 and NP50 represents the 50
10 non-participating residences that we modeled.

11 Q. Were the modeled numbers that you obtain
12 that is the result of your modeling in dBA, are those
13 the levels of noise that you would expect to occur
14 outside of the house or inside the house?

15 A. Yeah. These are predictions of outdoor
16 sound levels.

17 Q. Let's go back to your direct testimony
18 marked as Kingwood Exhibit 10. Find answer 12 on
19 page 6.

20 A. Yes.

21 Q. And the answer to question 12 talks about
22 things that can be installed in order to reduce the
23 amount of noise produced by inverters, correct?

24 A. That's correct.

25 Q. But there's nothing in the application

1 that states that any of these mitigation devices will
2 be installed on the -- on the invertors for the
3 project, correct?

4 A. No. No mitigation has been proposed
5 aside from the 500-foot setback that was part of the
6 Joint Stipulation.

7 Q. Let's go to your supplemental testimony
8 marked as Kingwood Exhibit 11.

9 A. Yes.

10 Q. All right. I thought we would find the
11 proposed text to the condition that you recommended
12 for the noise in the supplemental testimony, but I'm
13 not seeing it here. Is it contained here anywhere,
14 or is it in your first testimony?

15 A. My first testimony includes discussion of
16 both Condition 29 and Condition 30 of the Staff
17 Report.

18 Q. Okay. And your recommendations with
19 respect to those two conditions in your original
20 direct testimony did not change with -- in your
21 supplemental testimony?

22 A. No. And to note the comments on the
23 Condition 29 were just a summary of them. There
24 wasn't -- there are no proposed revisions to that
25 condition.

1 Q. Could we pull -- wait a minute. Here we
2 go. Page 9 of your original testimony Exhibit 10,
3 would you turn there.

4 A. Yeah, yeah.

5 Q. All right. And here you have a
6 recommendation for revising Condition 30, right?

7 A. Yes, we do have red lines to revising 30
8 based on project precedence.

9 Q. Okay. So as you propose the revision of
10 this condition, is there any noise limit that would
11 apply to the operation of the solar facility?

12 A. This -- this discusses a Condition 30 on
13 I guess page 9 on -- find which line exactly it says.
14 Starting kind of on line 12 where it says "to show
15 that sound levels will not exceed the average daytime
16 ambient level in dBA for the nearest sound monitoring
17 location for the Project Noise Elevation attached to
18 the application as Exhibit K plus five dBA at an
19 non-participating sensitive receptor." So it's
20 suggesting the limit is -- project operation is based
21 on the ambient level plus 5 dBA.

22 Q. Yeah, but that sentence refers to the
23 model that's going to be performed prior to
24 construction, right?

25 A. Yes. This is requesting results from an

1 updated noise model based on the selected equipment
2 for the project.

3 Q. Okay. And then in the next sentence you
4 state -- well, that talks about transformer data.
5 But the next sentence is also a model -- refers to a
6 model that would be performed prior to construction,
7 right?

8 MR. SETTINERI: I will just object.

9 A. Well --

10 MR. SETTINERI: I am just going to
11 object. If we could just ask for the record read the
12 sentence that we are directing the witness to. It's
13 hard to follow the -- that, if you could, please.

14 ALJ WILLIAMS: Attorney Van Kley, can you
15 give us a better map as to which sentence you're
16 reading.

17 MR. VAN KLEY: Yeah. I will be happy to
18 do that.

19 Q. (By Mr. Van Kley) Line 15, tell me if
20 you're following this sentence then. "If transformer
21 manufacturer data is not available, the model will be
22 updated with sound emission data following the NEMA
23 TR1 standard." Do you see that sentence?

24 A. Yes.

25 Q. And that sentence refers to a model that

1 may be performed prior to construction of the
2 project, right?

3 A. Yes.

4 Q. And then the next sentence starting on
5 line 17 states "If inverter manufacturer data is not
6 available, a similar inverter model will be used to
7 update the sound propagation model prior to
8 construction." And there again, this sentence refers
9 to a model that may be performed prior to
10 construction, right?

11 A. Yes. This condition, as I understand it,
12 is suggesting that when final equipment selections
13 have been made, the noise model should be -- should
14 be updated to show that the project is still in
15 compliance with the, you know, increasing sound level
16 by no more than 5 dBA over the ambient level.

