

BEFORE THE OHIO POWER SITING BOARD

- - -

In the Matter of the :
Application of Firelands :
Wind, LLC, for a :
Certificate of :
Environmental :
Compatibility and Public : Case No. 18-1607-EL-BGN
Need to Construct a :
Wind-Powered Electric :
Generation Facility in :
Huron and Erie Counties, :
Ohio. :

- - -

PROCEEDINGS

before Mr. Jay S. Agranoff and Mr. Michael Williams,
Administrative Law Judges, Ohio Power Siting Board,
conducted via Webex, called at 9:03 a.m. on
Wednesday, October 7, 2020.

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VOLUME III

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ARMSTRONG & OKEY, INC.
222 East Town Street, Second Floor
Columbus, Ohio 43215-5201
(614) 224-9481 - (800) 223-9481

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1 APPEARANCES:

2 Dickinson Wright PLLC
3 By Ms. Christine M.T. Pirik
4 Mr. Jonathan R. Secrest
5 Mr. Terrence O'Donnell
6 Mr. William Vorys
7 and Ms. Madeline Fleisher
8 150 East Gay Street, Suite 2400
9 Columbus, Ohio 43215

10 and

11 K&L Gates LLP
12 By Mr. James M. Lynch
13 Mr. Adam N. Tabor
14 and Mr. Brian Knox
15 925 Fourth Avenue, Suite 2900
16 Seattle, Washington 98104

17 On behalf of the Applicant.

18 Van Kley & Walker, LLC
19 By Mr. Jack A. Van Kley
20 132 Northwoods Boulevard, Suite C-1
21 Columbus, Ohio 43235

22 On behalf of the Intervenor Alvin and
23 Patricia Didion, Jane Fox, Marvin and
24 Theresa Hay, Patricia Olsen, Sheila and
25 Walt Poffenbaugh, Christina and John
Popa, Lori Riedy, Charles Rogers, Kenn
Rospert, Dennis and Sharon Schreiner,
Donna and William Seaman, Deborah and
Kenneth Weisenauer, Gerard Wensink,
and Black Swamp Bird Observatory.

Sabin Center for Climate Change Law
By Ms. Hillary W. Aidun
Columbia Law School
435 West 116th Street
New York, New York 10027

On behalf of the Intervenor Tom Yingling
and Kevin Erf.

- - -

1 APPEARANCES: (Continued)

2 James Joel Sitterly,
3 Huron County Prosecutor
4 By Mr. Jacob S. Stephens,
5 Assistant Prosecuting Attorney
6 Civil Division
7 12 East Main Street, 4th Floor
8 Norwalk, Ohio 44857

9 On behalf of Board of Trustees of Norwich
10 Township, Huron County, Ohio, and Board
11 of Trustees of Richmond Township, Huron
12 County, Ohio.

13 James Joel Sitterly,
14 Huron County Prosecutor
15 By Mr. Randal L. Strickler,
16 Chief Assistant Prosecuting Attorney
17 Civil Division
18 12 East Main Street, 4th Floor
19 Norwalk, Ohio 44857

20 On behalf of the Board of Commissioners
21 of Huron County, Ohio.

22 City of Willard
23 By Ms. Heather Niedermeier Heyman,
24 Law Director
25 111 South Myrtle Avenue
Willard, Ohio 44890

On behalf of the City of Willard.

Dave Yost, Ohio Attorney General
By Mr. Werner L. Margard, III
and Mr. Robert Eubanks,
Assistant Attorneys General
30 East Broad Street
16th Floor
Columbus, Ohio 43215

On behalf of the Staff of the OPSB.

- - -

1 APPEARANCES: (Continued)

2 Dave Yost, Ohio Attorney General
3 By Mr. Brett A. Kravitz
4 and Ms. Katherine A. Walker,
5 Assistant Attorneys General
6 2045 Morse Road, Building A-3
7 Columbus, Ohio 43229

8 On behalf of the Staff of the ODNR.

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JOINT EXHIBIT IDENTIFIED ADMITTED

1 The September 11, 2020, 360 --
Stipulation Signed on Behalf
of the Applicant, the City
of Willard, the Huron
Commissioners, the Richmond
Trustees, the Norwich
Trustees, the Local
Residents, and the Staff

1 Wednesday Morning Session,
2 October 7, 2020.

3 - - -

4 ALJ AGRANOFF: Are you ready to call your
5 first witness, Mr. Secrest or Ms. Pirik?

6 MR. SECREST: Thank you, your Honor. May
7 the Applicant call Mr. Chris Leftwich to the stand.

8 ALJ AGRANOFF: And Kelli, if you could
9 please promote Mr. Leftwich to a panelist.

10 MS. KING: Mr. Leftwich, you have been
11 unmuted and you are now in a panelist role.

12 ALJ AGRANOFF: I am just looking for him
13 on the screen. There he is.

14 THE WITNESS: Thank you.

15 ALJ AGRANOFF: Hello there. Good
16 morning.

17 THE WITNESS: Good morning.

18 ALJ AGRANOFF: If you could please raise
19 your right hand.

20 (Witness sworn.)

21 ALJ AGRANOFF: Thank you.

22 - - -
23
24
25

1 CHRIS LEFTWICH

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

4 DIRECT EXAMINATION

5 By Mr. Secrest:

6 Q. Good morning, Mr. Leftwich. Would you
7 please state your full name as well as your business
8 address.

9 A. My name is Chris Leftwich, and I am
10 employed at 471 Main Street, Paint Lick, Kentucky.

11 Q. And by whom are you employed?

12 A. Copperhead Environmental Consulting,
13 Incorporated.

14 Q. Thank you. Do you have in front of you a
15 copy of your prefiled direct testimony?

16 A. I do.

17 Q. Is that a true and accurate copy of your
18 prefiled testimony?

19 A. Yes. It appears to be.

20 Q. Do you have any revisions or changes to
21 that testimony?

22 A. I do not.

23 MR. SECREST: Your Honor, may I have
24 Mr. Leftwich's prefiled testimony marked as
25 Applicant's Exhibit 34.

1 ALJ AGRANOFF: So marked.

2 (EXHIBIT MARKED FOR IDENTIFICATION.)

3 MR. SECREST: Thank you. I tender
4 Mr. Leftwich for -- for cross-examination.

5 ALJ AGRANOFF: Thank you.

6 MR. SECREST: Sorry, we were conversing.

7 ALJ AGRANOFF: I knew what you meant.

8 Mr. Van Kley.

9 MR. VAN KLEY: Thank you, your Honor.

10 - - -

11 CROSS-EXAMINATION

12 By Mr. Van Kley:

13 Q. Good morning, Mr. Leftwich.

14 A. Good morning.

15 Q. I am going to be asking you some
16 questions on behalf of the Black Swamp Bird
17 Observatory and the local resident intervenors.

18 Let's start off by asking you a few
19 questions about your background. On how many wind
20 projects have you testified?

21 A. Just one. Well, I guess including this
22 one would be two. Sorry.

23 Q. Okay. I thought we've met three times
24 including today.

25 A. No, sir.

1 Q. Okay. All right. Very good thing. And
2 in both these cases you've testified on behalf of the
3 wind developer?

4 A. Correct.

5 Q. In how many wind projects have you
6 provided services related to bats?

7 A. Man, I would say over a dozen. It's
8 kind -- it's a pretty rough estimate. It dates back
9 several years, but that's my best guess, about a
10 dozen or more.

11 Q. Okay. And in those cases, did you always
12 work for the wind developer?

13 A. Directly -- indirectly, no, and directly,
14 yes, I guess. It depends on how -- how you define
15 work for the developer. The majority, yes.

16 Q. Okay. Well, in cases where you did not
17 work directly for the wind developer, who did you
18 work for?

19 A. State DNR and it was -- yeah, so it was
20 state.

21 ALJ AGRANOFF: Just so the record is
22 clear, when you use the acronym DNR.

23 THE WITNESS: Okay. Department of
24 Natural Resources.

25 ALJ AGRANOFF: Thank you.

1 Q. (By Mr. Van Kley) So let's talk about
2 bats for a while. Are bats important as a component
3 of the environment?

4 A. I believe so.

5 MR. SECREST: Objection, vague.

6 MR. VAN KLEY: I think it's a pretty
7 clear question.

8 MR. SECREST: I think he answered
9 anyways.

10 ALJ AGRANOFF: Please continue.

11 Q. (By Mr. Van Kley) What is the importance
12 of bats in the environment?

13 A. To me personally, it's an intrinsic
14 value. I think all plants and animals are important.

15 Q. Okay. And do -- what role does the bat
16 play in the ecosystem?

17 A. Can you be more specific on what
18 ecosystem that you are speaking of?

19 Q. Well, let's talk about the ecosystem in
20 Ohio.

21 A. Okay.

22 Q. Fair question.

23 A. Sure.

24 Q. In Ohio -- in this area of Ohio where the
25 project area is, what role or roles do bats play in

1 the ecosystem?

2 A. Well, they play a role as both a predator
3 and prey.

4 Q. Okay. And what are they the prey of?

5 A. You know, owls will -- will target bats.
6 You know, snakes definitely will attack -- attack
7 bats and roosts. There's, you know, a handful of
8 predators of bats.

9 Q. So they're the -- so they're a food
10 source for other types of animals.

11 A. They can be, yes.

12 Q. And what are bats the predators of?

13 A. In Ohio, they're insectivores.

14 Q. What types of insects do the bats eat in
15 the area of the project area in Northern Ohio?

16 A. It varies by species.

17 Q. Can you provide me with some of the
18 species that are consumed by bats in the part of the
19 state occupied by the project area?

20 A. Sure. Sure. There are species of
21 insects, I can't tell you the species, I am not an
22 insect person, but there are various flying insects
23 that are eaten by bats; beetles, moths, some
24 mosquitoes but lots of beetles and moths.

25 Q. Do they eat mosquitoes?

1 A. Yes, they will.

2 Q. And do they eat insects that are
3 considered to be agricultural pests?

4 A. Yes.

5 Q. Do they eat insects that otherwise would
6 eat farmers' crops?

7 A. That and other -- other plants.

8 Q. Are bats known to collide with wind
9 turbines?

10 A. Yes.

11 Q. Do you have any theory on why they
12 collide with wind turbines?

13 A. I personally don't study that aspect of
14 bats and wind. I know there are other publications
15 out there that do discuss collisions and other
16 fatality methods of wind and bats, but that is not a
17 personal area of my expertise.

18 Q. Based on your literature review, what are
19 the leading theories as to why bats collide with
20 turbines?

21 MR. SECREST: Objection, outside the
22 scope.

23 ALJ AGRANOFF: Mr. Van Kley?

24 MR. VAN KLEY: I'm not limited to the
25 scope of direct examination. This is -- this is

1 cross-examination of a witness for the first time.

2 ALJ AGRANOFF: I'll allow the question to
3 the extent that the witness is familiar with the
4 question that was asked of him.

5 A. Can you please repeat the question?

6 Q. Yeah. Based on your literature review,
7 what are the leading theories as to why bats collide
8 with wind turbines?

9 A. For clarification, are you asking why
10 they collide or how they are killed?

11 Q. Why they collide.

12 A. I am aware of, you know, bats colliding
13 with wind turbines during -- primarily during the
14 spring and fall migration, you know. Why they
15 collide, I think there is some published
16 observational data out there that suggests that bats
17 could be attracted to wind turbines, you know, those
18 are observational -- an observational study. I still
19 think there's -- I think the conclusions were that
20 there's still research to be done on that hypothesis.
21 I don't think there is a lot of -- of -- that I'm
22 familiar with, a lot of empirical evidence as to why
23 bats collide with turbines.

24 Q. Are you familiar with what is known as
25 white-nose syndrome?

1 A. Yes.

2 Q. Okay. Can you explain what that is?

3 A. Sure. It is a -- it is a syndrome caused
4 by a fungus, and I -- it's *P. destructans*. *P* is the
5 genus; *destructans* is the species.

6 And it started in New York is where it
7 was first detected in cave-dwelling bats. And since
8 the discovery of it in New York, I believe in a cave,
9 it has spread kind of through New York, Pennsylvania,
10 south to the Appalachians. It stuck mostly in the
11 cave areas of the Appalachians. It has spread
12 further west. You know, Kentucky and Tennessee have
13 a lot of cave habitat for bats. And it's pretty much
14 spread kind of in the eastern karst area of the
15 United States. And I believe it has also jumped over
16 to Washington State and I think there's one other
17 state in the west but I have not checked the most
18 recent map of that -- that disease.

19 Q. Has it reached Ohio yet?

20 A. Yes.

21 Q. Okay. Is it present in northern Ohio?

22 A. I don't know where the hibernacula are in
23 Ohio other than the southern part of the United
24 States -- sorry, southern part of Ohio. So I'm not
25 familiar with the locations of hibernacula

1 specifically in northern Ohio and if there even are,
2 so I don't know that answer.

3 Q. Are you aware that there is karst in at
4 least parts of the project area for the Emerson Creek
5 wind project?

6 A. Yes.

7 Q. What has been happening to the
8 populations of bats once white-nose syndrome has
9 arrived in a location where they live?

10 A. It has, in some species, it has shown
11 very high mortality in certain species, so in those
12 species the populations that are known to hibernate
13 in certain caves have been infected with it have --
14 have declined significantly in some cases.

15 Q. Can you tell me what species of bats are
16 present in the area of the project area for the
17 Emerson Creek wind project?

18 A. Sure. There's nine species of bats that
19 you would expect to find in Huron and Erie Counties
20 and I'm basing this on records from ODNR, Ohio
21 Department of Natural Resources. Big brown bats,
22 little brown bats, tricolored bats, Indiana bats, red
23 bats, hoary bats, silver-haired bats, evening bats,
24 and I'm missing one, Indiana bat.

25 Q. Very good.

1 A. Oh, thanks.

2 Q. Your memory is excellent.

3 A. Well, I hope.

4 Q. Which of those species are cave-dwelling
5 bats?

6 A. All of them except the hoary bat,
7 silver-haired bat, and the red bat.

8 Q. Are all of the cave-dwelling bats in the
9 project area or this area of Ohio subject to
10 white-nose syndrome if it arrives?

11 A. I -- I know -- I can tell you what I --
12 what species I do know because I don't know if all of
13 them have had any -- you know, I don't think big
14 brown bats have shown any real issue but I'm not
15 positive, but I know Indiana bats, northern
16 long-eared bats, tricolored bats, and little brown
17 bats are the most -- have been the most susceptible
18 to it.

19 Q. Are you aware of bat surveys that were
20 conducted in the project area for the Emerson Creek
21 wind project and included in the Application for the
22 project?

23 A. I am.

24 Q. Did you personally participate in any of
25 those surveys?

1 A. I did.

2 Q. What was your role?

3 A. For the three surveys completed by
4 Copperhead, for these specific projects I served as
5 project manager. I designed the presence/absence
6 surveys that were conducted. I coordinated the study
7 design with the resource agencies which would be U.S.
8 Fish and Wildlife Service and Ohio Department of
9 Natural Resources. I -- so I designed those studies,
10 got them approved, made sure they were following
11 established protocols.

12 And then I oversaw the field folks and
13 served as project manager and participated on, you
14 know, nightly phone calls, troubleshoot issues, catch
15 up on results. And then I was involved in -- in
16 drafting and seeing review of the final reports for
17 these three studies.

18 Q. Were any Indiana bats discovered during
19 any of these surveys?

20 A. Yes.

21 Q. How many were discovered?

22 A. One.

23 Q. The Indiana bat is a federal endangered
24 species; is that correct?

25 A. Correct.

1 Q. The Indiana bat is an insectivore?

2 A. Yes.

3 Q. What kinds of insects do Indiana bats
4 eat?

5 A. I -- flying insects is probably as
6 specific as I can get. I am not familiar with the
7 species or types of insects but, you know,
8 opportunistic and flying insects is a good general
9 description.

10 Q. What do you mean by that term?

11 A. Flying?

12 Q. Yes. Like can you explain what might be
13 the flying insects you're talking about?

14 A. Sure. Flying insects will have wings and
15 they will fly versus insects that are, you know --
16 and they'll also glean insects off of leaves but I'm
17 not familiar with the exact species of insects that
18 they will consume.

19 Q. Do you at least know that the Indiana
20 bats consume mosquitoes?

21 A. Yes.

22 Q. The Indiana bat flies oftentimes to catch
23 insects?

24 A. Yes, that is how it feeds, correct.

25 Q. In what types of habitat does the Indiana

1 bat fly in order to forage?

2 A. They primarily forage in open forest
3 areas. You know, they are often associated with
4 riparian areas, water. It has to be open water, not
5 real cluttered, cluttered by vegetation. You know,
6 they will fly in open canopies, forest tops. They
7 will forage on forest edge, along the edge of forests
8 and, I guess in this part of Ohio, cropland. But
9 primarily forested habitats is where they forage.

10 Q. Uh-huh. They are also known to forage in
11 open areas; isn't that true?

12 A. Correct, yes, that's what I said, open
13 areas, uh-huh.

14 Q. And --

15 A. Let me qualify. Open areas typically
16 associated with forest edge or forest habitat.

17 Q. The Indiana bats are known to cross open
18 agricultural fields to commute from one place to
19 another?

20 A. Yes, they are.

21 Q. What is the typical range for an Indiana
22 bat to travel during foraging?

23 A. It can vary with -- with the season. Can
24 we clarify what season we are speaking of?

25 Q. Yeah. Why don't you lead me through all

1 the seasons and answer the question with regard to
2 each season.

3 A. Well, during migration they will forage
4 between migration ba -- oh, and, you know, studies
5 that Copperhead has participated in show that, you
6 know, foraging areas are usually relatively small
7 compared to those of the foraging ranges in the
8 summer. So in the summer, during the maternity
9 season, two and a half miles is kind of considered
10 the general foraging range of Indiana bats in the
11 summer.

12 Q. I believe the Indiana bat is also known
13 to go as far as 5 miles for foraging?

14 A. I am not aware of a study, a published
15 study, but I do not know that answer.

16 Q. With regard to the Indiana bat that was
17 discovered during this survey for the Application for
18 Emerson Creek wind farm, did you or your crew or
19 anybody else on behalf of the developer track that
20 bat?

21 A. Yes.

22 Q. Okay. And how was it tracked?

23 A. Two different techniques. A radio
24 transmitter was placed on its -- in the scapula of
25 the bat after it was captured and that allowed the

1 tracking to occur. Technique-wise, the bat was
2 tracked during the daytime to locate roost trees and
3 it was also tracked, per ODNR protocol, to collect
4 foraging data at night.

5 Q. And what was the distance -- or what were
6 the distances that this bat was traveling according
7 to your tracking devices?

8 A. I would have to reference -- there's a
9 table in the report. May I reference the report?

10 Q. Yeah, you sure can. And let us know
11 which report you are looking at, please.

12 A. Okay. Okay. I am looking at the report
13 titled "2017 Emerson Creek Wind Project Bat Mist
14 Netting Survey Report, Huron County, Ohio," and I
15 believe it's Exhibit Y4 if I am understanding the
16 labeling here.

17 Q. Okay. Why don't you give us a moment to
18 look for that.

19 A. No, that's not Y4. I apologize. It is
20 Y3.

21 Q. All right.

22 ALJ AGRANOFF: So that would be Exhibit Y
23 of the Application?

24 THE WITNESS: Correct.

25 ALJ AGRANOFF: Okay. If you could just

1 hold for a second.

2 A. Okay. On -- do you want me to --

3 ALJ WILLIAMS: Actually, while Judge
4 Agranoff is finding it in his files, could you tell
5 us the PDF page number if you have it in front of you
6 or what page you are working off of?

7 THE WITNESS: I am working off of a hard
8 copy.

9 ALJ WILLIAMS: What page are you on?

10 THE WITNESS: Page 8, Table 4.

11 ALJ WILLIAMS: PDF page 11 for those who
12 are watching along electronically.

13 ALJ AGRANOFF: So is there a specific
14 appendix that it is?

15 THE WITNESS: I just know it as Exhibit
16 Y3.

17 ALJ AGRANOFF: Okay. I've got it. It's
18 Table 4, the foraging details for a radio-tagged
19 female?

20 THE WITNESS: Yes, sir.

21 ALJ AGRANOFF: Okay. Thank you.

22 Q. (By Mr. Van Kley) All right. Does
23 Table 4 provide you with the answer to my question?

24 A. I believe it does, yes.

25 Q. Okay. And would you tell me what that

1 answer is.