17 Q. So the next sentence starting on line 20,
18 I am trying to figure out what that means, and I am
19 hoping you can tell me. Let me read that sentence
20 into the record for clarity. "If the sound power
21 level of the installed inverter is 2 dBA or more
22 above the sound power level used in the updated
23 preconstruction model, then the sound propagation
24 model will be updated to ensure project-wide
25 compliance with the applicable sound level limit."

1 Can you tell me what that sentence means based on
2 your understanding?

3 A. Yeah. Based on my understanding, this is
4 for a scenario in which data for the selected
5 inverter was not available prior to construction, so
6 first that -- the first step would be using a similar
7 model to provide an estimate of -- of, you know,
8 equivalent sound levels for the actual like equipment
9 that is -- has been selected.

10 Then as I understand it, the -- that
11 equipment for which we had no sound data for prior to
12 construction gets installed. Someone would then go
13 out and measure -- measure the sound power level of
14 that equipment in the field and use that -- use that
15 data in the model, re-update the model with that
16 data, and identify if project noise levels exceeded
17 the 5 dBA over ambient criteria.

18 I think this is possibly to show that,
19 you know, currently our estimates of increases over
20 ambient are not at 5. We can look at Exhibit 11, the
21 attachment which shows our estimates of -- Attachment
22 B shows our estimates of expected increase over
23 ambience for all project sources at night, and the
24 maximum expected increase over ambience is only 3
25 dBA. So this would imply that, you know, a 2 dB

1 increase in actual installed equipment may not -- may
2 not correspond with an exceedance of 5.

3 That is my understanding of the condition
4 as it's written. It is possible that this condition
5 is also allowing for some level of uncertainty within
6 that, you know, manufacturer's data.

7 Q. Maybe I should ask the question a
8 different way and see if I can understand that
9 answer. Did you write the underlying language in
10 Condition 30?

11 A. It is written in my testimony, and it is
12 language -- similar language to what was adopted as
13 part of the AEUG Union Solar project.

14 Q. So were you the author of the language
15 that's underlined in Condition 30 as found on your
16 testimony on page 9?

17 A. I --

18 MR. SETTINERI: Object. It is his
19 testimony.

20 MR. VAN KLEY: Say again, Mike.

21 MR. SETTINERI: It's his testimony, so I
22 would just object. He testified previously it was
23 prepared by or at his direction.

24 MR. VAN KLEY: Yeah. I am asking whether
25 he wrote it.

1 ALJ WILLIAMS: I will sustain the
2 objection.

3 MR. VAN KLEY: I guess I don't understand
4 the objection.

5 ALJ WILLIAMS: He's testified where the
6 language came from and how he came to be responsible
7 for including it.

8 MR. VAN KLEY: Right. He said that it
9 was prepared by him or under his direction, so I am
10 trying to figure out whether this particular language
11 was prepared by him or by somebody else under his
12 direction.

13 MR. SETTINERI: And I would have another
14 objection as to relevancy.

15 ALJ WILLIAMS: I will let him answer the
16 question as to whether he personally scribed this
17 language.

18 A. I did not scribe this language. This
19 language is -- I am merely referencing it as project
20 precedent and reference also Mr. Stickney's
21 testimony.

22 Q. (By Mr. Van Kley) Okay. All right. So
23 answer me this then, based on your understanding of
24 Condition 30 as it's written in your direct
25 testimony, can you tell me whether this condition as

1 worded here would allow the solar project to exceed
2 the ambient Leq by more than 5 dBA?

3 A. As written? Our modeling cannot --
4 cannot show that the project exceeds 5 dBA over the
5 ambient.

6 Q. Okay. Perhaps you didn't understand the
7 question. I will try to rephrase. I am trying to
8 figure out whether the language that is being
9 proposed here could result in sound levels allowed by
10 this condition that are higher than 5 dBA above the
11 ambient Leq. Can you answer that question?

12 A. As I understand it, this is not a -- this
13 is not a compliance metric based on field
14 measurements at residences. It's a compliance metric
15 based on -- possibly based on measurements in the
16 field of installed equipment near that equipment and
17 then using that information to produce updated
18 modeling results to show project -- estimated project
19 impact at all areas of the project.

20 So this is not a -- this condition does
21 not require that someone would measure at every
22 single residence in the project area to show
23 definitively that the project does not exceed the 5
24 dBA over ambient. It's a modeling based approach.
25 It's used in construction with real measurement of

1 actual equipment as installed close -- close to the
2 equipment.

3 Q. So would the ambient measurements
4 included in Appendix K at the three monitoring
5 stations be utilized in some way to determine
6 compliance with Condition 30?

7 A. This condition as redlined does suggest
8 that it should not exceed the average daytime ambient
9 level and dBA for the nearest sound monitoring
10 location for the project noise evaluation attached to
11 the application as Exhibit K plus 5 dBA depending on
12 said receptors, so it does reference those -- those
13 ambient measurements in our report.

14 Q. Okay. So based on that answer then, does
15 Condition 30 provide that the noise level from the
16 project of more than 5 dBA above the ambient level
17 found in Appendix K from the nearest monitoring
18 station would violate the condition?

19 A. Could you repeat the question, rephrase
20 it?

21 Q. Sure. All right. Is there anything in
22 Condition 30 that would prohibit the solar project
23 from producing more than 5 dBA of noise above the
24 ambient level found in the monitoring station that is
25 the closest to that location as stated in Appendix K?

1 A. I would say it does prevent that. It
2 specifically lists daytime ambient, and the
3 compliance measurement that would be used is modeling
4 results.

5 Q. So if the modeling results prior to
6 construction predict that the level of noise from the
7 project will -- will not exceed 5 dBA, then is it
8 your testimony that the project would be -- that is
9 all that is needed to determine whether the project's
10 in compliance after construction?

11 A. From this condition it would -- it would
12 be sufficient if the -- if the modeling results
13 showed increases over ambient were less than 5, that
14 the project would be in compliance.

15 Q. Okay. Now, I think I understand. Are
16 there any other recommended conditions in the Joint
17 Stipulation that provide any noise limitations for
18 the operation of the solar facility?

19 MR. SETTINERI: Just object,
20 mischaracterizes the Joint Stipulation as to other
21 conditions. You framed the condition -- I can't
22 remember exactly how you framed it, but you didn't
23 characterize it correctly.

24 MR. VAN KLEY: I don't understand that
25 objection.

1 ALJ WILLIAMS: Mr. Odom, do you
2 understand the nature of the question?

3 A. I guess I understand the Condition 29 of
4 the Staff Report allows construction noise and some
5 proposed limits on that during certain hours. I
6 understand that the intent of Condition 4 of the
7 Joint Stipulation was -- was to increase inverter
8 setback and reduce noise, but it is not specifically
9 related to 5 dBA over ambient.

10 Q. All right. So if I am understanding your
11 answer, then your answer is that other than proposed
12 Condition 30 --

13 A. Which is Condition 31 in the Joint
14 Stipulation.

15 Q. Okay. Thank you. So other than
16 Condition 31 in the Joint Stipulation, none of the
17 other proposed conditions in the Joint Stipulation
18 provide any noise limitation applicable to the
19 operation of the facility; is that correct?

20 MR. SETTINERI: I'll object.
21 Mischaracterizes his testimony. He didn't say it was
22 a noise limitation. He didn't say -- he didn't say
23 it was a compliance standard. That's what's being
24 framed in the questions and that's why I am
25 objecting, form of question.

1 ALJ WILLIAMS: Mr. Odom? Do you
2 understand what's being asked, Mr. Odom?

3 A. I'm not aware of other conditions than
4 this condition -- than this condition that speak to
5 noise. And as I mentioned, that Condition 29 of the
6 Staff Report, which I believe is Condition 30 of the
7 Joint Stipulation as well, I am not aware of any
8 other conditions that relate to noise.

9 Q. All right. So you are not -- other than
10 proposed Condition 31 in the Joint Stipulation, you
11 are not aware of any other proposed condition in the
12 Joint Stipulation that applies to noise from
13 operation of the facility, correct?

14 A. I am not aware of any others, no.

15 MR. VAN KLEY: Okay. I think we got
16 there now. Thank you.

17 I have no more questions at this time,
18 your Honor.

19 ALJ WILLIAMS: Thank you, Mr. Van Kley.
20 Miami Township?

21 MR. SLONE: Yes, thank you. I won't be
22 very long, and I hope not to tread too much on
23 Mr. Van Kley's line of questioning.