2 A. Sure. The female Indiana bat was tracked
3 during the evening -- or during night to collect data
4 on foraging, and we measured a distance from the
5 roost tree and its foraging behavior that evening,
6 and on the 27th, the furthest distance it moved in
7 that night between foraging points was 1,500 meters.
8 Which I believe is less than a mile.

9 On the 28th of June, the furthest it
10 moved in that night during the time we were tracking
11 it was 692 meters.

12 And on the 29th of June, we did not get a
13 full -- a full evening of tracking in due to
14 inclement weather so the limited data points on that
15 bat showed it moved 1,200 meters was the furthest it
16 moved in that night while we were tracking it.

17 And then on July -- the 30th of June, we
18 did not track the bat, that's why there is a gap
19 there, due to weather.

20 On July 1st, that is an interesting
21 night. That bat moved, and let me refer you to
22 page 10 of this report. This is a nice graphic that
23 will show you all of the foraging data collected on
24 this bat and put it all into context into what that
25 bat was doing in the evening and kind of -- it just

1 shows its home-range areas calculated through a
2 couple programs and statistical software.

3 But on the last night, it moved
4 14,000 meters. And if you look at page 10 on the
5 July 1st night which is the blue dots in the southern
6 area, those first -- first blue dots are pretty
7 representative of a typical foraging bout of an
8 Indiana bat and then you will see the dots start
9 trailing to the south and they end down near a town,
10 I think that's Tiro. I may be pronouncing that
11 incorrectly. That southward movement is not typical
12 of Indiana bat foraging.

13 That bat, I remember speaking with the
14 project manager and a pilot that night, asking what
15 in the world is going on. This bat is moving very
16 far south. It is not really foraging and you can see
17 that by the spacing of the blue dots. Compare that
18 to the northern portion of the earlier sampling where
19 those dots are tightly clustered; that's very
20 representative of Indiana bat foraging in the summer
21 by a female.

22 So these dots here on the south on the
23 night of July 1st are atypical in my experience and
24 is not foraging. That bat was doing something
25 different. That bat appeared to be basically

1 commuting its way far south and we left it at that
2 last point south. That bat just continued to go. It
3 was not stopping. So that behavior is not indicative
4 of foraging and that is what is resulting in the
5 large number of distance moved on that night so it's
6 not characteristic and it was not foraging.

7 Q. Okay. So you tracked this bat for about
8 8 miles; is that correct?

9 A. 14 kilometers is I think is where it went
10 that night before we left it because it was just not
11 stopping.

12 Q. And you discontinued tracking it after it
13 had gone that distance?

14 A. Correct, yes. It was -- it had not
15 stopped. We left it in mid-flight. It was flying
16 and not stopping.

17 Q. All right. So during the time that you
18 were tracking this bat, the Indiana bats were in
19 their nesting period?

20 A. Yes. This was in the summer maternity
21 season, yes.

22 Q. Do Indiana bats typically nest in
23 colonies?

24 A. They do roost in colonies, yes, they are
25 colonial roosters.

1 Q. So if you find one Indiana bat, you are
2 likely to have other Indiana bats in the same area
3 during this time of the year?

4 MR. SECREST: Objection, vague as to
5 "find." Are you talking about identified during
6 flying or flying to a roost tree?

7 MR. VAN KLEY: It doesn't make any
8 difference.

9 ALJ AGRANOFF: If the witness understands
10 the context of the question, he can answer.

11 A. Can you please repeat the question?

12 Q. Sure. During the nesting period for the
13 Indiana bat, if you find an Indiana bat, is it likely
14 that other Indiana bats will be present in the same
15 area?

16 A. Can you please clarify what you mean by
17 find? Because there is a different -- there is
18 different answers, I suppose, to that question.
19 Depending on what you are asking exactly.

20 Q. Well, you explain to me what the
21 different methods for finding an Indiana bat are.

22 A. Okay. Well, I mean, so when you capture
23 a bat, does that mean that you are going to capture
24 two? No. So in that example, my answer to your
25 question would be no.

1 Q. Yeah. My question is a little different
2 which is, if you find an Indiana bat during nesting
3 season, is it likely that other Indiana bats are in
4 the same area since they are colonial roosters?

5 A. Okay. Yes. It's -- it's probably safe
6 to assume in the summer maternity season that that
7 bat is part of a colony, yes.

8 Q. But Firelands didn't find any other
9 Indiana bats besides this one.

10 A. That is the only one that was captured,
11 correct.

12 Q. And you captured this Indiana bat in a
13 mist net; is that correct?

14 A. A mist net, yes, sir.

15 Q. You found three roost locations for the
16 Indiana bat that you tracked?

17 A. Yes, I believe that is correct.

18 Q. Were all of those roost locations located
19 in the project area for the Emerson Creek wind
20 project?

21 A. No, none of them were located in the
22 project area --

23 Q. I thought --

24 A. -- at that time.

25 Q. I'm sorry. I cut off your answer. What

1 was the rest of your answer?

2 A. That was my answer. They were not
3 located in the project area.

4 Q. All right. At the time that this Indiana
5 bat was discovered, was the project area different
6 than it is now?

7 A. I -- I believe it is. It was larger than
8 it is now.

9 Q. So how far are -- or how far were the
10 three roost locations for this Indiana bat from the
11 present-day boundary of the project area?

12 A. I have not -- I have not measured that.
13 I do not know the answer.

14 ALJ AGRANOFF: What was the time frame
15 for which those three first locations were
16 identified?

17 THE WITNESS: The time frame? It was
18 two, three days after it was captured, the first
19 roost tree was located. Let's see, on page 7, if I
20 can refer to the report.

21 MR. SECREST: When you say "report," you
22 mean Exhibit Y3?

23 THE WITNESS: Yes.

24 MR. SECREST: Thank you.

25 THE WITNESS: So it was late July was the

1 time frame.

2 ALJ AGRANOFF: And what was the year?

3 THE WITNESS: 2017.

4 ALJ AGRANOFF: Thank you.

5 Q. (By Mr. Van Kley) Did you say late July?

6 A. Let's see, I'm sorry. I'm trying to
7 reference the report here. Hold on, please. Yes.
8 It was 20 -- 25 -- I'm sorry. Not July. Late June.
9 Sorry.

10 Q. Well, look back at Table 4 on page 8 of
11 Exhibit Y3. According to this table, this Indiana
12 bat was tracked between June 27 and July 1?

13 A. For foraging data, yes.

14 Q. Okay. Was it tracked for any other time
15 period?

16 A. No. The daytime tracking that was done
17 to locate roost trees would have been going
18 simultaneously during the daytime.

19 Q. Okay. Now go to page 7 of Exhibit Y3 of
20 the Application.

21 A. Okay.

22 Q. Go to the heading for Diurnal Radio
23 Telemetry.

24 A. Uh-huh.

25 Q. Okay. So the first paragraph under that

1 heading refers to the Indiana bat that we've been
2 discussing as bat 636; is that correct?

3 A. Correct.

4 Q. Then the second paragraph under the
5 heading of Diurnal Radio Telemetry, the first
6 sentence says bat 636 did not immediately fly upon
7 release, 25 July, and was placed on the bark of a
8 live oak -- or live black oak tree near the capture
9 site. Is the date of July 25 in that sentence an
10 error?

11 A. Yes, sir, it is.

12 Q. What should it be?

13 A. Should be June.

14 Q. The same would be true for all the other
15 references to July in that paragraph?

16 A. Yes. That paragraph, all the July -- the
17 days of the week are -- are correct. The month is a
18 typographic error. To clarify your question
19 originally, late June was when this data was being
20 collected.

21 Q. Would you find Exhibit K2 of the
22 Application which has been marked as Applicant's
23 Exhibit No. 1.

24 ALJ AGRANOFF: One moment, Mr. Van Kley.
25 Is that the June 26, 2018?

1 MR. VAN KLEY: Yes, sir.

2 ALJ AGRANOFF: Okay.

3 MR. VAN KLEY: That's the date of the
4 first e-mail that appears in that document.

5 ALJ AGRANOFF: Okay. Thank you.

6 Q. (By Mr. Van Kley) Let's go to the second
7 page of that PDF. So it would be the second page of
8 the paper copy if you have a paper copy as well. And
9 I'm referring you to an e-mail from Keith Lott of the
10 U.S. Fish and Wildlife Service to Jennie Geiger of
11 Apex Clean Energy dated June 11, 2018. Tell me when
12 you've found that e-mail.

13 A. I found it.

14 Q. I would like you to take a look at the
15 third paragraph of that e-mail. And it reads as
16 follows: "For Emerson North project, since I gave
17 you recommendations prior to this clarification, I
18 stand by my previous recommendations, but this option
19 will not be available for other wind projects (unless
20 the project overlaps with less than 123 acres of an
21 Indiana bat buffer)." Do you see that?

22 A. I do.

23 Q. Do you know what is -- what was being
24 discussed in this paragraph?

25 MR. SECREST: Objection, foundation.

1 MR. VAN KLEY: I asked him whether he
2 knew. I am asking him to establish whether he has a
3 foundation for the e-mail. He was involved in the
4 project, and chances are that he -- he did know about
5 this topic.

6 MR. SECREST: Now counsel is speculating.

7 ALJ AGRANOFF: Mr. Leftwich, are you
8 familiar with the subject matter contained within
9 this e-mail?

10 THE WITNESS: I am familiar with the
11 reference to outer-tier buffers that they are
12 referring to, yes. The outer-tier guidance, I am
13 familiar with that.

14 Q. (By Mr. Van Kley) Would you explain what
15 that is?

16 A. The outer-tier guidance, it is an
17 addition to the U.S. Fish and Wildlife Service
18 Indiana bat summer survey guidance that refers to a
19 Fish and Wildlife Service if -- let me back up.

20 If an Indiana bat is captured on a
21 mist-net project and no roost trees are located, U.S.
22 Fish and Wildlife Service will put a 5-mile buffer
23 around the capture site as a precautionary measure
24 assuming that that buffer will then cover the home
25 range of that bat because no further information is

1 known. So no radio telemetry was conducted. If
2 that's the case, they do that.

3 So the outer tier guidance was added to
4 the Fish and Wildlife Service guidelines. I can't
5 remember which year it was, but a few years ago, that
6 allows project applicants to conduct further mist
7 netting to try to refine -- redefine or I guess hone
8 in and reanalyze the Indiana bat usage of the area so
9 to -- to potentially with negative mist-net results
10 can reduce that buffer from 5 miles down to 2-1/2
11 miles. That is what the outer tier guidance is all
12 about.

13 Q. Okay. Thank you. That's helpful. So in
14 this particular project, the Emerson Creek wind
15 project, was the outer-tier guidance used?

16 A. It was -- it was.

17 Q. Okay. And what was the outcome of using
18 that guidance?

19 A. Well, the -- there's a report. May I
20 reference the report that discusses this process?

21 Q. Sure.

22 A. Sorry. These binders are heavy. They
23 are on the floor.

24 Okay. I believe -- let me find the
25 correct exhibit. This will be in Exhibit Y of the

1 bat mist-netting reports. I believe it is -- yes, it
2 would be Exhibit Y -- Y1.

3 ALJ AGRANOFF: Is that the document that
4 would be identified as the final report?

5 THE WITNESS: Correct, final report 2018
6 bat mist-net survey for the north Wind Project."

7 ALJ AGRANOFF: Okay. Thank you.

8 A. Can you repeat your specific question?

9 Q. Yeah. I think I asked you to explain
10 whether -- to explain what the outcome of the
11 application of the outer-tier guidance was in this
12 case.

13 A. The outcome was a mist-net survey was
14 conducted per the direction of Angela Boyer with U.S.
15 Fish and Wildlife Service that that was to conduct a
16 mist-net survey for the outer tier of an acoustic
17 record that was located north of the project boundary
18 at the time, that is an acoustic record and I don't
19 know the history of that record, so an outer-tier
20 mist-net survey was completed and it's really
21 probably best represented in Figure -- I'm sorry,
22 Figure 1 of that report, page 3.

23 Q. How many mist nets were set up for this
24 exercise to utilize the outer-tier guidance?

25 A. Three.

1 Q. What was the territory, the amount of the
2 territory covered by those three mist net locations?

3 A. I'm referencing page 1, the Methodology,
4 to be able to answer that question. So 539 acres of
5 potential Indiana bat habitat. Hold on. I'm sorry.
6 Let me back up. Let me back up.

7 I am back on the first paragraph, the
8 Project Background, because there's two -- there's
9 two tasks in this one report so I want to make sure I
10 split them up correctly.

11 So it was -- there is one mist net site
12 for every 123 acres of potential Indiana bat habitat
13 so take three times that and that's approximately the
14 amount of acres. I think it's -- I would have to
15 subtract 539 and 386 so it looks like a couple
16 hundred acres of forested habitat was sampled. In
17 the outer tier.

18 Q. Let's go back to Exhibit K2 on the same
19 page that we were examining earlier which is on the
20 second page of that exhibit.

21 A. Are we back in the e-mail?

22 Q. Yes, and we are back in the same
23 paragraph.

24 A. Okay.

25 Q. Due to -- you were involved in the

1 Indiana bat surveys at the time this e-mail was
2 written?

3 A. I think these are post -- I would have to
4 look at the exact dates. I think these are post
5 completion of our surveys, so if that's the case,
6 then no.

7 Q. Based on any communications that you've
8 had with Jennie Geiger or -- or anyone else, do you
9 know what the recommendations are that were referred
10 to in this paragraph?

11 A. Can you clarify what recommendations
12 you're speaking of? I'm not familiar -- I've never
13 seen this e-mail specifically so what recommendations
14 are you referring to, please?

15 MR. SECREST: I'll renew my objection as
16 to foundation.

17 MR. VAN KLEY: Yeah. I am trying to
18 establish a foundation here by finding out what the
19 witness knows.

20 Q. So let me ask you this, do you know
21 whether the U.S. Fish and Wildlife Service has made
22 any recommendations on this project with regard to
23 the subject matter that we've been discussing?

24 MR. SECREST: Objection, vague. We've
25 been discussing a lot of subject matter.

1 Q. Let me reask the question.

2 We've been talking about the application
3 of the outer-tier guidance, right?

4 A. Correct.

5 Q. And if you look at the paragraph above
6 the one that you and I have been discussing, you will
7 see that there's a reference there to reducing the
8 buffer size from 5 miles to 2.5 miles?

9 A. Yeah. I'm not able to discern from this
10 e-mail what buffer they're speaking of. I don't -- I
11 don't know the context of -- of this and I'm thinking
12 that, you know, the buffer survey that I referenced
13 in -- that is part of the exhibit in our application,
14 I -- I don't know if this e-mail -- what record this
15 e-mail is specifically referring to now that I look
16 at it closer and further. I'm not sure what this is
17 in reference to specifically, what record it's
18 referring to. Because -- sorry, go ahead.

19 Q. Based on your knowledge about the
20 outer-tier guidance, can you explain to me about the
21 significance of having less than 123 acres of an
22 Indiana bat buffer?

23 A. I'm sorry. Can you repeat the question?

24 Q. Yeah. I'm looking at that third
25 paragraph again.

1 A. Okay.

2 Q. Of Lott's e-mail and it states there that
3 Mr. Lott stood by his previous recommendations but
4 this option will not be available for other wind
5 projects unless the project overlaps with less than
6 123 acres of an Indiana bat buffer. Do you see that?

7 A. I do.

8 Q. Okay. Can you tell me what -- what
9 significance less than 123 acres of Indiana bat
10 buffer has with respect to the application of this
11 outer-tier guidance?

12 A. I am not aware of what -- of that
13 threshold and why -- what he is referring to. I'm
14 not aware. I don't know the answer.

15 Q. Do you know whether the outer-tier
16 guidance applies to some wind projects but not
17 others?

18 MR. SECREST: Objection, vague.

19 ALJ AGRANOFF: Go ahead, Mr. Secrest.

20 MR. SECREST: I'm sorry. I objected
21 based on vagueness.

22 ALJ AGRANOFF: Okay. And Mr. Van Kley?

23 MR. VAN KLEY: It's not vague. I'm
24 asking a rather straightforward question.

25 ALJ AGRANOFF: I'll allow the question.

1 THE WITNESS: Can I ask you to repeat it,
2 please?

3 MR. VAN KLEY: Yeah. Could we have the
4 court reporter repeat the question?

5 (Record read.)

6 A. Yes. The guidance itself doesn't specify
7 specific project types that it is -- can be used or
8 not be used. It's -- from this e-mail this is my
9 only -- this last paragraph, it says this option will
10 not be -- will not be available to other wind
11 projects unless with the caveat. So from this e-mail
12 it sounds like it can be applied in certain
13 situations to wind projects.

14 Q. Where -- is there a document that lays
15 out the outer-tier guidance that we've been
16 discussing?

17 A. Yes.

18 Q. And what is that document?

19 A. It would be the Indiana bat -- U.S. Fish
20 and Wildlife Service Indiana Bat Summer Guideline.
21 And again, I don't remember -- they update that every
22 year. That's a progressive document that changes
23 with new data so I don't know when it was -- it was
24 actually added. I can't remember the specific year
25 but it's in the current one or at least it was in

1 this 2018 time frame.

2 Q. Is the guidance you just referred to the
3 same guidance we see referenced in the paragraph
4 above the paragraph in Keith Lott's e-mail that we've
5 been discussing?

6 A. Are you -- where are you referring to in
7 the e-mail again?

8 Q. Yeah. Let's go -- if you're in Exhibit
9 K2 --

10 A. Okay.

11 Q. -- second page, Keith Lott's e-mail of
12 June 11, 2018.

13 A. Okay.

14 Q. And then look at the second paragraph of
15 that e-mail and you'll see a reference to the Indiana
16 bat Section 7 and Section 10 Guidance for Wind Energy
17 Projects. And my question is whether the outer-tier
18 guidance is found within that guidance.

19 A. No, sir.

20 Q. Okay. Can you identify the guidance that
21 it's found in?

22 A. Yes. The Indiana Bat Summer Survey
23 Guidelines. The name has changed over the years but
24 I believe U.S. Fish and Wildlife Service Indiana Bat,
25 yeah, Summer Guidelines, or Guidance, would be where

1 it would be located.

2 Q. Okay. We are going to move on for now.
3 We may come back to that later after a break, perhaps
4 we will look at that guidance document.

5 Let's go to Exhibit K4 of the
6 Application. Let me know when you have found it. It
7 should open with an e-mail from Erin Hazelton to
8 Jennie Geiger.

9 A. What's the date of that e-mail, please?

10 Q. December 19, 2017.

11 A. Okay. I think I found it.

12 Q. And that's the e-mail we are going to
13 discuss here briefly.

14 A. Okay.

15 Q. What is the time period in which you were
16 involved in bat surveys in this project?

17 A. 2017 and 2018, I believe, are the dates.

18 Q. So you were involved in the project at
19 the time this e-mail was written on December 19,
20 2017?

21 A. December 2017, I would have been finished
22 with, I think, our bat surveys by this time. Yes,
23 our summer surveys. I was only involved in the
24 summer surveys that are in the reports that are in
25 our exhibit as far as directly involved with.

1 Q. Were you in communication with Apex Clean
2 Energy concerning bat issues as of the time of
3 December 19, 2017?

4 A. No. I do not believe so. I would have
5 to check the dates of our reports. If there is any
6 December discussions with myself and Apex, it's
7 regarding the subject of the mist net reports that
8 were completed that summer.

9 Q. Uh-huh. Have you seen this e-mail before
10 today?

11 A. No, sir.

12 Q. Have you had any communications with Apex
13 Clean Energy or Firelands concerning updating the bat
14 acoustic studies after December 19, 2017?

15 A. No.

16 Q. Do you know whether the bat acoustic
17 surveys were updated after December 19, 2017?

18 A. I do not know that answer. I did not see
19 the studies in my -- the studies that I am
20 sponsoring, it's not in there.