24 - - -

25

1 CROSS-EXAMINATION

2 By Mr. Slone:

3 Q. Good afternoon, Mr. Odom.

4 A. Good afternoon.

5 Q. I guess we are creeping into evening.
6 Hoping not to keep you that long. I want to talk
7 about the model, please, the Acentech model. Now,
8 the model assumes noise from the solar array,
9 correct?10 A. It assumes noise from the tracker motors
11 which move, so it assumes noise from the inverters,
12 assumes noise from the substation transformer, and it
13 assumes noise from the distribution transformers
14 located throughout the project.15 Q. Okay. I thought I heard you say that the
16 tracker motors are moving parts.17 A. The tracker motors do move the solar
18 panels, but my understanding is that the tracker
19 motors themselves are the major noise producer and
20 not the actual motion of the panels themselves.21 Q. Okay. That's your understanding. Do
22 the --23 A. We have been provided sound data for the
24 tracker motors, not necessarily -- we don't -- we
25 have not been provided data for, let's say, movement

1 of some number of trackers. It could be those --
2 those measurements that were taken for those tracker
3 motors moves 10 arrays. I don't know. All I know
4 we've got sound data for a tracker motor, not sound
5 data for the panels themselves.

6 Q. Aside from the tracker motors, are there
7 other moving parts on the solar array?

8 A. Not to my knowledge.

9 Q. Is there no -- no parts rotate?

10 A. Not for which we have been provided sound
11 data.

12 Q. Okay. So just so that I understand, for
13 your model the only sound data that you've been
14 provided was the tracker motors. Those are the
15 moving parts of the array that you've been provided
16 data for.

17 A. And as I've described, major noise
18 producing equipment is the electrical equipment for
19 the solar project.

20 Q. Is it safe for us to assume that the
21 solar array noise will change with length of time in
22 service?

23 A. I don't have any data on the degradation
24 of the tracker motors and if that noise changes over
25 the life of the system. I also do not know anything

1 about the typical maintenance of tracker motors over
2 their lifetime.

3 Q. Okay. So the degradation or potential
4 degradation of those tracker motors was not part of
5 the model?

6 A. No, it was not. It's not part of the
7 model, and I would say typical modeling practice is
8 to use sound power data for equipment operating in
9 normal fashion. A lot of times like we may be called
10 in for a problem with a -- like a rooftop fan that is
11 noisy, and you will find that it has a balancing
12 issue or something but when -- in terms of modeling,
13 there is like no way to predict on our end what a
14 malfunctioning piece of equipment would sound like.

15 Q. Would a malfunctioning piece of equipment
16 be louder than a piece of equipment in normal
17 operation?

18 A. It -- it could also just be
19 nonoperational and quiet as well. I have no
20 predictions on how -- how different failure modes
21 might appear in terms of the sound.

22 Q. Fair enough. Degrading parts, in your
23 opinion do you think those parts would be louder than
24 parts in normal use?

25 A. I think it's -- it would be speculation

1 on my part. I don't know for sure.

2 Q. Can you speculate?

3 MR. SETTINERI: Object, asked and
4 answered.

5 ALJ WILLIAMS: I'll sustain the
6 objection. I am not going to have the witness
7 speculate.

8 MR. SLONE: Fair enough.

9 Q. (By Mr. Slone) Are you familiar with the
10 Acentech's model assumptions?

11 A. Yes.

12 Q. What are those assumptions?

13 A. So some of those assumptions is that the
14 area of the project where the solar panels are
15 located where the kind of in general the whole area
16 of the project is assumed to be more reflective of
17 sound than the typical, you know, rural, agricultural
18 grassland areas of the project, so a conservative
19 element we are expecting sound that travels and
20 bounces off areas of solar panels or the paved, paved
21 ground in the project area within the -- within the
22 confines of the project area.

23 We have not modeled like roads as
24 reflective -- as re -- with a reflection value of .1
25 but that's what we did for the project itself. I

1 discussed a little bit about our assumptions about
2 what equipment is operating when and why our
3 nighttime assumptions about the inverters is
4 conservative.

5 Other things we do assume like two orders
6 of reflection in our model. We have not assumed any
7 obstructions in the area. We have not modeled like
8 buildings to show how much they would block sound
9 from the project.

10 Our receivers are located at 1.5 meters
11 above the ground which is common practice, what you
12 would expect to standing -- someone standing out in a
13 field would hear. And we've assumed standard
14 meteorology conditions in terms of temperature and
15 relative humidity. And the way that CadnaA operates,
16 the foundational standard beneath it assumes a
17 moderate downwind condition in all directions which
18 basically sound as it travels away from a source
19 will -- can bend in the atmosphere based on wind or
20 temperature conditions.