21 Q. You're not aware of any such additional
22 studies contained in the Application for this
23 project?

24 A. I am not aware of any, no.

25 Q. Let's go to Exhibit K7 of the

1 Application.

2 A. Can you please tell me what that exhibit
3 is? These -- they are not numbered so I'm having
4 to --

5 Q. Okay. We'll -- the first page of K7 has
6 an e-mail dated November 7, 2016, from Kate Parsons
7 to Jennie Geiger. If that doesn't help you, let me
8 know. I will see if there is another way we can get
9 you there. The K7 document is labeled as an exhibit
10 pertaining to U.S. Fish and Wildlife Service ODNR
11 Meeting summary, 2016-11-04.

12 A. All right. I found K7 so let's go back
13 to your specific -- okay, I am in K7.

14 Q. Okay. Great. Go to the second page of
15 K7 which has a meeting summary dated November 4,
16 2016.

17 A. Okay. I'm there.

18 Q. I would like to refer you to the last
19 paragraph and the sentence that starts with the word
20 "Bats."

21 A. Okay.

22 Q. And I would like to take a look at the
23 second paragraph -- or the second sentence of that
24 paragraph which reads as follows: "However, U.S.
25 Fish and Wildlife Service noted that results of

1 mist-net surveys indicating negative presence/
2 probable absence of Indiana bat are only valid for
3 2 years and additional surveys are recommended to
4 confirm probable absence of IBAT." Do you see that
5 sentence?

6 A. Yes, I do.

7 Q. Do you agree with the statements in that
8 sentence?

9 MR. SECREST: Objection, foundation.

10 ALJ AGRANOFF: Mr. Van Kley.

11 MR. VAN KLEY: He is a bat expert. He
12 should know.

13 ALJ AGRANOFF: To the extent that the
14 witness has the knowledge and expertise to respond to
15 that question, he can certainly do so.

16 A. Can you repeat the question, please?

17 Q. Yes. I have asked whether you agree with
18 this statement in the second sentence on the last
19 paragraph of this page of K7.

20 A. My recollection of -- of 2016 survey
21 guidance that would dictate this statement is that,
22 at the time, negative results were good for two years
23 in 2016. It's different now. And --

24 Q. What's different about it now?

25 A. It's five years now. They've increased

1 it due to increased confidence in probable absence
2 determinations from mist-net surveys.

3 Q. Is that based on improvements in the
4 techniques for taking or for conducting mist-net
5 surveys?

6 A. It is both a result of increased survey
7 effort that is currently required and also just,
8 again, these surveys have been going on for -- since
9 the '80s. There's a lot of data that support
10 presence/probable absence surveys and those
11 determinations that are associated with it. So it's
12 just a combination of more data and the increased
13 survey level of effort that's currently required and
14 that's due to white-nose syndrome.

15 Q. And what is the current level of effort
16 that is required for mist-net surveys?

17 A. It is nine net nights per 123 or per
18 site.

19 Q. Okay. Would you give me that again,
20 please.

21 A. Nine net nights.

22 Q. Nine net nights?

23 A. Per site is what -- how we speak as far
24 as level of effort.

25 Q. When were the mist-net surveys you

1 conducted for the Emerson Creek wind project?

2 A. 2017 and '18. Those are the most recent
3 ones. There's earlier ones.

4 Q. When were the earlier ones conducted?

5 A. 2011 and 2012.

6 Q. For the 2017 mist-net surveys, how many
7 net nights per site were utilized?

8 A. At that time of that survey, the
9 guidelines stipulated nine net nights per site.

10 Q. And how many were conducted by Firelands?

11 A. Nine.

12 Q. How many were conducted by Firelands in
13 2018?

14 A. Nine.

15 ALJ AGRANOFF: Just for point of
16 clarification, what exactly is a net night?

17 THE WITNESS: Sure. A net night is one
18 mist net placed for one night.

19 ALJ AGRANOFF: Thank you.

20 THE WITNESS: Uh-huh.

21 Q. (By Mr. Van Kley) All right. I think I
22 am at a point where I need to check my notes to see
23 if I have missed any of my questions, and I also
24 wanted to take a look at that guidance that
25 Mr. Leftwich was describing in one of his answers to

1 expedite any questions I may have in that. So if we
2 could take a 10-minute break, I would appreciate
3 that.

4 ALJ WILLIAMS: Before we scramble off,
5 where are we in terms of having a next witness
6 electronically verified, Attorney Secrest?

7 MR. SECREST: I'm not sure, your Honor.
8 Perhaps Ms. King has some further information.

9 ALJ WILLIAMS: Kelli, do we have either
10 Mr. Kusnier or Evans ready in the queue in case we
11 have some time after 11 o'clock to get another
12 witness started in?

13 MS. KING: We are working on Mr. Evans
14 now in the background. He still is not able to be
15 promoted. I believe Kusnier is. Let me check on
16 that.

17 ALJ WILLIAMS: You can check when we are
18 on break. So the plan will be, if Mr. Leftwich wraps
19 up relatively quickly after break, we will head
20 straight into our witness then before lunch.

21 MS. KING: Sure.

22 ALJ WILLIAMS: All right. See everybody
23 in 10 minutes. 10:30?

24 ALJ AGRANOFF: Let's say 10:30, yep.

25 ALJ WILLIAMS: Perfect. Thank you.

1 ALJ AGRANOFF: Thank you.

2 (Recess taken.)

3 ALJ AGRANOFF: Let's go back on the
4 record. And Mr. Van Kley, whenever you are ready.
5 You need to unmute.

6 MR. VAN KLEY: All right. Here I am.

7 Q. (By Mr. Van Kley) Mr. Leftwich, I have a
8 few more questions about mist netting. You earlier
9 had mentioned the protocol for nine net nights per
10 site. Does that protocol require those mist nets to
11 be of a certain size in order to constitute the net
12 night?

13 A. There are standard sizes of mist nets.
14 So the ranges that it refers to are typical sizes
15 that you can purchase. The actual size of the net
16 night -- I'm sorry. The actual size of the mist net
17 is going to be dependent upon the area you are
18 sampling. So a wider trail would require a wider
19 mist net versus a smaller trail.

20 Q. Uh-huh. Does the U.S. Fish and Wildlife
21 Service guideline that provides for nine net nights
22 per site specify the wideness of the net?

23 A. I mean, it may mention a range. Like
24 your standard mist nets are typically from, you know,
25 3 meters to 18 meters. But, again, it's chosen by

1 the person on site to best cover the area being
2 sampled.

3 Q. What was the size of the nets used in
4 Firelands's mist-net surveys?

5 A. I would have to go back into the report
6 data sheets. That information is listed for every
7 single site that is -- that is a piece of information
8 that is written down on the data sheet, so I -- I
9 don't know every single net size that was utilized.
10 But all of that information is on record in the data
11 sheet.

12 Q. Okay. Well, if it's already in the
13 record there, we won't need to look it up, and I have
14 no further questions at this time.

15 ALJ AGRANOFF: Thank you.

16 Any clarifying questions of any of
17 counsel?

18 Okay. If not, redirect.

19 MR. SECREST: Thank you, your Honor, and
20 again, I know we were just on a break, however may we
21 take another 10 minutes?

22 ALJ AGRANOFF: Okay. Why don't we do
23 that and hopefully that will, in the long run, net
24 out in our favor.

25 MR. SECREST: Well played. Thank you.

1 ALJ WILLIAMS: We'll have Witness Kusnier
2 ready to go at the close of this witness.

3 MR. SECREST: Yes, we will.

4 ALJ AGRANOFF: Thank you.

5 ALJ WILLIAMS: 10:45.

6 (Recess taken.)

7 ALJ AGRANOFF: Okay. Redirect at this
8 time.

9 MR. SECREST: Thank you, your Honor.

10 - - -

11 REDIRECT EXAMINATION

12 By Mr. Secrest:

13 Q. Mr. Leftwich, do you have in front of you
14 what is titled Joint Stipulation and Recommendation?

15 A. I do.

16 Q. Okay.

17 MR. SECREST: Your Honor, may I move to
18 have this marked as Joint Exhibit 1?

19 ALJ AGRANOFF: So marked.

20 (EXHIBIT MARKED FOR IDENTIFICATION.)

21 MR. SECREST: Thank you, your Honor.

22 Q. Mr. Leftwich, I am specifically looking
23 at page 5 of the Joint Stipulation and Recommendation
24 and paragraphs 20 and 21.

25 A. Okay.

1 Q. Do those provide measures to protect bats
2 from mortality related to this wind project?

3 A. They do.

4 Q. Strike that, but thank you.

5 Clarification, do these measures protect
6 Indiana bats specifically from potential fatalities
7 due to this wind project?

8 A. Yes.

9 Q. Thank you.

10 With regard to the surveys that you are
11 sponsoring, were those surveys accepted and approved
12 by Fish and Wildlife Service?

13 A. Yes, they were.

14 Q. And to your knowledge, did ODNR send the
15 results of the Applicant's bat surveys as having
16 complied with its monitoring guidelines?

17 A. Yes.

18 Q. Okay. You were questioned quite a bit on
19 cross-examination related to Indiana bat detected
20 near the project area. Was Fish and Wildlife Service
21 consulted related to that?

22 A. Yes.

23 Q. And is that typical that Fish and
24 Wildlife Service would be consulted?

25 A. Yes, it is.

1 Q. And the results of the studies related to
2 the Indiana bat were shared with Fish and Wildlife
3 Service?

4 A. Yes, they were.

5 MR. SECREST: Thank you, your Honor. I
6 have no further questions.

7 ALJ AGRANOFF: Thank you.

8 Based on that limited redirect,
9 Mr. Van Kley, do you have anything?

10 MR. VAN KLEY: Yeah, just briefly.

11 - - -

12 REXCROSS-EXAMINATION

13 By Mr. Van Kley:

14 Q. Mr. Leftwich, with regard to the
15 conditions in the Joint Stipulation that you have
16 just discussed, those measures described in those
17 paragraphs of the Joint Stipulation are not
18 guaranteed to prevent 100 percent of the potential
19 bat deaths, are they?

20 A. From my -- my knowledge and understanding
21 of literature on these methods, they do not remove
22 100 percent of the fatalities.

23 MR. VAN KLEY: All right. No further
24 questions.

25 ALJ AGRANOFF: Okay. Thank you.

1 - - -

2 EXAMINATION

3 By ALJ Agranoff:

4 Q. I do have just one quick clarification,
5 Mr. Leftwich, if you could take a look at page 4 of
6 your testimony.

7 A. Sure. Okay.

8 Q. And specifically down on line 25.

9 A. Okay.

10 Q. There's reference to the Emerson North
11 Wind Project.

12 A. Correct.

13 Q. Is there a difference between Emerson
14 North versus Emerson Creek?

15 A. The -- this portion was just named
16 differently at the time of the study. I believe that
17 this -- from the information I have seen that this
18 study is part of the current project boundary. It
19 was just a name difference.

20 Q. Okay. And then if you take a look on
21 page 5, line 15, there the reference is Emerson Creek
22 North. That's again just a change in name at some
23 point in time or?

24 A. Correct. It's just the separation of the
25 portions of the project area we surveyed.

1 Q. Okay. But both of those references that
2 we were just discussing are now known as the Emerson
3 Creek wind project.

4 A. Correct.

5 ALJ AGRANOFF: Okay. Thank you.

6 Based on my limited question, any
7 follow-up from counsel?

8 MR. SECREST: No, thank you, your Honor.

9 ALJ AGRANOFF: Okay. If not, thank you,
10 Mr. Leftwich.

11 THE WITNESS: Thank you.

12 MS. KING: Mr. Leftwich, I will demote
13 you and demote you to an attendee role at this time.

14 ALJ AGRANOFF: And Mr. Secrest, would you
15 care to make a motion?

16 MR. SECREST: I do, your Honor. May I
17 move for admission of Applicant's Exhibit 34.

18 ALJ AGRANOFF: Any objection?

19 There being none, it shall be admitted as
20 part of the record at this time.

21 (EXHIBIT ADMITTED INTO EVIDENCE.)

22 ALJ AGRANOFF: And with respect to the
23 Joint Stipulation marked as Joint Exhibit 1, you are
24 going to hold off on that?

25 MR. SECREST: That's correct, your Honor.

1 Thank you.

2 ALJ AGRANOFF: No problem. And would you
3 like to call your next witness.

4 MR. SECREST: Please, your Honor. May
5 the Applicant call John Kusnier.

6 ALJ AGRANOFF: And Judge Williams.

7 MS. KING: Okay. I will move him over.

8 Mr. Kusnier, you have been moved over to
9 panelist role.

10 THE WITNESS: Okay.

11 MS. KING: You are unmuted. Thank you.

12 THE WITNESS: There we go.

13 MS. KING: Thank you.

14 THE WITNESS: Yes.

15 ALJ WILLIAMS: Mr. Kusnier, my name is
16 Mike Williams. I am one of the ALJs assigned to the
17 case. I am going to swear you in.

18 THE WITNESS: Okay.

19 ALJ WILLIAMS: Would you raise your right
20 hand.

21 (Witness sworn.)

22 ALJ WILLIAMS: Thank you.

23 Please proceed, Attorney Secrest.

24 MR. SECREST: Thank you, your Honor.

25 - - -

1 JOHN KUSNIER

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

4 DIRECT EXAMINATION

5 By Mr. Secrest:

6 Q. Good morning, Mr. Kusnier. How are you?

7 A. Fine. How are you?

8 Q. I am doing well, thank you.

9 A. Okay.

10 Q. Will you please state your full name for
11 the record, by whom you are employed, and your
12 business address.

13 A. Yes. My name is John Kusnier,
14 K-u-s-n-i-e-r. I am employed by The Mannik & Smith
15 Group at the address of 1800 Indian Wood Circle in
16 Maumee, Ohio 43551.

17 Q. Thank you.

18 Do you have in front of you your direct
19 prefiled testimony?

20 A. I do.

21 Q. Okay. Is that a true and accurate copy
22 of the prefiled direct testimony in this case?

23 A. Yes, it is.

24 Q. Do you have any changes or revisions to
25 that testimony?

1 A. I do not.

2 MR. SECREST: Excellent. Your Honor, may
3 I have Mr. Kusnier's prefiled direct testimony marked
4 as Applicant's Exhibit 35?

5 ALJ WILLIAMS: So marked.

6 (EXHIBIT MARKED FOR IDENTIFICATION.)

7 MR. SECREST: Thank you, your Honor. I
8 tender Mr. Kusnier for cross-examination.

9 ALJ WILLIAMS: Mr. Van Kley.

10 MR. VAN KLEY: Thank you, your Honor.

11 - - -

12 CROSS-EXAMINATION

13 By Mr. Van Kley:

14 Q. Good morning, Mr. Kusnier.

15 A. Good morning.

16 Q. Have you personally made any visits to
17 the project area for the Emerson Creek wind project?

18 A. I have not.

19 Q. All right. And as I talk to you about
20 the project area in later questions in the
21 cross-examination that will refer to the project area
22 for the Emerson Creek wind project.

23 A. Okay.

24 Q. So you are sponsoring a study for Emerson
25 Creek wind project that's related to the evaluation

1 of natural resources such as wetlands and surface
2 water; is that correct?

3 A. Yes, it is.

4 Q. And since you did not visit the project
5 area, who did visit the project area for purposes of
6 preparing that report?

7 A. There were a number of individuals from
8 our company in -- on the project team. Katie Simon,
9 John Freeland, Claire Watts, Alex Peters, and Aaron
10 Mondorf comprise the field team.

11 Q. And what were their duties during their
12 field visits for the purpose of obtaining information
13 for this report?

14 A. As a team with respect to surface waters
15 and that evaluation, Katie Simon and John Freeland
16 were the senior members of the project team and they
17 were assisted by Claire Watts, Alex Peters, Aaron
18 Mondorf in the identification and delineation of any
19 wetlands and streams within the project area.

20 Q. Did they do anything else?

21 A. They also as part of the environmental --
22 or ecological assessment, they -- in the field they
23 made incidental observations, I believe, of wildlife
24 that they may have seen; and then in the office, they
25 comprised -- you know, summarized all the data,

1 prepared the report. Katie Simon would have been
2 responsible for the quality of the document, and they
3 were also assisted in the preparation of the data
4 sheets from written documents to typed by a co-op
5 named Ivy Martin.

6 Q. Did these persons make any observations
7 concerning the geology of the area that they were
8 studying?

9 A. Based on my assessment of the ecological
10 assessment report, it was only through literature
11 review where they did provide mapping for various
12 geological substrata, drift thickness, and so on.

13 Q. Uh-huh. Did that desktop review include
14 any review of potential karst in the project area?

15 A. Yes, there was a mention of karst area
16 within a portion of the project area.

17 Q. Uh-huh. Did these individuals make any
18 effort to look for karst features in the project
19 area?

20 A. Not to my knowledge.

21 Q. Uh-huh. Did they make any observations
22 of any karst features that they may have seen during
23 their visits?

24 A. Not to my knowledge.

25 Q. Did they see any caves in the project

1 area?

2 A. I do not recall seeing any mention of
3 caves in the report.

4 Q. Did they make any observations in their
5 field notes or other records about wildlife
6 observations they made during their visits?

7 A. I did not reveal -- review, excuse me,
8 field notes, and I did not see any table of wildlife
9 observations within the report.

10 Q. Uh-huh. So you don't know whether they
11 saw any eagles while they were there?

12 A. That is correct.

13 Q. Uh-huh. You don't know whether they saw
14 any eagle nests while they were there?

15 A. That is correct.

16 Q. So in preparation for your testimony
17 today, you did not review the field notes of the
18 individuals who provided the information for your
19 report?

20 A. That is correct.

21 Q. At any other time have you reviewed those
22 field notes?

23 A. No, I have not.

24 Q. Who wrote the report that is included in
25 the Application?

1 A. It would have been a team effort. I
2 think -- well, Katie Simon, John Freeland, Alex
3 Peters, and Aaron Mondorf would have had the bulk of
4 the responsibility in writing the report. But Katie
5 Simon would have been also responsible for quality
6 control. And then our project manager, Matt Pesci,
7 would have reviewed the documents once more for
8 clarity and consistency, grammatical errors, things
9 like that.

10 Q. Did you write any of the report?

11 A. I did not.

12 Q. Did you have any role with respect to
13 preparing the report before it was submitted to
14 Firelands?

15 A. I did not.

16 MR. VAN KLEY: All right. I have no
17 further questions.

18 ALJ WILLIAMS: Mr. Secrest, redirect.

19 MR. SECREST: No redirect on behalf of
20 Applicant. Thank you, your Honor.

21 ALJ WILLIAMS: Judge Agranoff, any
22 questions?

23 ALJ AGRANOFF: No, thank you.

24 ALJ WILLIAMS: I wouldn't expect any, but
25 I'll entertain if anyone wants to try to inquire from

1 counsel. If that's not the case, then take up the
2 exhibits. Mr. Secrest.

3 MR. SECREST: Yes, your Honor. May I
4 move for the admission of Applicant's Exhibit 35.

5 ALJ WILLIAMS: Mr. Van Kley?

6 MR. VAN KLEY: No objection.

7 ALJ WILLIAMS: It will be admitted.

8 (EXHIBIT ADMITTED INTO EVIDENCE.)

9 ALJ WILLIAMS: Mr. Kusnier, thank you for
10 your attendance today. You are excused.

11 THE WITNESS: You're welcome. Thank you.

12 ALJ WILLIAMS: Attorney Margard.

13 By Mr. Van Kley: Yes, sir.

14 ALJ WILLIAMS: These things are a bit
15 unpredictable. Do we have any of the Staff witnesses
16 ready to go to fill in?

17 MR. MARGARD: I understand they are all
18 available, all on standby, at least the best I know.

19 ALJ WILLIAMS: We will begin with Witness
20 Bellamy if we otherwise have our choice.

21 MR. MARGARD: I'm fine with that.

22 MS. KING: Your Honor.

23 ALJ WILLIAMS: We'll probably lead into
24 Witness Bellamy depending on how it's going and we
25 will take a break for lunch.

1 MR. MARGARD: Yep.

2 MS. KING: Your Honor, I apologize for
3 interrupting. We were able to connect Mr. Evans.

4 By Mr. Van Kley: Oh, there you go.

5 ALJ AGRANOFF: Pleasant surprise.

6 ALJ WILLIAMS: Rather than -- again,
7 Attorney Margard, please thank the witnesses for
8 their ever present willingness to accommodate. I
9 think if we have Witness Evans ready to go, let's go
10 ahead and get that while the technology is good.

11 Attorney Secrest, will you call him.

12 MR. SECREST: Yes. As soon as I come off
13 mute. Your Honor, may the Applicant please call
14 B. Benjamin Evans to the stand.

15 MS. KING: Mr. Evans, you have been
16 unmuted and you are now a panelist.

17 THE WITNESS: Okay. Can you hear me
18 okay?

19 ALJ WILLIAMS: We can hear you. We are
20 looking for your audio.

21 ALJ AGRANOFF: Video.

22 ALJ WILLIAMS: Video.

23 Mr. Evans, I can see you and I can hear
24 you. Good morning. Welcome. You are appearing
25 virtually as a witness in our Ohio Power Siting Board

1 case, and as we begin your testimony, I am going to
2 swear you in. Would you raise your right hand.

3 (Witness sworn.)

4 ALJ WILLIAMS: Thank you.

5 Attorney Secrest.

6 MR. SECREST: Thank you, your Honor.

7 - - -

8 B. BENJAMIN EVANS

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

11 DIRECT EXAMINATION

12 By Mr. Secrest:

13 Q. Good morning, Mr. Evans.

14 A. Good morning.

15 Q. Will you please state and spell your full
16 name for the record, provide us with whom you are
17 employed, as well as your business address.

18 A. Bryan Benjamin Evans. I'm president --
19 president and owner of Evans Engineering located at
20 524 Alta Loma Drive, Thiensville, Wisconsin.

21 Q. Thank you, Mr. Evans.

22 Do you have in front of you a copy of
23 your prefiled direct testimony?

24 A. I do.

25 Q. And is the copy in front of you a true

1 and accurate copy?

2 A. To the best -- to the best of my
3 knowledge, yes.

4 Q. Okay. Do you have any changes or
5 revisions to that testimony?

6 A. No, I don't.

7 MR. SECREST: Your Honor, may I move to
8 have Mr. Evans' prefiled direct testimony marked as
9 Applicant's Exhibit 44?

10 ALJ WILLIAMS: So marked.

11 (EXHIBIT MARKED FOR IDENTIFICATION.)

12 MR. SECREST: Thank you, your Honor. I
13 tender Mr. Evans for cross-examination.

14 ALJ WILLIAMS: Thank you.

15 Attorney Van Kley.

16 MR. VAN KLEY: Thank you, your Honor.

17 - - -

18 CROSS-EXAMINATION

19 By Mr. Van Kley:

20 Q. Good morning, Mr. Evans.

21 A. Good morning.

22 Q. When were you hired to evaluate the
23 Emerson Creek wind project?

24 A. Could you repeat the question?

25 Q. Yes. When were -- when was your company

1 hired to evaluate the Emerson Creek wind project?

2 A. I believe -- I believe it was in summer
3 or fall of 2018.

4 Q. At that time what was your mission with
5 regard to what you were seeking to accomplish?

6 A. Why I was hired?

7 Q. Yeah. What was the goal of your work?

8 A. The goal of our work was to assist Apex
9 in identifying a communications facility that
10 transmitted over the air to identify particularly
11 microwave lengths that would be crossing the project
12 area, land mobile stations, transmitting stations in
13 the area, and other communication -- to identify
14 other communications towers in the area and also to
15 do an assessment of broadcast stations, identifying
16 those radio and broad -- radio and T.V. stations that
17 were also in the area.

18 Q. Have you prepared this type of work on
19 other wind projects?

20 A. Yes.

21 Q. On how many other wind projects have you
22 performed this type of work?

23 A. I don't know the exact -- I don't know
24 the exact number. It would think they number in the
25 hundreds.

1 Q. And on all of those projects, have you
2 done that work for the wind developer?

3 A. To my knowledge, yes.

4 Q. Are you familiar with the current layout
5 of the turbines proposed for the Emerson Creek wind
6 project?

7 A. Not really familiar with it. I have it.

8 Q. You have a copy of the layout?

9 A. Yes. On my computer.

10 Q. Uh-huh. Okay. Do you know whether the
11 layout of the turbines in the current configuration
12 for the wind project is the same as the layout of the
13 project at the time you conducted your study?

14 A. There have been different -- well, I
15 wouldn't say different but there were -- there was
16 some micro siting going on after my initial report in
17 November of 2018. I was asked to revise the report
18 according to the new revised turbine locations.

19 Q. So you updated your report after the
20 turbine layout was changed?

21 A. Yes.

22 Q. Has your report been updated since the
23 time the current layout for the turbines was set up?

24 A. I believe my report reflects the current
25 layout.

1 Q. Okay. During your study, did you provide
2 Firelands with any advice on whether the Company
3 could move any of its turbines in order to reduce
4 impacts on communications in the area?

5 A. Actually I don't recall.

6 Q. Did Firelands ever ask you to provide the
7 Company with advice on whether turbine locations
8 could be changed in order to reduce the potential
9 impact on communications?

10 A. Well, I'm not sure. Can you -- could you
11 be more specific?

12 Q. Uh-huh. Well, I'm not sure. I thought I
13 was being pretty specific but why don't we go to an
14 exhibit. If you would go to the document that has
15 been identified as LR Exhibit 13, maybe this document
16 will clarify my question. Let me know when you have
17 that in front of you.

18 (EXHIBIT MARKED FOR IDENTIFICATION.)

19 A. What's --

20 Q. It is LR Exhibit 13.

21 A. Okay. I don't know what that refers to.
22 Can you give me a name of the document?

23 Q. Yes. It's a copy of some pages from your
24 website. Your company's website.

25 A. Okay.

1 Q. Have you found it now?

2 A. I will get there in a minute. I am on
3 the homepage.

4 Q. Okay. If you would go to the heading for
5 Wind Energy Consulting.

6 A. Uh-huh.

7 Q. I would like to direct your attention to
8 the third paragraph under that heading which I
9 believe reads as follows, will you tell whether I am
10 reading correctly: "Microwave studies can be
11 conducted in one of two ways. If your turbine layout
12 is still in process, Evans Engineering will assist
13 you by performing a 'black out' study, which will
14 help you to determine where to place your turbines.
15 Or, if your layout is complete, we will provide
16 information on each turbine location to determine
17 mitigation measures." Did I read that language
18 correctly from your website?

19 A. Yes. That's correct.

20 Q. Okay. So my question has do with the
21 first of the two ways your website states your
22 company can assist its customers. That is, by
23 performing a "black out" study which will help them
24 to determine where to place the turbines. And my
25 question is whether you performed such a study for

1 the Emerson Creek wind project.

2 A. We did perform the study. And I believe
3 at that time when we were preparing our first --
4 well, when we were doing our studies for the first
5 time, there was a layout that they submitted to us to
6 the best of my recollection, it was not a "black out"
7 study, it was a study -- it was a study that would --
8 where the report would include the turbine locations.

9 And so we -- we took consideration of
10 that particular turbine layout and the first thing we
11 do as far as feedback to the developer would be, and
12 this is probably the most important thing that we
13 look at, is to make sure that the turbines are not in
14 the path of microwave lengths. If they are, we
15 would -- we would advise the developer to move that
16 location so that the turbine would be clear of the
17 microwave path that would be interfering.

18 Interfering with it. And I believe -- well, that's
19 my answer.

20 Q. Okay. So with regard to the Emerson
21 Creek wind project, did you provide any advice to the
22 developer on where to locate its turbines in order to
23 prevent interference with microwave communications?

24 A. Yes, I believe I did.

25 Q. And did the developer follow that advice

1 in all instances?

2 A. To the best of my knowledge, yes.

3 Q. Let's talk about T.V. reception for a few
4 moments. If you would go to your report submitted as
5 part of the Application, which I believe is Applicant
6 Exhibit 45; is that correct? Let me just
7 double-check.

8 A. Are you asking me?

9 Q. I will ask anybody who knows.

10 MR. SECREST: Mr. Van Kley, his report or
11 his testimony?

12 MR. VAN KLEY: His report which is in the
13 Application. I have it marked as Exhibit Q so maybe
14 that's the best way to find it.

15 A. I have my report in front of me. It's
16 January 14, 2019.

17 Q. Yeah. That's what I am looking for. Let
18 me give everybody else a few moments to find it on
19 their computers. We're looking for Exhibit Q of the
20 Application.

21 ALJ WILLIAMS: Of the PDF.

22 Q. Let's start on the second page of your
23 report, Exhibit Q, and look at the Introduction
24 first. I would like to refer you to the third
25 sentence of the third paragraph of that Introduction.

1 And specifically to the second sentence of that
2 paragraph. Let me know when you find that. It
3 starts with the words "The wind turbines."

4 A. Yes.

5 Q. That sentence states as follows: "The
6 wind turbines being considered for the project will
7 have a hub height of between 105 and 125 meters and a
8 maximum rotor diameter of 150 meters."

9 A. We're not reading from the same report
10 apparently because that particular sentence reads
11 differently.

12 ALJ WILLIAMS: Report dated January 14,
13 2019.

14 MR. VAN KLEY: Yeah. I am looking at
15 Exhibit Q. And that was introduced into evidence
16 with Mr. Pedder's testimony and it's the same one
17 that I am reading from.

18 ALJ WILLIAMS: The Bench has it.

19 MR. SECREST: Mr. Evans, are you perhaps
20 looking at the original report as opposed to the
21 revised?

22 THE WITNESS: I am looking at my report
23 from January 14, 2019.

24 Q. (By Mr. Van Kley) Did you have more than
25 one version of your report?

1 A. Yes, I did.

2 Q. Okay. And do you know whether you're
3 reading from the same version that is included in the
4 Application for the Emerson Creek wind project?

5 A. It would help me to know when that --
6 when the Application was filed.

7 MR. SECREST: Mr. Evans, what is the
8 actual date of the report that you are looking at
9 right now?

10 THE WITNESS: The title of the report is
11 "Engineering Report Concerning the Effects Upon FCC
12 Licensed RF Facilities Due to Construction of the
13 Emerson Creek Wind Energy Project in Erie, Huron, and
14 Seneca Counties, Ohio."

15 MR. SECREST: The version I am looking at
16 the title is exactly the same with the exception of
17 the last part. It just states Erie and Huron
18 Counties.

19 THE WITNESS: Okay.

20 ALJ WILLIAMS: Mr. Secrest, if we were in
21 person, you could potentially hand it to him. Is
22 there a way to send him an electronic copy?

23 MR. SECREST: Attorney Pirik is doing
24 that right now, your Honor.

25 ALJ WILLIAMS: Mr. Van Kley, you are fine

1 with that, I assume?

2 MR. VAN KLEY: Yes. I sure am.

3 THE WITNESS: Does your copy have a date
4 of the report as January 14, 2019?

5 MR. SECREST: It does.

6 THE WITNESS: Okay.

7 MR. VAN KLEY: The title you read to us
8 still had Seneca County in it so that appears to be
9 an earlier version of the report.

10 MR. SECREST: Mr. Evans, if you wouldn't
11 mind checking your e-mail, you should have it in
12 there.

13 THE WITNESS: Okay. Did you send it back
14 to me?

15 MR. SECREST: It came -- it will have
16 come from Christine Pirik.

17 THE WITNESS: Okay.

18 MR. SECREST: Mr. Van Kley, I believe I
19 can right now, if it would help, I believe I can
20 share my screen so that Mr. Evans can see what we are
21 looking at.

22 MR. VAN KLEY: Uh-huh. That would be
23 okay.

24 THE WITNESS: Or I could try to pull it
25 out. Do you know when and what day and what time --

1 ALJ WILLIAMS: Can you check your e-mail.
2 Ms. Pirik just sent it to your e-mail.

3 MR. SECREST: I misspoke. I cannot share
4 it from my screen. I do not have that function right
5 now.

6 ALJ WILLIAMS: While we're recognizing
7 this might be an issue for future exhibits, do you
8 have other ones that Ms. Pirik can get started
9 queuing up?

10 MR. VAN KLEY: Yes.

11 MS. KING: This is Kelli, the host. I am
12 looking for an option to enable screen sharing at the
13 moment.

14 ALJ WILLIAMS: I think we are going to be
15 okay, Kelli. Thank you.

16 MS. KING: Okay.

17 MR. VAN KLEY: We will also be discussing
18 with Mr. Evans' LR Exhibit 12 and the Joint
19 Stipulation. And I think that's it.

20 ALJ WILLIAMS: Ms. Pirik, if you could
21 please help us with putting those in as well.

22 Mr. Evans, is your e-mail working? Do
23 you have Ms. Pirik's last e-mail yet?

24 THE WITNESS: Her last e-mail?

25 ALJ WILLIAMS: She e-mailed you, in the

1 last 5 minutes, a copy as well so we could all be on
2 the same document.

3 MR. SECREST: Mr. Evans, the e-mail may
4 note that it is permitting access to a kiteworks
5 folder. Sorry. Ms. Pirik corrected me. It's
6 directly from her.

7 THE WITNESS: Okay. Okay.

8 ALJ WILLIAMS: You have opened the e-mail
9 and are able to see Exhibit LR12 -- LR13? Sorry.

10 THE WITNESS: Yeah, the engineering
11 report of January 14, 2019.

12 ALJ WILLIAMS: Okay. Mr. Van Kley, thank
13 you for your patience. Get those last two and we'll
14 proceed.

15 MR. VAN KLEY: Okay.

16 Q. (By Mr. Van Kley) So you now have in
17 front of you the engineering report that you prepared
18 which is part of the Application as Exhibit Q; is
19 that correct?

20 A. Yes, yeah. I have got it in front of me.

21 Q. Now, let's go back to the second page
22 then and take a look at the third paragraph on the
23 second page of your report.

24 A. Yes.

25 Q. And I would like to read to you the

1 second sentence of that paragraph. It states as
2 follows: "The wind turbines being considered for the
3 project will have a hub height of between 105 and
4 125 meters and a maximum rotor diameter of
5 150 meters." And then the next sentence states as
6 follows: "For the purposes of these studies, the
7 105-meter hub height and 150-meter rotor diameter
8 were assumed, since these dimensions would have the
9 most potential impact on the microwave paths in the
10 area." Did I read those sentences correctly?

11 A. Yes.

12 Q. So my question then to you is -- is why
13 is the 105-meter hub height considered to have the
14 most potential impact on the microwave paths in the
15 area?

16 A. Because typically the microwave -- the
17 microwave paths are -- when you measure the distance
18 from the ground to where the center of the micro beam
19 is, it's typically above -- it's typically above
20 50 meters. It -- so it's -- it's typically lower
21 than the hub height of a typical wind turbine.

22 Q. Why would a turbine of 105-meter hub
23 height have more potential impact than a taller wind
24 turbine?

25 A. Because -- because that would make it --

1 a higher hub height would make the rotor further
2 above the microwave beam.

3 Q. Uh-huh.

4 A. So that's the answer to that question.

5 Q. So typically how high above the ground
6 are the microwave paths usually located?

7 A. Well, there -- in any specific -- in any
8 specific elevations, that depends on the specific
9 requirements of the microwave operators.

10 Q. Uh-huh. In the area around or inside of
11 the project area for the Emerson Creek project, are
12 there any microwave paths that are higher than
13 105 meters?

14 A. Not to my recollection.

15 Q. And why is the 150-meter rotor diameter
16 considered to have the most potential impact on
17 microwave paths?

18 A. Well, I wouldn't say that the rotor would
19 have the most impact because the -- the spinning
20 blade might have some amount of impact if the sweep
21 of the blade is crossing the microwave beam.

22 Q. Uh-huh. To your recollection, is
23 150 meters the size of the largest rotor diameter for
24 the turbine models being considered by Firelands for
25 this project?

1 A. I believe that's -- that's correct. To
2 my recollection.

3 Q. Go to page 45 and I'm not sure why the
4 number on Exhibit Q has 5 on it, but just to be
5 clear, it would be the fourth page of your report.

6 A. Okay.

7 ALJ WILLIAMS: Attorney Van Kley, so on
8 the PDF, page 4 is actually labeled page 4.

9 MR. VAN KLEY: Yes. I'm looking at it.

10 Q. It should have the words starting "If the
11 Emerson Creek Wind Project should cause
12 disruptions...." 1, 2, 3 under that.

13 A. No. Page 4 of my report, it doesn't
14 start off that way.

15 Q. Okay. When you look at the pages of your
16 report, are you including the title page and the
17 numbers?

18 A. It should be at the bottom on the right.

19 Q. Uh-huh. Would you find the page that has
20 1, 2, 3 set out on it. 1 being "Relocation of the
21 household antenna to receive a better signal."

22 A. That would be in the T.V. assessment.

23 Q. Correct.

24 A. Okay.

25 ALJ WILLIAMS: Are we on Exhibit Q? I'm

1 sorry.

2 MR. VAN KLEY: Yes, yes, we are.

3 ALJ WILLIAMS: Roughly where should I be
4 within this exhibit?

5 MR. VAN KLEY: You should be on the
6 fourth PDF page.

7 ALJ WILLIAMS: That's labeled?

8 ALJ AGRANOFF: It's marked as page 45.

9 THE WITNESS: Yes. It's page 45. That's
10 my page 45.

11 ALJ WILLIAMS: On my PDF page, I have
12 "Important Note: Microwave path studies...."

13 MR. VAN KLEY: You know what, I think
14 what I did, I probably just printed out the pages I
15 had questions on. So that's my error. It should be
16 page 45.

17 THE WITNESS: Yes.

18 MR. SECREST: It is, yes.

19 MR. VAN KLEY: Okay.

20 MR. SECREST: True pagination 45.

21 MR. VAN KLEY: Yeah.

22 ALJ WILLIAMS: Okay. I'm with you now.

23 MR. VAN KLEY: Everybody is on the same
24 page after the confusion I caused?

25 ALJ WILLIAMS: Thank you, Attorney Van

1 Kley.

2 Q. (By Mr. Van Kley) Let's ask questions
3 about that page. I'm looking at the paragraph under
4 1, 2, and 3 which starts with the words "According to
5 this engineer's calculations."

6 A. Uh-huh.

7 Q. Okay. And it says there that "According
8 to this engineer's calculations, there are
9 approximately 7,780 households within an area most
10 likely to be affected (approximately 228 square
11 miles). It is conservatively estimated that 70
12 percent, or 5,446, of the households receive TV
13 programming primarily by satellite dish or cable."
14 Did I read those sentences, correctly?

15 A. Yes.

16 Q. In regard to the first sentence where you
17 refer to an area of approximately 228 miles -- or
18 square miles.

19 A. Yes.

20 Q. Do you know how many miles of land was
21 included in this mileage outside of the project area?

22 A. I don't know the square mileage but I can
23 tell you we extend -- we took the wind farm
24 footprint, the actual project area that Apex sent to
25 us, you know, which was designated the project area

1 and we -- we took that as the footprint and then we
2 extended out some distances beyond those project
3 limits.

4 Q. Uh-huh. And how many miles beyond the
5 project limits did you include within your study area
6 of 228 square miles?

7 A. That's up to 2.5 miles.

8 Q. How did you derive your estimate that
9 70 percent of the households receive T.V. programming
10 primarily by satellite dish or cable?

11 A. I relied on a statistic that -- the
12 statistic was that, in 2017, 70 percent of households
13 in the -- 73 percent of the households in the United
14 States were getting their T.V. programming from cable
15 and/or microwave dish.

16 Q. Who made these estimates?

17 A. That was from the NTIA, that's the
18 National Telecommunications and Information
19 Administration. It's a federal agency that assists
20 the executive branch of the government as far as
21 technology -- in technology issues.

22 Q. Uh-huh. Is that -- was this information
23 from a report prepared by the NTIA?

24 A. I suppose. And I'm not sure where I got
25 that. But in my notes that's -- that's what I have.

1 I wrote it down in my notes.

2 Q. Did the NTIA have any estimates about the
3 percentage of households that receive T.V.
4 programming in rural areas?

5 A. I don't -- I don't have any knowledge of
6 that, no.

7 Q. Uh-huh. Wouldn't you expect that that --
8 that the percentage of households not -- not having
9 satellite dish or cable would be higher in rural
10 areas?