21 And so what -- what this kind of
22 downwind -- moderate downwind condition assumption
23 does is that it assumes sound that emanates from the
24 project up into the sky will bend back down to the
25 ground which is a -- so there will be times in which

1 the model is more conservative and, for example,
2 upwind conditions there are probably areas of the
3 project that would not hear equipment.

4 Q. I want to talk just a moment about you
5 mentioned normal operation that I believe I
6 understood the data that you used assumes normal
7 operation of the -- of parts in the motors; is that
8 correct?

9 A. That's correct.

10 Q. Can you tell me what that normal
11 operation means?

12 A. I mean, this means that I think we have
13 been provided data for transformers and inverters
14 operating we understand to either be 100 percent
15 capacity, or we don't always have detailed
16 information about the temperature conditions and
17 other conditions of the test. But these are sound
18 power levels and so we are not assuming any kind of
19 setback of the equipment or any reduction in sound to
20 reduced operation.

21 Q. Would normal also mean optimum
22 performance?

23 A. I would -- I would -- yeah, I would agree
24 it's optimal performance in that it is a test data
25 provided for manufacturers in normal operating

1 conditions.

2 Q. In perfect construction?

3 A. I would assume that is an element.

4 Q. Are you aware whether Kingwood intends to
5 monitor sound from the array after construction and
6 during operation?

7 A. I am not aware of any monitoring plans.

8 MR. SLONE: Nothing further. Thank you.

9 ALJ WILLIAMS: Thank you.

10 Greene County.

11 MR. BOGGS: I have no questions for this
12 witness, your Honor.

13 ALJ WILLIAMS: Thank you. Xenia
14 Township.

15 MR. DUNN: No questions, your Honor.

16 ALJ WILLIAMS: Thank you.

17 Cedarville Township.

18 MR. BROWN: No questions, your Honor.

19 ALJ WILLIAMS: Thank you, Mr. Brown.

20 In Progress.

21 ALJ HICKS: You were muted, Mr. Hart.

22 MR. HART: No questions, your Honor.

23 Thank you.

24 ALJ WILLIAMS: Thank you, Mr. Hart.

25 Tecumseh? Hearing none, I'll continue

1 on.

2 Staff.

3 MS. BAIR: Yes, thank you. I have a
4 couple of questions.

5 ALJ WILLIAMS: Please proceed, Ms. Bair.

6 MS. BAIR: Thank you.

7 - - -

8 CROSS-EXAMINATION

9 By Ms. Bair:

10 Q. Mr. Odom, I would like to ask you to look
11 at your direct testimony which is Kingwood
12 Exhibit 10. If you could please go to page 8. I am
13 looking at line 14. Well, I guess line 13 and 14.
14 You say "If data is not available for the transformer
15 that the Project selects, the Applicant can rely on
16 the NEMA TR1 standard." Is that called NEMA or
17 N-E-M-A?

18 A. NEMA is how I would pronounce it.

19 Q. Okay. And could you please tell me what
20 that is?

21 A. Yes. So this is a standard that is -- we
22 see published data based on the size rating of the
23 transformer, and it is associated like you may have
24 NEMA TR -- NEMA TR 170 and that is associated with a
25 specific sound level measured at 1 meter, so in our

1 model we can use that -- that it's an overall sound
2 pressure level for the equipment and we can use that
3 to estimate sound power forward for that equipment.

4 Q. Okay. And you use the word receiver.
5 It's not -- it's not an engineering standard that
6 uses noise data from a known transformer or known
7 piece of equipment?

8 A. I have -- I have seen it, for example, on
9 a data sheet from Eaton transformers where they list
10 different ratings and different essentially sound
11 pressure levels at 1 meter or 1 to 2 meters that it
12 is -- it is specified in the standard, but it's a
13 kind of average -- average sound pressure level
14 measurements around a piece of equipment as I
15 understand it.

16 Q. Okay. So does NEMA contain formulas for
17 estimating the sound power level; is that correct?
18 And a different transformer would have a different
19 sound power level?

20 A. I understand that it is -- that it is
21 based on the measurement. That's my understanding of
22 it.

23 Q. The actual measurement, not formulas.

24 A. It's either a measurement, or it's a
25 guarantee for sound pressure level at a -- at a

1 different distance is how I've always understood it.