11 MR. SECREST: Objection, speculation.

12 ALJ WILLIAMS: We'll let him answer.

13 A. Can you repeat the question?

14 Q. Yeah. Wouldn't you expect that the
15 percentage of households not having satellite dish or
16 cable would be higher in rural areas?

17 A. Well, I'm not sure, you know, I'm not
18 sure that would be the case. It might be higher. As
19 far as users of satellite dish. In places where
20 cable isn't available which is -- this happens to be
21 in the rural areas where cable doesn't extend up to.

22 Q. Yeah. Have you done any studies to
23 determine approximately the percentage of households
24 that do not have satellite dish or cable in rural
25 areas?

1 A. I have not.

2 Q. Have you done any surveys around the
3 project area for the Emerson Creek wind project to
4 find out how many of the households there utilize
5 satellite dish or cable?

6 A. No, I have not.

7 Q. So reading further into this paragraph
8 that we've been discussing, let's go to the third
9 sentence of that paragraph where you state: "This
10 leaves an estimated 2,334 households relying on
11 transmitted off-the-air TV signals." Did I read that
12 correctly?

13 A. Yes.

14 Q. That's also known as analogue?

15 A. I'm sorry?

16 Q. Is that reference to "off-the-air TV
17 signals" sometimes referred to as analogue?

18 A. Off-the-air could be -- could be analogue
19 but not anymore because T.V. stations are not
20 transmitting in analogue. They haven't been since
21 about 2009. But off-the-air can be -- it could be
22 digital. It could be any -- any video encoding
23 that's out there.

24 Q. When you refer to "off-the-air TV
25 signals," you are referring to signals other than

1 those that come from satellite dish or cable?

2 A. Yes. Yes.

3 Q. And then in the next sentence on this
4 page of Exhibit Q you state as follows: "Based on
5 the 10 percent criteria described previously, up to
6 233 TV receiving locations may be affected to varying
7 degrees in the worst-case." Did I read that
8 correctly?

9 A. Yes.

10 Q. So here you've taken 10 percent of the
11 estimated 2,334 households that rely on transmitted
12 off-the-air T.V. signals to come up with the figure
13 of 233 T.V. receiving locations that may be affected;
14 is that correct?

15 A. That's correct.

16 Q. Okay. Now, where did you come up with
17 the 10 percent criteria?

18 A. That's based on our experience in --
19 in -- in the development of wind projects over the
20 years. 10 percent would represent the worst-case
21 number, you know, it would be the wind projects
22 that -- where they would -- where there was the most
23 egregious level of T.V. interference. It's basically
24 the worst that was ever encountered. As far as T.V.
25 interference goes. And I think there was -- this

1 was -- well, it actually was back in the analogue
2 days, but we've never updated that figure.

3 Q. And how did you -- how did you -- what
4 were you doing that resulted in your study that came
5 up with this figure?

6 A. Well, we did -- our company did -- did
7 some measurements near wind farms. And so it was --
8 so this figure represents the top tier of anything
9 that we've encountered.

10 Q. Uh-huh. Have you been involved in
11 evaluating T.V. interference by operating wind
12 projects?

13 A. Yes, I have.

14 Q. For how many wind projects have you
15 conducted such an evaluation?

16 A. By myself?

17 Q. Well, you or your company.

18 A. Well, there were two in my years of doing
19 this.

20 Q. What were the names of those two wind
21 projects?

22 A. One of them was located in Maine. I
23 think it was called the Evergreen Wind Project. I'm
24 not sure. The other one was -- I can't say what
25 project that was because the developer -- I have a

1 confidentiality agreement with the developer of that
2 project.

3 Q. Okay. So with regard to the Maine
4 project, approximately what time frame in years --
5 the year did you conduct that evaluation?

6 A. I believe it was in -- around -- I want
7 to say around 2007.

8 Q. And when did you conduct the other
9 evaluation of the confidential wind farm?

10 A. That was in 2017.

11 Q. And when did you say again that analogue
12 was replaced?

13 A. It was -- analogue -- all high-powered
14 stations were required to -- for years they were
15 transmitting in both analogue and digital in order to
16 ensure a smooth transition to digital. And the FCC
17 ordered all high-powered T.V. stations to cease the
18 analogue transmission in 2009.

19 Q. So was it the evaluation of the wind farm
20 in Maine that produced the 10 percent figure that you
21 used to estimate the number of households that would
22 be -- that will have their T.V. programming affected?

23 A. Well, I can't say because of that
24 project. There were other projects that I was not
25 personally involved in.

1 Q. Okay. I'm sorry, I must have missed
2 something in your answer. Could you repeat that?

3 A. I said that's not necessarily -- that
4 10 percent is not necessarily applying to the Maine
5 project.

6 Q. Well, what was the percentage of
7 households affected by that project, if you know?

8 A. I don't know.

9 Q. You don't know?

10 A. No, I don't.

11 Q. Uh-huh. Well, what about the other
12 project that you did in 2017 for the confidential
13 client, what was the percentage of household --
14 households affected by that project if you know?

15 A. I want to say there were -- there were
16 16 -- there were complaints of T.V. disruption from
17 16 households.

18 Q. Uh-huh.

19 A. And I don't know what that comes out in
20 percentage-wise but -- but that was, what, about 16
21 complaints.

22 Q. Okay. So am I correctly understanding
23 then that this 10 percent estimate that you utilized
24 was not derived from either of these two studies?

25 A. No. Actually it's a fudge factor. Like

1 I said, it was the largest percentage that would have
2 ever been encountered at any time.

3 Q. Uh-huh.

4 A. So really it's a worst-case scenario.

5 Q. So that 10 percent figure did not come
6 from the two studies that you performed on the two
7 wind projects that we've been discussing?

8 A. It might have come from something else.
9 But this is -- this is the figure that we've used
10 since we started doing T.V. interference assessments.

11 Q. Well, if that figure didn't come from
12 either of these two projects, then where did it come
13 from?

14 A. I couldn't say. I don't know.

15 Q. Reading further down into this paragraph
16 on Exhibit Q, page 45, you state in the last sentence
17 of that paragraph that "Mitigation costs would be
18 approximately \$200 per location for an upgraded
19 outdoor antenna, for \$450 per year per location for a
20 satellite or cable subscription." Did I read that
21 correctly?

22 A. Yes.

23 Q. Where did you obtain these costs?

24 A. I looked them up. I don't know
25 exactly -- what I would do is check prices for a

1 high-quality outdoor antenna and I'm sure that's what
2 I based my \$200 on. And the per year for satellite
3 or cable, I think what -- what I might have done
4 there was to look up the cable subscription plans and
5 chose the, you know, the low tier subscription which
6 would, at minimum, carry the local channels.

7 Q. How can an upgraded outdoor antenna
8 improve T.V. reception if it is interfered with by a
9 wind turbine?

10 A. Because in most cases, why T.V. -- T.V.
11 reception is -- is disrupted is that there's not
12 enough available -- not enough available signal
13 being -- being pulled in by the antenna. If the
14 antenna is just like a rabbit ears on top of the T.V.
15 set, it's not going to do as good a job as a
16 high-quality antenna would do. So a high-quality
17 outdoor antenna would do a much better job of pulling
18 in -- pulling in the signal where the antenna is.
19 And if it's -- especially if it's outdoor, you know,
20 like on the roof or somewhere outdoors.

21 Q. If a wind turbine does interfere with
22 T.V. reception, how would that evidence itself on the
23 T.V.? On the T.V. picture?

24 A. When a -- when a T.V. channel is being
25 disrupted, that manifests -- that manifests itself by

1 the picture -- and we are talking about a digital
2 picture, manifests itself by a frozen picture, a
3 frozen picture with a tear or tears in it in the
4 picture, and often you'll have -- you have the
5 picture that's pixelated, you know, pixel -- you can
6 actually see little squares of picture. You could
7 actually see those little squares. And ultimately a
8 video failure, video failure would -- would end up as
9 a blank screen or a blue picture, a blue screen.

10 Q. Go to page 43 of your report.

11 A. Okay.

12 Q. And I would like to direct your attention
13 to the second paragraph under the heading "4.1 TV
14 Broadcast Facilities."

15 A. Yes.

16 Q. And let's go to the fifth line of that
17 paragraph starting with the word "Unusual."

18 A. "Usually"?

19 Q. Or "Usually," yes.

20 A. Okay.

21 Q. That sentence states: "Usually, a rule
22 of thumb is that approximately 10 percent of the
23 receiver locations are affected to some extent within
24 three miles of a large turbine when the -- when the
25 turbine is between the TV station and the receiver."

1 Did I read that correctly?

2 A. That's correct.

3 Q. Okay. Now, I thought that earlier in
4 your testimony you said that you went out to a
5 distance of 2-1/2 miles from the project boundary in
6 order to estimate the number of households that could
7 be affected by interference with their T.V.; is that
8 correct?

9 A. That's correct.

10 Q. So if you went 3 miles beyond the project
11 area, would that increase the number of households
12 that would be potentially affected by interference
13 with the T.V. reception?

14 A. Well, I think I might have overestimated
15 when -- well, this appears out of reports, all of our
16 reports really, and -- up to 3 miles but lately,
17 depending on the direction of the station --

18 ALJ WILLIAMS: I am sure you are having
19 the same issue I am having, Mr. Evans, you are
20 breaking up a little bit. Could you restate that
21 answer.

22 A. Okay. That's the language that existed
23 in our reports for years and years and I never gave
24 thought to changing it. But when I -- when I looked
25 at this case, particular project, I thought that

1 2-1/2 half miles was a good number to use based on
2 the -- the directions from the station to the
3 project.

4 Q. Why would that make any difference with
5 respect to the distance beyond the project area that
6 could be -- that could have their T.V. reception
7 interfered with?

8 A. Well, in some cases the households are --
9 the project area -- or the populations that you are
10 considering would not -- would not be exactly in line
11 between the station and the -- and the receipt of the
12 transmission. In other words, turbines would not be
13 in exactly colinear or on the line with the
14 transmitter and the receivers.

15 Q. How many transmitters of these T.V.
16 communications are there in the area that's served
17 around the project area?

18 A. Can you repeat that?

19 Q. Yeah. How many sources of T.V. signals
20 are there in the -- in this area?

21 A. The T.V. --

22 ALJ WILLIAMS: Mr. Evans, I'm sorry.
23 It's inaudible now. I don't know if there is a way
24 to boost your signal but I didn't get any of that
25 answer.

1 THE WITNESS: Well, I just started
2 talking. I wasn't in the middle of a sentence. Can
3 you hear me --

4 ALJ WILLIAMS: Yes.

5 THE WITNESS: -- right now? Okay. I
6 will lean further into the phone here.

7 A. On page 44 is a list of stations which
8 we've found that are -- which we found that are
9 predicted to cover some or all of the project and
10 beyond. And beyond the project, say a couple miles
11 or so. And they are listed on page 44.

12 Q. Those are listed in Table 4?

13 A. Table 4, yes.

14 Q. And those T.V. signals come to the
15 project area from a variety of directions; isn't that
16 correct?

17 A. Mainly from two directions. From the
18 east where the -- where the Cleveland T.V. stations
19 are located and -- and from the -- and from -- and
20 stations from the northwest in the Toledo area also
21 serve the area.

22 Q. Well, you also have T.V. stations in
23 Mansfield; isn't that correct?

24 A. Yes.

25 Q. And that's from the south of the project

1 area, isn't it?

2 A. That's correct.

3 Q. And Canton is from the southeast of the
4 project area?

5 A. Yes. East of the project area.

6 Q. So you have T.V. signals coming from
7 three directions then, correct?

8 A. Yes.

9 Q. So are you saying then that the turbines
10 that are going to be erected are not in the direct
11 line of the T.V. signal from any of the stations to
12 the people using those T.V. stations?

13 A. Well, I'm not sure I understand that
14 question. But -- but we -- we -- we extended the --
15 we extended the line a maximum of 2-1/2 and that
16 seems to be the -- the most sort of prediction when
17 we analyzed this.

18 Q. Well, I thought I had heard you say that
19 you used a distance of 2-1/2 miles instead of 3 miles
20 because you didn't believe the turbines were going to
21 be located in a direct line between the T.V. signal
22 and the household receiving it. Am I
23 misunderstanding what you are saying?

24 THE WITNESS: Could I request a break,
25 please?

1 ALJ WILLIAMS: Okay. 5 minutes.

2 MR. VAN KLEY: If you want to, we can
3 take a lunch break. I have maybe 15 minutes of
4 questions left at this point.

5 ALJ WILLIAMS: Okay. If everybody is
6 okay with that, we will break until 1:15.

7 MR. SECREST: Thank you. Well, thank
8 you.

9 ALJ WILLIAMS: We are off the record.
10 Thank you.

11 (Thereupon, at 12:07 p.m., a lunch recess
12 was taken.)

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1 Wednesday Afternoon Session,
2 October 7, 2020.

3 - - -

4 ALJ WILLIAMS: We'll go ahead and go back
5 on the record.

6 Mr. Van Kley, we'll turn this back over
7 to you for your cross.

8 MR. VAN KLEY: All right. Thank you.

9 - - -

10 B. BENJAMIN EVANS

11 being previously duly sworn, as prescribed by law,
12 was examined and testified further as follows:

13 CROSS-EXAMINATION (Continued)

14 By Mr. Van Kley:

15 Q. Mr. Evans, let's go back to your
16 testimony that has been marked as Applicant
17 Exhibit 44. And please go to page 4 of that
18 testimony.

19 A. Yeah. My computer is very slow. I
20 apologize. I'm having a tough time.

21 Q. No problems. Just let us know when you
22 get there.

23 A. Okay. What was that page number?

24 Q. 4. We're going to go to Question and
25 Answer No. 9.

1 A. Oh, I'm sorry. Is this my testimony?

2 Q. Yes.

3 A. Okay. Okay.

4 Q. All right. Are you there?

5 A. Yes.

6 Q. Okay. Good. All right. In the first
7 paragraph of your answer to Question 9 of your
8 testimony, in the first sentence, you state that you
9 completed some research on RTK systems in 2017. Do
10 you see that?

11 A. Yes.

12 Q. All right. And RTK system is -- is an
13 acronym for real-time kinematic GPS locator system?

14 A. Yes.

15 Q. And what is that?

16 A. I'm sorry. Can you repeat the question?

17 Q. Yes. What is an RTK system?

18 A. It -- it's a system in which that enables
19 farm equipment to do seed and other farm activities
20 in a very accurate way. You have to be able to track
21 the vehicle with -- within an inch of accuracy. A
22 normal GPS is not that accurate. It's only accurate
23 to within 15 feet, I think. What -- what the RTK
24 system is it also integrates into the system the
25 differential GPS correct -- GPS signals which are

1 generated by the system which, in effect, provides
2 air correction in the location to get -- to get the
3 accuracy that farm equipment needs to have.

4 Q. And what kinds of farming activities
5 utilize RTK systems?

6 A. I'm not really familiar with farming
7 equipment. I would think vehicles, harvesters, any
8 equipment that does seeding and such.

9 Q. Describe the research that you did on RTK
10 systems in 2017.

11 A. I -- I went online and read from a few
12 websites. In fact, particularly there was
13 information in the John Deere website. They are
14 vendors of -- they are primary vendors of the RTK
15 systems. And I went on other websites to read about
16 RTK, but I don't recall what those were.

17 Q. Why do you refer to that research in your
18 testimony and in Answer 9?

19 A. Repeat that, please.

20 Q. Why do you refer to that research in your
21 answer to Question 9 of your testimony?

22 A. Because I was made aware that there was a
23 farmer who lives in the extreme northern part of the
24 project area that had a GPS system.

25 Q. Uh-huh. Is that farmer's name Gerard

1 Wensink?

2 A. Yes.

3 Q. What, if any, information did you find in
4 your research about whether wind turbines can
5 interfere with RTK systems?

6 A. I wasn't able -- I wasn't able to find
7 anything which said that RTK systems were adversely
8 affected by wind turbines. I did read where they --
9 if there should be some sort of interruption of the
10 vehicle's GPS tracking device, that the -- that the
11 vehicle can continue to do its activities for a
12 period of 15 minutes, whereas, meaning that they can
13 continue on for 15 minutes and still be accurate in
14 its tracking which in most cases I would think is
15 enough time for the -- for the obstruction to pass by
16 as the vehicle is traveling.

17 Q. Did you find any research that
18 specifically stated that wind turbines will not cause
19 problems with the use of RTK systems?

20 A. I didn't find anything that explicitly
21 stated it that way, no.

22 Q. What kind of communication pathway does
23 an RTK system use? Is it a microwave, or is it
24 something else?

25 A. The base station, if I understand

1 correctly, is the 450 and 900 megahertz bands.

2 Q. And if there is interference by the wind
3 turbine, would that be caused by the fact that the
4 wind turbine blades are located in between the user
5 of the RTK system and the RTK system itself?

6 A. You mean between the vehicle with the
7 system onboard and the base station?

8 Q. Yes, correct.

9 A. If there -- if there is a problem, it's
10 most likely that, yes.

11 Q. Uh-huh. Okay. Have you seen a farmer
12 working a field with planting or harvesting
13 equipment?

14 A. I don't recall that I have.

15 Q. Well, are you aware that typically in
16 working a farm field that a farmer will drive
17 equipment from one end of the field to another and
18 then back again and then back again, back and forth
19 across the field?

20 A. That seems to be a reasonable way to do
21 it, I would think.

22 Q. All right. So if the turbine's blades
23 are located between that field and the RTK base, then
24 the farmer's equipment will not be traveling out of
25 the range of the turbine blades, would it?

1 A. It depends which direction the vehicle is
2 traveling in relation to the direction of where the
3 turbine is.

4 Q. Uh-huh. Well, if the -- if the farmer's
5 equipment is traveling in a vertical position between
6 the base of the RTK system and the -- let me start
7 that over.

8 If the farmer's equipment is traveling
9 vertically away from the turbine instead of
10 horizontally across the turbine, then it's most
11 likely that the equipment would be -- will be
12 traveling away from the interference; isn't that
13 correct?

14 A. I think what you are trying to say is if
15 the farmer is -- let's say the farmer is traveling in
16 a north-south direction and -- and the turbine and
17 the base station and the farmer are all along a line
18 in north and south. Yeah. There's a potential for a
19 problem but it's -- there are a lot of variables
20 involved. What the elevation is at each point, the
21 height of the base station antenna.

22 It all depends on -- you know, the base
23 station has to have complete line of sight to the
24 vehicle or should have line of sight. It -- in order
25 to have a -- in order to be assured a clear signal.

1 Sometimes -- sometimes that line of sight is
2 temporarily blocked. Sometimes there is something
3 there that would not be moved out of the way because
4 of a particular direction the farmer is going, the
5 farmer with his vehicle is going. And it's not
6 always the case that an obstruction between the base
7 station and the end user would have an interference
8 problem. Some radio systems do overcome very minor
9 obstructions.

10 Q. Did you visit the project area?

11 A. No, I did not.

12 Q. So you haven't seen the farm fields in
13 the area of the project that's been proposed?

14 A. No, I don't know where the fields are
15 located.

16 Q. And you wouldn't have any idea how long
17 it would take a farmer to plant a field of the sizes
18 that are contained in the vicinity of the project
19 area?

20 A. How long it would take a farmer to seed
21 the farm, the fields?

22 Q. Yeah. How long would it take the farmer
23 to seed a particular field of the size that is -- is
24 found in the area of the project?

25 A. I don't know.

1 Q. How about harvesting, do you know how
2 long it would take to harvest a typical field in that
3 area?

4 A. No, I don't.

5 Q. Go to the second paragraph of Answer 9 on
6 page 4 of your testimony marked as Exhibit 44. Let's
7 look at the first sentence of that paragraph starting
8 with the word "Specifically."

9 A. Yes.

10 Q. That sentence states as follows:
11 "Specifically, because GPS receivers can generally
12 lock onto up to 10 satellites in different directions
13 at any one time when the sky is fairly unobstructed,
14 the acquisition of GPS signals should be unencumbered
15 by wind turbines." Did I read that correctly?