2 Q. Okay. Moving on to page 9.

3 A. Yes.

4 Q. I am looking at line 17. I am going
5 back -- unfortunately going back into where you just
6 were with Mr. Van Kley. And on line 17 let me see --
7 it's hard to read this. I want to go back. I am
8 going to go up to line 15 and start with that
9 sentence. "If transformer manufacturer data is not
10 available, the model will be updated with sound
11 emission data from the NEMA TR1 standard. If
12 inverter manufacturer data is not available, a
13 similar inverter module will be used to update the
14 sound propagation model prior to construction."

15 MR. SETTINERI: Sorry to interrupt,
16 Ms. Bair, I want to make sure the record is clear.
17 When you said "from the NEMA TR1 standard" at the end
18 of line 16, it actually states "following the NEMA
19 TR1 standard."

20 Q. (By Ms. Bair) "Following the NEMA."

21 MR. SETTINERI: Thank you.

22 Q. Do you see that in your testimony,
23 Mr. Odom?

24 A. Yes.

25 Q. Okay. When you say "similar inverter,"

1 what are you talking about there? Is it the same or
2 could it -- it could have a higher sound power level,
3 right?

4 A. I think in this case the sound power
5 level of the actual inverter selected for the project
6 is unknown, so it's not known whether it's louder or
7 quieter, so I think they select a similar inverter
8 model based on the relevance characteristics for it
9 to meet the project's need at that time of the
10 design, the size or other characteristics perhaps,
11 and as I understand, this -- this condition continues
12 to kind of say this is a temporary estimate that then
13 gets revised when the actual equipment gets
14 installed. I think it's a -- how to handle when you
15 are purchasing a piece of equipment that has no
16 published sound data.

17 Q. Okay. But pre-construction you used
18 something to protect what that sound data -- what
19 that equipment will produce, correct?

20 A. Yes, based on from a similar model,
21 similar to what we have done at this stage of the
22 project. We have used a -- what we think is a
23 similar inverter model assumed in the project at this
24 stage and later when an actual selection has been
25 made, a selection similar to that selection will be

1 modeled, and then once the actual inverter that was
2 purchased by the project is installed, then
3 compliance measurement would -- would be done to
4 measure the actual sound power of that piece of
5 equipment.

6 Q. Okay. I think I understand what you said
7 but let's -- let's -- well, maybe I need to read the
8 whole thing, but I am looking at line 20. "If the
9 sound power level of the installed inverter is 2 dBA
10 or more above the sound power level used in the
11 updated preconstruction model, then the sound
12 propagation model will be updated to ensure
13 project-wide compliance with the applicable sound
14 level limit."

15 So the installed inverter has a sound
16 power level that is 2 dBA greater than what was the
17 sound model presented in the application, okay?
18 Let's just assume it comes out and it's 2 dBA higher.
19 How will compliance be achieved by the Company?

20 A. So I think the -- so the first is 2 dBA
21 or more, then you need to update that model with that
22 measurement data and evaluate whether the project
23 still meets compliance. Let's say, for example, it
24 was 2 dBA exactly over, you would model it and
25 evaluate have we exceeded 5 dBA over the ambience.

1 If not, you have met compliance. If -- if it is out
2 of compliance, then I would say that would require
3 mitigation.

4 Q. Okay. So let's say it's 3 dBA higher
5 than what was tested earlier. That's going to
6 require mitigation, correct?

7 A. Pending, pending an update of our
8 acoustic model and --

9 Q. Okay.

10 A. And that update indicating that the
11 project design goal of 5 dBA, 5 dBA over ambient is
12 exceeded.

13 Q. So just to state the obvious, mitigation
14 means bringing that sound level down to be in
15 compliance, correct?

16 A. That's correct.

17 Q. Okay. And can you tell me some ways it
18 might be how you could mitigate the inverter or if
19 you have any ideas how that could be done.

20 A. I would point to question -- page 6, my
21 answer 12 on line 14 of page 6.

22 Q. I think I know what you are talking
23 about. What line are you on?

24 A. This is on line 14 of page 6.

25 Q. Okay. So you are saying some of those

1 mitigation measures would be used that are contained
2 in answer 12.