16 A. Yes, that's correct.

17 Q. Now, in this sentence, are you referring
18 to the RTK system -- RTK systems that are used by
19 farmers when you talk --

20 A. I'm -- in that sentence I'm only
21 referring to the GPS signals from the satellite.

22 Q. So you're not talking about RTK systems
23 there.

24 A. Well, RTK systems do rely on GPS signals
25 from the GPS satellite constellation.

1 Q. But they -- those GPS signals come only
2 out of the base with RTK system?

3 A. They use -- RTK systems use the
4 positional information from the GPS satellites and
5 also the RTK system itself calculates the error
6 between the -- what's the positional information from
7 the satellite and the actual position that -- that a
8 user is located in.

9 So -- so what -- what makes RTK unique --
10 unique is that it corrects the error that you get off
11 of the GPS satellites because GPS signals come from
12 satellites that are like 10,000 miles above the earth
13 but when they go through the atmosphere, those
14 signals are slightly bent and that results in the
15 positional error that you get with raw GPS data and
16 the error being like 15 feet or so.

17 What the RTK system is doing is using its
18 computational powers to calculate the positional
19 error. And -- and make it so that the -- that the
20 farm vehicle is on track within an inch of accuracy.

21 Q. I'm not sure that I understand quite how
22 the RTK systems work relative to the satellites so
23 maybe you could explain that a little bit more. In
24 particular, could you explain the relationship
25 between the signal that the RTK base receives from

1 the satellite versus the signal that the RTK base
2 sends to the farm equipment?

3 A. The base station has like an antenna
4 which is kind of straight like a plate. It receives
5 the signal from the satellites, the positional
6 information from the satellites. When you establish
7 a permanent base station, you have to have it
8 accurately surveyed by a surveyor so that you know
9 exactly where that -- where that antenna is, the base
10 station antenna is.

11 What -- what the system does is that it
12 compares -- the base station compares the positional
13 information from the satellites with the known
14 position of the base station which is accurately --
15 which was accurately determined. It calculates the
16 signal delay between those two positions, the
17 uncorrected position and the corrected position, and
18 it calculates that positional error and in real time
19 and it sends it to the end user driving the farm
20 vehicle and it does this for every single satellite
21 that the base station sees in the sky. So it
22 transmits the correctional information to the end
23 user in the vehicle.

24 Q. Okay. So let me make sure now I
25 understand this accurately. The base station

1 receives a signal from the satellite in the sky; is
2 that correct?

3 A. Yes.

4 Q. Okay. And then does the RTK base station
5 send a signal to the farmer's equipment?

6 A. Correct.

7 Q. And does the RTK base station send that
8 signal to the equipment by bouncing it off the
9 satellite or is it sent directly between the base
10 station and the equipment?

11 A. It's sent by radio signal from the base
12 station to the vehicle. Farm vehicle. The farm
13 vehicle also has a GPS antenna onboard as well as an
14 antenna to receive the signals from the base station
15 because -- because the vehicle needs both -- both
16 transmissions to establish its position accurately.

17 Q. Let's go to page 5 of your testimony. I
18 would like to talk about lines 4 through 9 on that
19 page.

20 A. Okay. This point -- this is Question and
21 Answer No. 9?

22 Q. Yeah, yes, it would be the last paragraph
23 of Answer No. 9.

24 A. Yes.

25 Q. Let's look at the last sentence of that

1 paragraph.

2 A. Yes.

3 Q. There you've stated as follows: "If the
4 field is in the coverage area of another existing
5 network base station, the solution could be as simple
6 as switching the mobile unit to the other base
7 station."

8 A. Yes.

9 Q. So with respect to another existing
10 network base station that you're referring to in this
11 sentence, who would be the owner of that base
12 station?

13 A. The other base station?

14 Q. Yeah.

15 A. Some other farmer in the area or a co-op.

16 Q. Have you done any investigation to
17 determine how many RTK base stations are in existence
18 in the project area or within 3 miles of the project
19 area?

20 A. I have not. Could I just add something
21 here?

22 Q. Yeah. Sure. Go ahead.

23 A. Okay. Switching to a different base
24 station is not the only possible solution. I -- it
25 was supposed to be in my testimony but I -- I

1 inadvertently, I guess, omitted it.

2 There are a couple ways you can get
3 around any possible disruption of the RTK system.
4 One is to -- the set-up that Mr. Wensink has, he has,
5 I believe, his base station on top of a grain
6 elevator or a grain leg, I think, and it's up to --
7 it's something like 100 or so feet up in the air.

8 One -- one method of mitigating any
9 potential disruption would be to increase that height
10 or build a taller structure to get more saturation
11 signal down into the farm field.

12 Another way would be to set up a repeater
13 station and that's in my testimony. Set up a
14 repeater station which takes -- if there is an
15 obstruction directly between the base station and the
16 farm vehicle, you might be able to set up a repeater
17 station at a -- at a location that has a clear path
18 from the repeater to the --

19 ALJ WILLIAMS: Mr. Evans, we are losing
20 your audio. We lost your audio. We lost part of
21 that response.

22 A. For example, the -- the repeater -- what
23 a repeater does is it takes the signal from the base
24 station and sends it to the farm vehicle. I said
25 that before. I'm repeating myself. So if that

1 repeater base station is set up on like a -- like a
2 small rise in the -- in the terrain, it -- it sort of
3 bends the signal around, around the obstruction, if
4 you will. It takes the signals from the base
5 station, they're operating on one particular
6 frequency and usually what the repeater does is send
7 it to the data board to the RTK system in the vehicle
8 on another frequency, so.

9 Q. Going back to your mention of the
10 alternative to build a higher base station. Would
11 doing that subject to -- subject the base station to
12 a more likelihood of damage from winds?

13 MR. SECREST: Objection, speculation.

14 ALJ WILLIAMS: I'll allow him to answer.

15 A. Are you talking about putting the base
16 station on a taller structure?

17 Q. Yeah. I'm talking about your observation
18 that Mr. Wensink's base station could be built to
19 a -- a higher elevation as a potential way of
20 avoiding interference from the turbines. And my
21 question is whether doing that would subject the
22 system to a greater likelihood of damage from wind.

23 A. I'm not a structural -- that's in the
24 purview of a structural engineer which I am not.

25 Q. Directing your attention back to page 5

1 of your testimony in the last paragraph of Answer 9.
2 We'll go back to that last sentence for a moment.
3 There it's stated that another existing network base
4 station could be used if it's in the same coverage
5 area, right?

6 A. That's correct.

7 Q. How much territory is encompassed in a
8 coverage area for an RTK system?

9 A. I don't know. The -- the vendors of the
10 system claim 8 miles but I have no way of knowing if
11 that's true or not.

12 Q. So you don't know how close a second base
13 station would have to be in order to utilize it
14 during the time that a turbine might be interfering
15 with RTK signals?

16 A. No, I don't know how close they would
17 have to be. It depends on -- well, not -- not all
18 base stations necessarily cover the same area. There
19 could be variations from one base station to another.
20 It depends on how high the antenna is and how much
21 power they are running.

22 Q. Let's go to the Joint Stipulation and
23 Recommendation which I believe has been marked as
24 Joint Exhibit 1. Do you have that in front of you?

25 A. Yes, I do.

1 Q. Go to page 8 of that document.

2 A. Okay.

3 Q. I would like to talk about paragraph 37a
4 through d.

5 A. Okay.

6 Q. And you can see that there's a reference
7 to a microwave path study in the introductory
8 paragraph of paragraph 37, correct?

9 A. Yes.

10 Q. Does a microwave path study address
11 potential interference with RTK systems?

12 A. No, it does not. As far as I know, an
13 RTK does not use microwave lengths or normally
14 doesn't use it.

15 Q. So would there be any part of paragraph
16 37 or subparts A through D of paragraph 37 that apply
17 to RTK systems?

18 A. I don't think so.

19 ALJ WILLIAMS: Can we get that answer
20 again? It broke up.

21 THE WITNESS: I don't think -- I don't
22 think RTK systems are applied to this 37.

23 ALJ WILLIAMS: Thank you.

24 Q. (By Mr. Van Kley) Okay. Do you need to
25 refresh your memory of what paragraph 37 states in

1 order to answer that question with certainty?

2 A. I'll read it over.

3 Q. Why don't you take a brief look at it.
4 Let me know when you have satisfied yourself as to
5 whether paragraph 37 applies to RTK systems.

6 A. Our study addressed the fixed microwave
7 systems, meaning you have a fixed point on one side,
8 on one end, and a fixed point on the other end and --
9 and they transmit back and forth only to those
10 endpoints. And that's the study we did in preparing
11 that report. As far as that type of system, it only
12 refers to fixed microwave systems. You have two --
13 two discrete end points communicating with each other
14 in a very -- very discrete beam path.

15 So -- so I don't think this paragraph 37
16 addresses RTK systems. RTK is -- basically -- it's
17 basically a base station and -- and the -- it's like
18 a mobile base system because the other end of the
19 communication path is -- is -- by design and by
20 definition it's like a mobile operation.

21 Q. All right. So your conclusion continues
22 to be then that you do not believe that paragraph 37
23 including subparts A, B, C, and D address RTK
24 systems, correct?

25 A. Correct.

1 Q. All right. Let's go to paragraph 38 on
2 page 9 of the Stipulation. Is there anything in this
3 condition 38 that addresses RTK systems?

4 A. It could possibly be covered under -- it
5 says all -- all existing licensed microwave paths and
6 licensed communication systems. You know, I am not a
7 lawyer. My interpretation could be completely wrong
8 but RTK might be included -- you could possibly,
9 possibly consider 38 to cover RTK.

10 Q. Well, RTK does not utilize microwave
11 paths, correct?

12 A. To my knowledge, no.

13 Q. Okay.

14 ALJ WILLIAMS: Say again, I'm sorry.

15 THE WITNESS: No, it does not.

16 Q. All right -- go ahead. Okay. So the
17 term "licensed microwave paths" in paragraph 38 does
18 not apply to RT -- RTK systems, correct?

19 A. Correct.

20 Q. Do you know --

21 A. It's fixed at both ends which does not
22 describe RTK.

23 Q. Okay. Do you know whether an RTK system
24 is a licensed communication system?

25 A. It can be, yes.

1 Q. Is it always licensed?

2 MR. SECREST: Objection. Asked and
3 answered.

4 ALJ WILLIAMS: We'll let him explain.

5 A. I don't know about always. It could be.
6 For all I know it could be used on the -- on an
7 unlicensed band.

8 Q. Do you happen to know whether
9 Mr. Wensink's RTK system is a licensed communication
10 system?

11 A. Yes. His base station is -- is licensed.
12 He does have an FCC license for that facility.

13 Q. Look at the last sentence of condition 38
14 on page 9 of the Joint Stipulation, please.

15 A. Yes.

16 Q. That sentence reads as follows: "If
17 interference with an omni-directional or multi-point
18 system is observed after construction, mitigation
19 would be required only for affected receptors." Can
20 you interpret that sentence for me?

21 A. I -- the first part of the sentence but
22 I -- I don't know what the meaning is of "affected
23 receptors."

24 Q. What's the meaning of the first part of
25 the sentence?

1 A. Well, omni-directional stations or
2 multi-point systems is -- it's -- is a radio station
3 that's serving several points at a time.
4 Omni-directional means the -- the coverage is
5 approximately equal in all directions from the
6 transmitter. A multi-point system, you have a main
7 site and points that -- serves a discrete number of
8 points that you want to communicate with.

9 Q. So does this sentence apply only to radio
10 stations then?

11 A. No. It would apply to any station
12 that's -- that transmits in all directions or in the
13 three directions.

14 MR. VAN KLEY: All right. Mr. Evans, I
15 think I have run out of questions for you at the
16 present time. So we will turn it back over to His
17 Honor.

18 ALJ WILLIAMS: Attorney Secrest, before I
19 let you redirect, I want to try to clarify my
20 understanding of a couple of these issues. Maybe it
21 will streamline your redirect or maybe it will help
22 guide you in terms of some questions the Bench still
23 has.

24 - - -
25

EXAMINATION

By ALJ Williams:

Q. Mr. Evans, you described at one point, I believe in my notes, the range of these RTK systems. I think you indicated it was 8 miles or up to 8 miles; is that correct?

A. I may not remember that accurately but, yes, that's what I had said.

Q. So you're not sure if it's 8 miles or what distance it might be?

A. I'm not sure.

Q. Okay. Now, you described these base stations and the ability to potentially interface multiple base stations across one or more farmers' needs. Are these base stations purchased by individual farmers? Are they subscription services? Tell me about a base station and how a farmer comes to access that.

A. Well, a farmer can set up their own base station and own it and use it. A farmer can also subscribe to a service, to this RTK service, from someone who has built their own system.

Q. How much would a base station transmitter cost?

A. I don't know that.

1 Q. Do you have an approximate? Is it 5,000?
2 500,000? 50? Do you have any idea?

3 A. 50,000, no. It might be in the ballpark.

4 Q. How about a subscription service, how
5 much might that run a farmer?

6 A. I have no idea.

7 Q. You described the ability to potentially
8 have farmers share data from these base stations.
9 Does that mean you would have to communicate with
10 your neighboring farmer, "Hey, I want to borrow a
11 signal from your base station"? How would they
12 coordinate that?

13 A. I'm -- I don't know.

14 Q. What's the approximate dimensions and
15 weight of a base station if I'm imagining it at some
16 point in the air? How much does it weigh? How big
17 is it?

18 A. Just the antenna system?

19 Q. The base station I think is what you were
20 testifying as to.

21 A. Okay. I don't know the weight of the
22 components of the system.

23 Q. That's all the questions I have on the
24 base station, the RTK system.

25 I had a question on the television signal

1 testimony from earlier. I believe your testimony was
2 that you modeled this based on the project area plus
3 2.5 miles, but otherwise in your testimony or your
4 report I believe there is reference to the potential
5 of up to 3 miles. Would 3 miles be a more
6 appropriate buffer zone around the project area?

7 A. Well, I wouldn't say that one is more
8 appropriate than the other.

9 Q. Your testimony, I believe in your report,
10 referenced 3 miles as the standard that you would
11 generally employ; is that correct?

12 A. That's right.

13 Q. If your report indicated that 3 miles is
14 the standard you usually work from, why would it be
15 lesser in regard to this project?

16 A. It's not necessarily a standard. It's
17 what -- you know, what we estimate.

18 Q. Why would the estimate be different in
19 regard to this specific project?

20 A. Well, it -- during the break I went back
21 and looked at my Google map with the turbines plotted
22 on it and the buffer zone as I explained before, the
23 buffer zone up to 2.5 miles from the project boundary
24 but that assumes that the entire area within the --
25 within the boundary is populated by turbines which is

1 not in most cases -- well, in almost all cases not
2 true.

3 But in this particular project, I looked
4 at the -- at my Google map with the turbine layout
5 and the original project boundary that was given to
6 me by Apex. And there are no turbines that would --
7 that are right on the border, right on the border of
8 the turbine project area. The ones that are close
9 are up to half a mile away inside the border.

10 Q. Let me clarify. So the ones that are --
11 I'm sorry because I think you are answering my
12 question now. The turbines that are close to the
13 edge of the project area are more than a half mile
14 away such that the half mile that they are inside the
15 area plus the 2-1/2 miles of buffer that you
16 estimated gets you to the 3 miles; is that what you
17 are trying to say?

18 A. Yes, that's what I am trying to say. A
19 few might be .4 miles away but generally close to a
20 half a mile.

21 Q. So might some be .3 miles away?

22 A. Maybe one.

23 Q. Last question I have. You talked about
24 the research you have done regarding T.V.
25 interference. I know there was the one somewhat

1 older project from Maine that dealt with digital and
2 analogue and there was a 2017 study that was done
3 confidentially. You indicated you found interference
4 with 16 -- potential interference with 16 consumers,
5 for lack of a better term, in that project. How many
6 consumers were in that project area?

7 A. I'm sorry, how many consumers?

8 Q. Yeah. You said there was interference
9 with 16 consumers. I want to know what the
10 denominator to that equation is.

11 A. Okay. The context of your question is
12 not quite right. I did not find 16 instances of
13 interference. There was reported cases.

14 Q. 16 complaints is what my notes say.

15 A. 16 complaints, yes.

16 Q. Out of how many consumers were in that
17 area?

18 A. I don't know. I don't think I calculated
19 that.

20 Q. You don't have any idea if it was roughly
21 a hundred, roughly a thousand? You don't have any
22 recollection?

23 A. In the entire --

24 Q. We have 16 complaints out of a project
25 area that you did research on, I am trying to figure

1 out how many consumers were impacted. I am trying to
2 create a ratio to figure out the veracity of the
3 percentage.

4 A. Yeah, I don't -- I don't -- I don't think
5 I calculated that.

6 Q. No. My question is, how many consumers
7 were in the project area?

8 A. Well, I might have an answer to your
9 question if you give me a few minutes to look up the
10 document which might have that information. Am I
11 allowed to?

12 Q. Of course.

13 A. Okay. Okay. It turns out I did do a
14 previous assessment and I did find that I calculated
15 the potential -- in the designated area, there were
16 970 house -- households in the project area.

17 Q. So 16 complaints, which it may be not all
18 of those were verified, out of 970, would be roughly
19 is 1.5 percent. Well below the 10 percent you had
20 approximated.

21 A. Yeah.

22 ALJ WILLIAMS: That's all the questions I
23 have.

24 Attorney Secrest, redirect.

25 MR. SECREST: Thank you, your Honor.

RECROSS-EXAMINATION

By Mr. Van Kley:

Q. Mr. Evans, with regard to the project for which 16 complaints were received about T.V. reception, can you describe the process that was used there to learn about those complaints?

A. Yes. I was actually hired by the developer to go out and do an assessment which included the taking of -- of signal measurements from the T.V -- from the T.V. stations. The nearest T.V. stations.

This -- this is not a perfect -- what we did is not a perfect study in the sense that when you do a study like this, when you actually go out and measure T.V. signals and then you want to know their -- how the turbines affected those T.V. signals, you -- you would first take measurements before the turbines go up, and then afterwards you go to those same measurement locations after the turbines are up and operating, and then you compare the after measurements to the before measurements.

In this particular project that I was hired to take a look at, we did not have that luxury. We didn't have the before measurements. The turbines were already up when we did the assessment, did

1 the -- when we did the on-site assessment. However,
2 I managed to get the operator to turn off some of the
3 wind turbines and then do the measurements with the
4 turbines in the nonrotating mode and turn them on
5 again and then I would take measurements which
6 represents when the turbines are operating and made
7 that comparison.

8 Q. So to who were the 16 complaints about
9 T.V. reception made? Were they made to you or
10 somebody else?

11 A. It -- they were directed to the
12 developer. And the developer sent that information
13 to me.

14 Q. Okay.

15 A. Where they were located.

16 Q. Did you make any efforts to find out or
17 did you make any effort to ask the other households
18 in the area whether they also had T.V. reception
19 problems?

20 A. No. I didn't interact with the people
21 living there.

22 Q. Do you know whether the operator or owner
23 of the wind project did that?

24 A. I'm not aware if they did or not.

25 MR. VAN KLEY: Okay. All right. I have

1 no further questions.

2 ALJ WILLIAMS: Attorney Secrest, any more
3 redirect?

4 MR. SECREST: No, your Honor. Thank you.

5 ALJ WILLIAMS: Do you want to take up the
6 exhibits?

7 MR. SECREST: Please, your Honor. May
8 the Applicant move for the admission of Applicant's
9 Exhibit 44.

10 ALJ WILLIAMS: Attorney Van Kley?

11 MR. VAN KLEY: No objection.

12 ALJ WILLIAMS: Anyone else? Okay.
13 Applicant Exhibit 44 will be admitted.

14 (EXHIBIT ADMITTED INTO EVIDENCE.)

15 ALJ WILLIAMS: Mr. Evans, thank you for
16 your testimony.

17 THE WITNESS: You're welcome.

18 ALJ WILLIAMS: It's about 2:15. Do you
19 guys want to take a quick break and then put on our
20 next witness?

21 MR. VAN KLEY: Sure. Could I move my
22 exhibit first?

23 ALJ WILLIAMS: Oh, I am sorry, Attorney
24 Van Kley.

25 MR. VAN KLEY: I would like to admit LR

1 Exhibit 13.

2 ALJ WILLIAMS: Any objections?

3 MR. SECREST: No. No objection, your
4 Honor.

5 ALJ WILLIAMS: It will be deemed
6 admitted.

7 (EXHIBIT ADMITTED INTO EVIDENCE.)

8 ALJ WILLIAMS: I apologize, Mr. Van Kley.

9 MR. VAN KLEY: No problem.

10 ALJ WILLIAMS: Any other matters before
11 we all scatter? Why don't we come back at 2:30 with
12 Witness Bellamy; is that okay, Judge Agranoff?

13 We will see everyone at 2:30. We are off
14 the record.

15 (Recess taken.)

16 ALJ AGRANOFF: Let's go back on the
17 record at this time.

18 And, Mr. Margard, are you prepared to
19 call your first witness?

20 MR. MARGARD: I am. Thank you, your
21 Honor. Staff would call Mr. Mark Bellamy.

22 ALJ AGRANOFF: If you could please have
23 Mr. Bellamy elevated to panelist status, please.

24 MS. KING: Mr. Bellamy, you have been
25 elevated to panelist. We can see and hear you.

1 Thank you.

2 THE WITNESS: Okay. Thank you.

3 ALJ AGRANOFF: Hello, Mr. Bellamy.

4 THE WITNESS: Hello.

5 ALJ AGRANOFF: If you could please raise
6 your right hand.

7 (Witness sworn.)

8 ALJ AGRANOFF: Thank you.

9 Mr. Margard.

10 MR. MARGARD: Thank you, your Honor.

11 So a preliminary matter, I would like to
12 request that the Staff Report of Investigation, filed
13 in this case on March 2, 2020, be marked for purposes
14 of identification as Staff Exhibit 1.

15 ALJ AGRANOFF: It shall be so marked.

16 (EXHIBIT MARKED FOR IDENTIFICATION.)

17 MR. MARGARD: And that the prefiled
18 testimony of Mark Bellamy, filed in this matter on
19 September 21, 2020, be marked for purposes of
20 identification as Staff Exhibit 2.

21 ALJ AGRANOFF: It shall be so marked as
22 well.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 MR. MARGARD: Thank you, your Honor.

25 - - -

1 MARK BELLAMY

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

4 DIRECT EXAMINATION

5 By Mr. Margard:

6 Q. Mr. Bellamy, would you state your name
7 and business address, please.

8 A. Yes. My name is Mark Bellamy. My
9 business address is 180 East Broad Street, Columbus,
10 Ohio 43215.

11 Q. And by whom are you employed and in what
12 capacity, please?

13 A. I'm employed by the Public Utilities
14 Commission of Ohio as a Utility Specialist working
15 for the Power Siting Department.

16 Q. Mr. Bellamy, do you have before you
17 what's been marked as Staff Exhibit No. 2?

18 A. Yes.

19 Q. And can you identify that exhibit for us,
20 please.

21 A. That is my proof -- prefiled testimony.

22 Q. And was it prepared by you or at your
23 direction?

24 A. It was.

25 Q. And have you reviewed that document prior

1 to taking the stand today?

2 A. Yes.

3 Q. Do you have any corrections or changes of
4 any kind to make to that document?

5 A. No.

6 Q. And if I were to ask you the questions
7 contained in that document, would your answers be the
8 same?

9 A. Yes.

10 Q. And in your opinion and to the best of
11 your knowledge, are those answers true and
12 reasonable?

13 A. They are.

14 Q. Now, do you also have before you what's
15 been marked as Staff Exhibit No. 1?

16 A. Yes.

17 Q. And would you identify that exhibit,
18 please.

19 A. That is the Staff Report of Investigation
20 in this case.

21 Q. Did you contribute to the preparation of
22 this report?

23 A. Yes.

24 Q. And can you please identify for us the
25 sections to which you were responsible.

1 A. Yes. I wrote the sections for blade
2 shear, ice throw, noise, and shadow flicker.

3 Q. And have you reviewed this document prior
4 to taking the stand today?

5 A. Yes.

6 Q. And do you have any corrections or
7 changes to make to those sections of the Staff
8 Report?

9 A. Yes.

10 Q. And what changes would those be, please?

11 A. Yeah. I am looking at page 50 of the
12 Staff Report.

13 Q. Give a moment, if you would, please, to
14 allow others to be on the same page. Okay. Proceed.

15 A. I'm -- yeah, I'm sorry I am having
16 trouble finding it but I thought that I had mentioned
17 that in all nine -- yeah, I think that I said in nine
18 models that were modeled for noise that none of them
19 are above the ambient-plus-5 limit but it's actually
20 eight, eight models, because the Applicant withdrew
21 one so that there -- they put forth eight models.
22 That's the only correction but I can't seem to find
23 it.

24 Q. Let me direct you, sir, if I might, to,
25 let's see, what is this, the first full paragraph on

1 that page, about four lines down, the sentence
2 beginning "The Applicant's analysis of noise
3 impacts."

4 A. Oh, yeah, that's right. That's correct.
5 That's the line. Yes. Where it says: "The
6 Applicant's analysis of noise impacts showed that for
7 the nine turbine models evaluated no
8 non-participating receptors had modeled sound impacts
9 in excess of 49.1 dBA." It should actually be eight
10 turbine models evaluated but that's my only
11 correction.

12 MR. MARGARD: Very good. Thank you.

13 Your Honors, I respectfully move the
14 admission of Staff Exhibit No. 2, subject to
15 cross-examination, and tender the witness.

16 ALJ AGRANOFF: Thank you.

17 Mr. Van Kley.

18 MR. VAN KLEY: Thank you, your Honor.

19 - - -

20 CROSS-EXAMINATION

21 By Mr. Van Kley:

22 Q. Good after, Mr. Bellamy.

23 A. Good afternoon.

24 Q. How long have you been with the Ohio
25 Power Siting Board Staff?

1 A. 11 years.

2 Q. And having been there for 11 years, has
3 that caused you to be familiar with all of the wind
4 projects in Ohio?

5 A. Yes. I was involved in the review of all
6 the wind projects that have come before the Ohio
7 Power Siting Board except for Buckeye I.

8 Q. How many operating wind projects are
9 there in Ohio?

10 MR. MARGARD: Can we clarify, as
11 regulated by the Power Siting Board, Mr. Van Kley?

12 MR. VAN KLEY: Yes, we can.

13 MR. MARGARD: Thank you.

14 A. I would have to guess. We have a -- we
15 have a map on the Ohio Power Siting Board website
16 that lists them all but, if I had to guess, I would
17 say five or six.

18 Q. Do you know approximately how many wind
19 turbines are operating under the Power Siting Board's
20 jurisdiction at the current time?

21 A. No. I don't know that. I could look it
22 up but I don't have that readily available.

23 MR. VAN KLEY: Okay. With -- with the
24 Judge's permission, I would certainly be amenable to
25 him looking that up to answer the question.

1 ALJ AGRANOFF: If you have the ability to
2 do so, Mr. Bellamy, go ahead and attempt to get that
3 answer.

4 THE WITNESS: Okay. I apologize. I'm
5 waiting for my e-mail to connect. Okay. It's in my
6 e-mail but I am having trouble getting my e-mail to
7 connect to the system. I can't -- I can't receive or
8 send e-mail right now for some reason.

9 MS. KING: The host for Outlook appears
10 to be down so we are not able to check e-mails at
11 this time.

12 MR. MARGARD: Jack, I'm certainly willing
13 to stipulate to the wind siting -- Power Siting wind
14 case status document that's on the Board's webpage if
15 that helps in any way.

16 MR. VAN KLEY: Okay. Well, it might.
17 Does Mr. Bellamy have access to the Power Siting
18 Board's website?

19 THE WITNESS: Let me try. Yes, I can
20 access the Power Siting Board website.

21 Q. (By Mr. Van Kley) All right. And does
22 the power -- does the Power Siting Board's website
23 have the information that I requested?

24 A. It does. It might take me a while to add
25 everything up. Do you want me to take the time to --

1 I mean we have a map of operational wind farms and a
2 list of the number of turbines per wind farm. Do you
3 want me to add those up?

4 Q. I don't think you need to add them but if
5 you could just itemize them. I think we could all do
6 our own addition. So why don't you just tell me the
7 names of the OPSB-regulated wind farms that are under
8 operation and the county in which the -- each farm is
9 located and then the number of turbines in each farm.

10 A. Okay. According to the website, the
11 first operational wind farm listed is Blue Creek.
12 It's located in Paulding and Van Wert Counties and it
13 has 152 turbines.

14 The next one is Timber Road I. It's
15 located in Paulding County. It has 18 turbines.

16 The next one is Timber Road II. It's
17 also located in Paulding County. It has 55 turbines.

18 The next one is turbine -- I'm sorry.
19 Timber Road III, located in Paulding County, with 30
20 turbines.

21 And then is the combined Hog Creek I and
22 II project which has a total of 30 turbines.

23 And then the next one is Northwest Ohio
24 which has a total of 42 turbines.

25 And the last one is Timber Road IV which

1 has a total of 13 turbines.

2 Q. Which county is -- are the Hog Creek?

3 A. I'm sorry. The Hog Creek turbines are in
4 Harding County.

5 Q. And what about the wind farm in Northwest
6 Ohio?

7 A. I'm sorry, Northwest Ohio is Paulding
8 County, and Timber Road IV is Paulding County.

9 ALJ AGRANOFF: Mr. Bellamy, that was
10 updated as of what date?

11 THE WITNESS: As of August 26, 2020.

12 Q. (By Mr. Van Kley) Have regulated wind
13 farms gone into operation since that date?

14 A. Yes. I believe on their approved wind
15 farms is Timber Road IV with 24 turbines. I believe
16 all of Timber Wood IV is online now. That's my
17 understanding. So that would be the only change. So
18 it looks like Timber Road IV should actually have 24
19 plus 13. What is that? 37? Yeah. Besides that,
20 there are -- there are no other additions to get us
21 up to date as far as I know.

22 Q. Are any of the counties in which these
23 regulated wind farms are located, counties that
24 adjoin Lake Erie?

25 A. No, none of those counties adjoin Lake

1 Erie.

2 Q. Do you know whether any of the project
3 areas for either of these regulated projects have
4 eagle nests located within them?

5 MR. MARGARD: I'll object, your Honor.
6 It's beyond the scope of this witness's testimony.

7 MR. VAN KLEY: Well, it's -- as, your
8 Honor knows, that's never a valid objection unless
9 you are on recross or redirect. If the witness has
10 information germane to the case, then that's fair
11 game.

12 ALJ AGRANOFF: If the witness has
13 familiarity with respect to any of the projects, then
14 he can answer the question.

15 A. I have not studied eagle populations on
16 any of the wind projects.

17 Q. So you don't know the answer to my
18 question then?

19 A. Yes, I don't know.

20 Q. Are you aware of any wind turbines in
21 Ohio that are operating but which are not subject to
22 Ohio Power Siting Board jurisdiction?

23 A. Yes, I am aware of some.

24 Q. How many of them are you aware of?

25 A. I don't know, maybe a dozen.

1 Q. In those projects, what's the range of
2 the number of turbines that is included in each
3 project?

4 MR. MARGARD: Your Honor, I'll object on
5 relevance grounds at this point.

6 ALJ AGRANOFF: Mr. Van Kley?

7 MR. VAN KLEY: It's relevant to
8 Mr. Good's testimony yesterday where I asked him the
9 same questions concerning his argument that the lack
10 of eagle mortalities in Ohio, other than the one in
11 Bowling Green, means that there's little threat to
12 bald eagle mortality -- a bald eagle's mortality from
13 wind turbines in Ohio. The size of the wind farms is
14 relevant to that inquiry.

15 MR. MARGARD: That was an appropriate
16 question for Mr. Good. Mr. Bellamy has already
17 indicated he hasn't looked at eagle nests or eagles
18 at all in relation to wind turbines.

19 MR. VAN KLEY: Well, I didn't ask him in
20 this question anything about eagles. I am just
21 asking him about the size of the wind projects that
22 he's aware of that are not subject to Board
23 jurisdiction and that's directly relevant to
24 Mr. Good's testimony and is subject to examination if
25 Mr. Bellamy knows the answer to that question.

1 ALJ AGRANOFF: Mr. Bellamy, do you have
2 familiarity with the size of the non-jurisdictional
3 wind farms?

4 THE WITNESS: As far as I know, all
5 non -- non-jurisdictional wind farms or wind turbines
6 are below 5 megawatts. House Bill 6, I think, has a
7 caveat that allows a greater --

8 ALJ AGRANOFF: I think the question
9 Mr. Van Kley was asking in terms of number of
10 turbines, not necessarily capacity.

11 THE WITNESS: Okay. I guess I don't
12 understand the question then.

13 Q. (By Mr. Van Kley) With respect to the
14 nonregulated wind projects that you are aware of, how
15 many wind turbines are included in those projects on
16 a project-by-project basis range?

17 ALJ AGRANOFF: Let's ask him first
18 whether he is familiar with the number of turbines
19 located at those non-jurisdictional facilities.

20 Q. Mr. Bellamy, do you know the answer to
21 that question?

22 A. No. I know that Whirlpool built a set of
23 three turbines that were below 5 megawatts total.
24 I'm not sure about the total megawatts of Bowling
25 Green or even the total number, but I know there is

1 several turbines at Bowling Green. And then there
2 are individual turbines throughout the state, but I
3 don't really know much more on numbers on
4 non-jurisdictional than that.

5 ALJ AGRANOFF: Okay. Mr. Van Kley,
6 please move on.

7 Q. (By Mr. Van Kley) One of the topics that
8 you evaluate for the Emerson Creek wind project is
9 blade shear; is that correct?

10 A. Yes.

11 Q. Just for the record, what is blade shear?

12 A. Blade shear is when a part of a blade
13 breaks off of a wind turbine and falls to the ground.

14 Q. Uh-huh. Have you done any research to
15 determine the distance that blades or parts of blades
16 have traveled from the base of the turbine tower in
17 incidents where blade shear has occurred as a general
18 matter?

19 A. Are you asking about reports of actual
20 blade shear incidents and how far blades have gone or
21 ballistic models that show how far a blade could go?

22 Q. The first part of that.

23 A. I'm aware of individual news stories
24 about blades breaking, but I'm not aware of a study
25 that -- that breaks down various incidents and shows

1 how far the blade pieces have gone.

2 Q. Uh-huh. Are you aware of anecdotal
3 reports about how far the blades have gone, what
4 blade parts have gone?

5 A. I'm aware of some of the incidents that
6 have happened in Ohio, to Ohio jurisdictional
7 turbines.

8 Q. Uh-huh. Are you aware of instances that
9 have occurred outside of Ohio?

10 A. Yes.

11 Q. Okay. In those instances about which you
12 are aware, how far have those blade or blade parts
13 have been -- been reported to have traveled?

14 MR. MARGARD: Are you asking for a range
15 or examples, or can you be more specific?

16 Q. What's the maximum distance?

17 MR. MARGARD: Thank you.

18 A. Yeah. I can't think of an example of an
19 out-of-state distance. Usually news reports will
20 simply state that a blade shear incident happened and
21 the details on blade shear incidents are hard to
22 find.

23 Q. Are you aware of a collection of data
24 known as the Caithness database?

25 A. Yes, I am aware.

1 Q. Have you ever looked at that database?

2 A. Yes.

3 Q. And that database has reports about blade
4 shear; is that correct?

5 A. Yes.

6 Q. And, in fact, that report reports on the
7 distances that those blades or pieces of blades have
8 traveled as a result of blade shear; isn't that
9 correct?

10 A. I can't remember. It's been a while
11 since I looked at the Caithness database. But from
12 what I understand, the Caithness database is, you
13 know, kind of a Wikipedia where anybody can edit it
14 and I'm not sure that the data in the Caithness
15 database has been verified scientifically.

16 Q. Well, have you done anything else to
17 research the distance at which blades or parts of
18 blades have been known to travel as a result of blade
19 shear?

20 A. Yes. I have -- I have studied the
21 incidences that have happened in Ohio to
22 jurisdictional turbines.

23 Q. Anything else?

24 A. I read industry literature on blade shear
25 but I haven't seen a report that lists incidents and

1 blade shear distances and so forth that I believe you
2 are trying to get at.

3 Q. Are you aware of a -- an incident of
4 blade shear that occurred in September 2020 at the
5 Timber Road Wind Farm IV or I guess it's called the
6 Paulding Wind Farm IV?

7 A. Yes. I visited that site as soon as they
8 notified the Board.

9 Q. And what were -- what did you do during
10 that visit?

11 A. I observed the wind turbine and the wind
12 turbine blade. I asked the operator questions about
13 the turbine.

14 Q. Did you identify the cause of that blade
15 shear?

16 A. The operator was not -- unsure of the
17 cause, you know, which was just hours after it
18 occurred. And the Applicant -- I'm sorry, the
19 operator is going to submit a report on the cause
20 soon, but I'm not aware of the cause yet.

21 Q. Did you see -- how many blades were
22 broken?

23 A. One.

24 Q. And did you see the broken blade on the
25 ground?

1 A. Yes.

2 Q. Uh-huh. Was it all in one piece, or was
3 it in more than one piece?

4 A. It appeared to be all in one piece,
5 although they had a -- a safety distance cordoned, so
6 I was not able to inspect the area, but it appeared
7 that the blade had broken off and fell straight down
8 at the base of the turbine.

9 Q. Uh-huh. How many other incidents of
10 blade shear from wind turbines in Ohio are you aware
11 of?

12 A. Are you asking me jurisdictional or
13 total?

14 Q. Total.

15 A. I'm not sure.

16 Q. Well, I am just asking how many you are
17 aware of.

18 A. Oh. Five. I think four jurisdictional
19 and one non-jurisdictional.

20 Q. Where was the blade shear incident at the
21 non-jurisdictional wind farm?

22 A. I can't remember exactly. I believe it
23 was at a school.

24 ALJ AGRANOFF: Mr. Bellamy, what is the
25 time frame for the number that you just gave?

1 THE WITNESS: I'm not sure what you mean
2 by time frame.

3 ALJ AGRANOFF: You gave a certain number
4 of incidents you could recall.

5 THE WITNESS: Right.

6 ALJ AGRANOFF: What period of time do you
7 think that encompasses?

8 THE WITNESS: I would guess -- the first
9 jurisdictional one I know of is 2012. I believe the
10 school one happened -- I have no idea when the school
11 one happened. It's been since I have been working at
12 the Public Utilities Commission in 2009, but I don't
13 remember exactly what year. But I do remember the
14 years for the jurisdictional ones.

15 ALJ AGRANOFF: And could you just give us
16 what those years were?

17 THE WITNESS: Oh, sure. 2012, I
18 believe -- yes, that project was called Timber Road
19 II. And then there was two in 2018, one in April
20 which was, I believe, Hog Creek and another in August
21 which was Blue Creek, but I might have -- I might
22 have those two dates mixed up. And then the
23 September 2020 incident in Timber Road IV.

24 ALJ AGRANOFF: Thank you.

25 Q. (By Mr. Van Kley) Do you know the

1 distance that blades or blade parts traveled during
2 the blade shear incident at Blue Creek in 2018?

3 A. I believe there was a diagram that -- I'm
4 sorry, counsel. You said Blue Creek. I was thinking
5 Timber Road for a second. Okay. Blue Creek, I
6 believe there was a piece that was found 250 feet
7 from the turbine base, and the project developer
8 stated that all of the -- there was several small
9 pieces that were found, and they were all found
10 within the safety setback which was tip height times
11 1.1.

12 Q. How about the blade shear incident at Hog
13 Creek during 2018?

14 A. This Hog Creek, the report that I saw
15 stated that the blade fell in one piece directly to
16 the turbine base.

17 Q. How about the incident at Timber Road II
18 during 2012?

19 A. In Timber Road II, I believe the farthest
20 piece was -- I believe there was a diagram that shows
21 the farthest piece was 233 meters. And there were
22 other pieces found, but I believe that's the farthest
23 piece that was found.

24 Q. Now, in all of these incidents of blade
25 shear at regulated wind farms, is the information

1 about the distance of the blade-part travel based on
2 the wind company's representations?