3 A. That's correct. And part of -- and part
4 of the reason that it is helpful to model that stage
5 rather than just say we've -- we've measured our
6 inverter sound level is let's say 3 dBA over -- over
7 what we modeled, what you would do you would update
8 the model, identify the points of noncompliance, if
9 any, and then design mitigation to address those
10 points of noncompliance. It wouldn't necessarily
11 require mitigation throughout the entire project.

12 MS. BAIR: All right. Thank you. I
13 don't have any more questions. Thanks.

14 ALJ WILLIAMS: Thank you, Ms. Bair.

15 Mr. Settineri, I assume you need a few
16 minutes to confer with your witness?

17 Let's go off the record

18 (Discussion off the record.)

19 ALJ WILLIAMS: Let's go back on the
20 record.

21 Mr. Settineri, any redirect?

22 MR. SETTINERI: I do, your Honor. Thank
23 you.

24 - - -

REDIRECT EXAMINATION

1
2 By Mr. Settineri:

3 Q. Mr. Odom, you were asked questions about
4 I think it was Condition 30 in the Staff Report, but
5 specifically you were sound power and sound pressure
6 in various answers. What is sound power versus sound
7 pressure?

8 A. So they are two different numbers, and
9 they represent different things. Sound power and
10 anyone -- I can point to particular points in the
11 report, but they are reference to different
12 quantities. So sound power is reference to -- has a
13 reference lever in watts. So sound power is an
14 energy measurement. It's a measurement of the total
15 acoustic energy output by equipment. It's what we
16 like to model. It is the best kind of sound data you
17 can get.

18 Some pressure level is measured at some
19 distance from a source and so that's -- what you
20 would experience measure standing at a particular
21 distance back from a source. You can convert between
22 the two. You can take a measurement under certain
23 conditions, sound pressure measurements at a specific
24 distance and back calculate what the sound power
25 level would be. And as we do in our model, we input

1 sound power level and estimate sound pressure level
2 at distances away from the equipment out in the
3 community.

4 Q. All right. You were also asked some
5 questions about the modeled sound levels,
6 specifically that they were -- your modeled sound
7 levels were outside the house. Do you recall that?

8 A. Yes.

9 Q. Okay. What would you expect the sound
10 levels to be inside a house?

11 A. It is a conservative estimate to assume
12 that any kind of standard building construction with
13 windows closed would provide roughly 20, 20 dB of
14 attenuation. That's kind of a core single -- single
15 value number for the amount of attenuation that would
16 be provided moving from outside to inside. So you
17 expect it to be 20 dB lower. With a cracked window
18 that number may change to 15 dBA of reduction. And
19 with a fully open window, that might be more in the
20 range of 5 to 10 dB depending on the distance from
21 the source probably.

22 MR. SETTINERI: Thank you, Mr. Odom.

23 No further questions, your Honor.

24 ALJ WILLIAMS: Thank you, Mr. Settineri.

25 I will invite recross on issues of

1 redirect. Mr. Van Kley.

2 MR. VAN KLEY: None for me, your Honor.

3 ALJ WILLIAMS: Thank you, sir.

4 Miami Township.

5 MR. SLONE: None from Miami Township,
6 your Honor.

7 ALJ WILLIAMS: Staff.

8 MS. BAIR: No. No, thank you.

9 ALJ WILLIAMS: All right. Mr. Odom,
10 thank you for your time this afternoon. You are
11 excused.

12 Let's take up the exhibits.
13 Mr. Settineri.

14 MR. SETTINERI: Thank you, your Honor.
15 At this time we would move for the admission of
16 Kingwood Exhibit 10, the direct testimony of Mr. Alex
17 Odom, as well as Kingwood Exhibit 11, the
18 supplemental testimony of Alex Odom.

19 ALJ WILLIAMS: Any objections to the
20 admission of both of those exhibits?

21 Hearing none, those are both admitted.

22 (EXHIBITS ADMITTED INTO EVIDENCE.)

23 ALJ WILLIAMS: Okay. That concludes the
24 on the record scheduled portion of our day so we will
25 go off the record.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

(Discussion off the record.)

(Thereupon, at 5:39 p.m., the hearing was
adjourned.)

- - -

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, March 8, 2022,
and carefully compared with my original stenographic
notes.

Karen Sue Gibson, Registered
Merit Reporter.

(KSG-7245)

- - -

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

3/22/2022 11:44:45 AM

in

Case No(s). 21-0117-EL-BGN

Summary: Transcript in the matter of the Kingwood Solar I, LLC hearing held on 03/08/22 - Volume II electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.