3 A. Yes.

4 Q. Would you go to page 49 of the Staff
5 Report.

6 A. Okay. I'm there.

7 Q. The first full sentence on the top of
8 page 49 identifies some safety features to address
9 blade shear from wind turbines, correct?

10 A. Yes.

11 Q. Were those safety features all available
12 in 2012 to the present?

13 A. Yes. But I can explain how the blade
14 shear incident happened in 2012.

15 Q. Go ahead since you brought it up.

16 A. Okay. You know, it's -- it's interesting
17 how -- the two incidents that we had parts thrown
18 farther than from the base, those two incidents
19 happened when the turbine was restarted after the
20 wind turbine was damaged.

21 In 2012, in Timber Road II, the blade was
22 found to have a manufacturer defect. Now, it appears
23 that the blade, you know, had a manufacturer defect
24 and must have broken enough to cause an imbalance and
25 caused the turbine to shut down.

1 After it was shut down, it was
2 inadvertently or mistakenly restarted by a remote
3 operator in Oregon. And when it restarted, the blade
4 with the manufacturer defect broke off and slammed
5 into a second blade so that -- that turbine actually
6 had two blades that were broken. And those were both
7 caused -- or, I'm sorry, the second -- the blade
8 being thrown was caused by the restart. That is
9 farther than from the base of the turbine.

10 And similarly in Blue Creek, in Blue
11 Creek the wind farm was shut down due to a
12 thunderstorm and it appears that the turbine was
13 struck by lightning and then the turbine was
14 restarted. I don't believe the operator knew that it
15 was struck by lightning, but the turbine was
16 restarted. And when it was restarted, 6 minutes
17 later, you know, someone on site noticed that there
18 was a piece of a blade broken off, and then they shut
19 the turbine down.

20 The other two incidents the blades fell
21 straight to the base. In Hog Creek, that was caused
22 by lightning strike. And when the blade broke off,
23 it went straight to the base. We don't know the
24 cause of Timber Road IV yet but that blade also went,
25 you know, straight to the base. I am interested in

1 knowing, you know, the cause of that one because the
2 operator told me that there were no storms in the
3 area that -- that night. So apparently it wasn't due
4 to lightning, but we don't know exactly what it is
5 yet.

6 Q. All right. Thank you. That's helpful
7 information.

8 Let's talk about ice throw starting on
9 page 49 of the Staff Report that you are already at.
10 I would like to direct your attention to the second
11 sentence in the first paragraph under the heading of
12 "Ice Throw" on that page which states as follows:
13 "The proposed turbine models have ice detection
14 equipment and safety features that would shut down a
15 turbine if the buildup of ice were to cause excess
16 vibrations or the speed to power ratio were to become
17 too high." You wrote this language, right?

18 A. Yes, I did.

19 Q. Does a wind turbine always vibrate when
20 it has ice on it?

21 A. No.

22 Q. Does a wind turbine always have a
23 speed-to-power ratio that is too high when it has ice
24 on it?

25 A. No. Ice has to accumulate on the blade

1 enough in order to cause that to happen.

2 Q. Okay. All right. Let's go to page 51 of
3 the Staff Report.

4 A. I'm there.

5 Q. Yeah. We are going to talk about noise
6 for a little bit. You wrote the noise discussion in
7 the Staff Report, correct?

8 A. Yes.

9 Q. But you're not an acoustician, are you?

10 A. No.

11 Q. Does the Board have any acousticians on
12 staff?

13 A. No, it doesn't.

14 Q. Take a look at footnote 25 on page 51 of
15 the Staff Report. Do you see there the wording of a
16 regulation from the Power Siting Board that pertains
17 to noise at wind turbines?

18 A. Yes.

19 Q. Let me just read the first sentence of
20 that paragraph to you -- of that footnote to you. It
21 says: "The facility shall be operated so that the
22 facility noise contribution does not result in noise
23 levels at any non-participating sensitive receptor
24 within one mile of the project boundary that exceed
25 the project area ambient nighttime average sound

1 level (Leq) by five A-weighted decibels." Did I read
2 that correctly?

3 A. Yes.

4 Q. And that is taken from the Board's rule
5 on noise, right?

6 A. Yes.

7 Q. Uh-huh. Do you know what the basis for
8 the restriction for -- that is stated in that
9 sentence where it says that the noise levels must not
10 exceed the project area ambient nighttime average
11 sound level by five A-weighted decibels?

12 MR. MARGARD: I'll object on relevance
13 grounds. It doesn't matter what he understands the
14 basis to be. The rule is what the rule is.

15 MR. VAN KLEY: Well, that's certainly
16 true but there is a basis for the rule and it
17 certainly pertains to -- to this proceeding because
18 the rule must have some basis in terms of, for
19 example, annoyance or other harm to the public, and I
20 think we have a right to explore that.

21 MR. MARGARD: I think he has a right to
22 explore annoyance to be certain. The rule is adopted
23 by the Board. The order adopting the rule speaks for
24 itself. The rule speaks for itself. What this
25 witness understands to be the basis here is

1 irrelevant.

2 MR. VAN KLEY: I highly disagree. In
3 fact, I've asked this question, I think, of
4 Mr. Bellamy in a proceeding in the past where he has
5 answered that question. I believe it was in Republic
6 Wind. And my question simply is what's the -- what's
7 the reason for the standard that to -- not to exceed
8 five A-weighted decibels above the average project
9 area Leq.

10 ALJ AGRANOFF: If Mr. Bellamy has any
11 familiarity with the Commission's comments that may
12 have been considered in their rule proceeding, you
13 can speak to that.

14 A. I can't remember the comments made during
15 the rule proceeding that led to the rule.

16 Q. Well, let me just cut right to it,
17 Mr. Bellamy. See if you can give me an answer. You
18 are aware that this standard is based on a standard
19 in the state of New York?

20 MR. MARGARD: If you know.

21 A. Yes. The -- you know, before the rules,
22 you know, went into effect, we recommended that
23 ambient-plus-5 standard and that was partially based
24 on -- on the New York study that said increases above
25 5 dBA cause complaints.

1 Q. Okay. Thank you.

2 Let's talk about shadow flicker. You
3 authored the parts of the Staff Report discussing
4 shadow flicker?

5 A. Yes.

6 Q. You are aware of the Board's standard for
7 the amount of shadow flicker that a wind project is
8 allowed to expose a nonparticipating landowner to?

9 A. Yes.

10 Q. What is that standard?

11 A. The standard says that
12 nonparticipating -- nonparticipating receptors are
13 not supposed to receive more than 30 hours of shadow
14 flicker per year.

15 Q. Does the Emerson Creek wind project, as
16 currently designed, achieve that standard?

17 A. No.

18 Q. Does the -- are you familiar with the
19 Joint Stipulation?

20 A. Yes, but it's been a while since I read
21 it, and I don't think that my sections were covered
22 in it, at least not very thoroughly.

23 Q. Okay. Well, let me ask you this, based
24 on the Staff Report where the Staff has recommended
25 conditions for this wind project, are there any such

1 conditions that apply to this project relative to
2 shadow flicker?

3 A. Yes, yeah.

4 Q. Do the Staff conditions, if they are
5 adopted, require a wind developer in this case to
6 submit a new plan or new model for shadow flicker
7 once it has arrived at a final design?

8 A. Can I look up the conditions?

9 Q. Sure.

10 ALJ AGRANOFF: I think you might want to
11 look at condition 34.

12 A. Yes. Condition 34 said -- states "At
13 least 30 days prior to construction, the Applicant
14 shall docket a shadow flicker study showing that
15 cumulative shadow flicker impacts will not exceed 30
16 hours per year at any non-participating sensitive
17 receptor."

18 Q. Now, has this condition been adopted for
19 other regulated wind projects in Ohio?

20 A. I believe that any project that -- that
21 has a study similar to this one that shows that there
22 are non-participators that are modeled to receive
23 more than 30, we would generally put in a condition
24 that says, okay, then you need to demonstrate by a
25 final design that all non-participators are under 30

1 hours.

2 Q. So you're aware of other wind farms that
3 have been constructed maybe that have provided such a
4 shadow flicker model prior to construction?

5 A. Yes.

6 Q. Okay. In those cases did the Power
7 Siting Board notify the public about the wind
8 developer's submission of the shadow flicker model
9 prior to construction?

10 A. I can't remember if -- if the shadow
11 flicker reports prior to construction have been
12 docketed or not.

13 Q. Do you expect that the shadow flicker
14 modeling report that is being required by condition
15 34 will be subject to public notice in this case?

16 A. Well, condition 34 says "shall docket" so
17 that sounds like they have to file something with the
18 docket.

19 Q. Will Staff take public comments about
20 that shadow flicker modeling report if you are
21 approving or disapproving it?

22 MR. MARGARD: Well, I'll object only to
23 the extent we haven't established that Mr. Bellamy
24 has any authority to make that decision.

25 MR. VAN KLEY: I am just asking him if he

1 knows.

2 MR. MARGARD: If he knows.

3 ALJ AGRANOFF: If you know, Mr. Bellamy.

4 A. Yeah. I'm not aware whether the Board
5 would have another public hearing after that report
6 is issued.

7 MR. VAN KLEY: All right. I have no
8 further comments -- or questions at this time.

9 ALJ AGRANOFF: Thank you.

10 Any clarifying questions from other
11 counsel before we do redirect?

12 Okay. Mr. Margard, are you ready for
13 redirect, or do you want to take a couple minutes
14 to --

15 MR. MARGARD: No. I don't have any
16 redirect, your Honor, but I think I would like at
17 this time, if I could, to request that the Bench take
18 administrative notice of the Power Siting wind
19 project case status document that appears on the
20 Power Siting Board's website that is the source of
21 the turbine count, for example, I think that would be
22 useful to include in this record.

23 MR. VAN KLEY: That would be okay with
24 me.

25 MR. SECREST: Likewise. Thank you.

1 MR. VAN KLEY: Will we get a PDF copy of
2 it uploaded to the record in this case?

3 MR. MARGARD: I will be happy to provide
4 a copy of that to the court reporter, and I will be
5 happy to circulate a copy of that to all of the
6 parties at the end of the day here.

7 MR. VAN KLEY: Okay. Thank you.

8 ALJ AGRANOFF: Just so the record will be
9 clear that this is simply being utilized for purposes
10 of taking administrative notice and is not being
11 marked as an exhibit in this record.

12 MR. MARGARD: Right. I would renew my
13 motion to admit Mr. Bellamy's testimony.

14 ALJ AGRANOFF: Okay. I just want to be
15 clear that the document that you are going to be
16 utilizing is the one we just discussed with the date,
17 and I have it in my notes.

18 MR. MARGARD: August 26 of 2020. It's a
19 two-page document showing -- it is a map, and the
20 second page is a chart of the various projects.

21 ALJ AGRANOFF: And I believe you
22 indicated, Mr. Margard, you would renew your motion
23 for Staff Exhibit 1 and Staff Exhibit 2?

24 MR. MARGARD: Well, yes. I'm happy to
25 wait until all of the Staff witnesses have testified

1 to admit Exhibit 1.

2 ALJ AGRANOFF: Okay.

3 MR. MARGARD: But certainly it's
4 appropriate to admit that into the record at this
5 time as well.

6 MR. VAN KLEY: I would have no objection
7 to admitting both exhibits. It will save us a little
8 time in the rest of the hearing probably if we could
9 just get it over with now and that way we don't have
10 to discuss it again.

11 MR. MARGARD: So moved.

12 ALJ AGRANOFF: Any objection from any
13 other counsel?

14 There being none, Staff Exhibit 1 and
15 Staff Exhibit 2 shall be admitted as part of the
16 record at this time.

17 (EXHIBITS ADMITTED INTO EVIDENCE.)

18 ALJ AGRANOFF: And at this time I believe
19 the next individual I had on my list is Staff Witness
20 Butler.

21 MR. MARGARD: I believe so.

22 ALJ WILLIAMS: Do you want to take a
23 little break and put Witness Butler on?

24 ALJ AGRANOFF: Yeah. Why don't we take a
25 10-minute break?

1 MR. MARGARD: That's fine.

2 ALJ AGRANOFF: And we will come back at
3 about 3:40.

4 (Recess taken.)

5 ALJ WILLIAMS: Attorney Margard, do you
6 want to call your next witness?

7 MR. MARGARD: Thank you, your Honor.
8 Staff calls Mr. Matthew Butler.

9 MS. KING: Mr. Butler, you've been
10 unmuted, and you are now a panelist.

11 THE WITNESS: Okay. Can everybody hear
12 me all right?

13 ALJ WILLIAMS: We can.

14 MS. KING: We can hear you but can't see
15 you.

16 THE WITNESS: Can you see me now?

17 ALJ WILLIAMS: Good afternoon,
18 Mr. Butler. How are you?

19 THE WITNESS: I am doing well. How are
20 you?

21 ALJ WILLIAMS: I'm well, thank you.
22 Would you please raise your right hand.

23 (Witness sworn.)

24 ALJ WILLIAMS: Thank you.

25 Please proceed, Mr. Margard.

1 MR. MARGARD: Thank you, your Honor. And
2 before I begin, I would like to mark as Staff Exhibit
3 No. 3, the prefiled testimony of Matthew Butler,
4 filed in this case on September 21 of 2020.

5 ALJ WILLIAMS: So marked.

6 (EXHIBIT MARKED FOR IDENTIFICATION.)

7 MR. MARGARD: Thank you, your Honor.

8 - - -

9 MATTHEW BUTLER

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

12 DIRECT EXAMINATION

13 By Mr. Margard:

14 Q. Please state your name and business
15 address.

16 A. Matthew Butler, 180 East Broad Street,
17 Columbus, Ohio 43215.

18 Q. And by whom are you employed and in what
19 capacity?

20 A. I'm employed as an Administrative Officer
21 2 by the Public Utilities Commission of Ohio.

22 Q. Now, Mr. Butler, do you have before you
23 what's been marked as Staff Exhibit No. 3?

24 A. I do.

25 Q. And can you identify that for us, please.

1 A. I believe that is the Staff Report of
2 Investigation.

3 Q. Oh, we have got our numbers backwards.
4 No. 3 would be your testimony, sir.

5 A. I'm sorry. My testimony.

6 Q. Very good. And was that document
7 prepared by you or at your direction?

8 A. Yes, it was.

9 Q. Okay. Have you reviewed that document
10 prior to taking the stand today?

11 A. Yes.

12 Q. Do you have any corrections or changes to
13 make to your testimony?

14 A. No.

15 Q. And if I were to ask you the questions
16 that are contained in your testimony today, would
17 your answers be the same?

18 A. They would.

19 Q. And in your opinion and to the best of
20 your knowledge, are those answers true and
21 reasonable?

22 A. Yes.

23 Q. Okay. And do you also have in front of
24 you the Staff Report which has been admitted as Staff
25 Exhibit No. 1?

1 A. I do.

2 Q. Okay. And did you contribute to the
3 drafting of that document?

4 A. I did, yes.

5 Q. And could you please identify the
6 sections in that document for which you were
7 responsible.

8 A. I wrote the section "Public Interaction
9 and Participation."

10 Q. And have you reviewed those sections
11 prior to testifying today?

12 A. Yes.

13 Q. And do you have any corrections or
14 changes to make to those sections of the Staff
15 Report?

16 A. I do not.

17 MR. MARGARD: Okay. Thank you.

18 Your Honors, I respectfully move for the
19 admission of Staff Exhibit No. 3 and tender
20 Mr. Butler for cross-examination.

21 ALJ WILLIAMS: Thank you.

22 Attorney Van Kley.

23 MR. VAN KLEY: Yes.

24 - - -

25

CROSS-EXAMINATION

By Mr. Van Kley:

Q. Good afternoon, Mr. Butler.

A. Good afternoon.

Q. Give me a general overview of your duties at the Ohio Power Siting Board.

A. Sure. My role is in a public affairs capacity to field questions and inquiries from -- from members of the public with regard to power siting projects.

Q. Do your duties include the submission of notices to newspapers or other news media for purposes of notifying the public about events occurring in the certification process for Board energy projects?

A. Part of my role would be to publish news releases that would notify the public about hearings. So in that way, yes.

Q. Do you submit notices to the news media concerning anything other than hearings?

A. There would be other occasions potentially where -- when the Board takes action on a case at one of its Board meetings. We generally put out news releases. Our agendas are published to a list that's very much similar to our news release

1 list. Occasionally in the past we've put out
2 releases about other events and rulemakings, things
3 of that nature.

4 Q. Now, in the course of the Power Siting
5 Board proceeding to consider an application for a
6 certificate, you're aware that the Applicant is
7 responsible for submitting public notices concerning
8 that project to the news media?

9 A. Yes.

10 Q. And do you play any role in that regard
11 such as issuing instructions or having somebody else
12 issue instructions to the Applicant directing them to
13 publish those notices?

14 A. I do not.

15 Q. Do you know who does?

16 A. My understanding is that the Applicant
17 would do that just by the fact that it's a rule
18 requirement.

19 Q. Are you familiar in -- with the
20 situations in which public notices from an Applicant
21 are required?

22 A. In a general sense, yes.

23 Q. Do you have in front of you Joint Exhibit
24 No. 1 which is the Joint Stipulation and
25 Recommendation?

1 A. Yes, I do.

2 Q. I would like to go through a few of the
3 recommended conditions that start on page 2 of this
4 exhibit.

5 A. Okay. I'm on page 2.

6 Q. All right. Now, let's go -- now go to,
7 please, page 3, condition 7.

8 A. I see it.

9 Q. All right. And this condition requires
10 the Applicant to submit a set of detailed engineering
11 drawings of the final project design, correct?

12 A. It appears to, yes. I didn't write this
13 condition but that's what it appears to say.

14 Q. Yeah. Based on your general knowledge
15 concerning public notices that are required for Board
16 proceedings, do you expect that any public notice
17 will be published in the news media at the time that
18 the Board receives this set of detailed engineering
19 drawings for the final project design?

20 A. I am not aware of a requirement that
21 would -- that would require the Applicant to notify
22 the public when they file this.

23 Q. Okay. And then the same question about
24 the requirement in condition 8, about the submission
25 of mapping in the form of PDF and geographically

1 referenced data.

2 A. I am not aware of a requirement.

3 Q. Go to page 4 of the Joint Stipulation,
4 condition 9. Are you aware of any requirement for
5 publication for the final delivery route plan?

6 A. I'm not aware.

7 Q. And how about the results of any traffic
8 studies referenced there?

9 A. No.

10 Q. Go to condition 14 on page 4. I have the
11 same question about the Programmatic Agreement to
12 minimize impacts to cultural resources.

13 A. I'm not aware of a notification
14 requirement for that either.

15 Q. And then go to condition 22, starting on
16 page 5. Are you aware of any such requirement for
17 the post-construction avian and bat monitoring plan?

18 A. No.

19 Q. As the public relations official for the
20 Power Siting Board, are you aware of whether bat and
21 bird mortality data is made -- for wind farms in Ohio
22 that are regulated by the Board is made public?

23 MR. SECREST: Objection, speculation to
24 the extent it calls for speculating as to whether the
25 developer makes that public.

1 ALJ WILLIAMS: I'll let the witness
2 answer as to his familiarity with the release or
3 publication of bat and bird mortality data.

4 A. I am not aware -- I am not familiar with
5 anything like that. That's beyond my area of
6 expertise.

7 Q. Would you know about it -- would you know
8 whether any such data is placed on the public docket
9 published -- that is contained on the Power Siting
10 Board's website?

11 MR. MARGARD: Can we break this question
12 up? You've asked both about the docket and about
13 postings on the website.

14 ALJ WILLIAMS: I think his response was
15 he was not aware of publication of that data. To the
16 extent there might be a clarifying question, is that
17 what you are asking, Attorney Van Kley?

18 Q. (By Mr. Van Kley) Yeah. My question
19 actually is a little different, and perhaps it wasn't
20 expressed very clearly.

21 My question to you, Mr. Butler, is if
22 anybody did submit post-construction mortality data
23 for inclusion in the public docket, would you know
24 that that had occurred?

25 A. I receive notifications, daily docket

1 notifications, so I would see it there.

2 Q. Okay. And are you aware of any such
3 docket notifications that have occurred in the past
4 for other wind projects which -- with respect to
5 mortality data?

6 A. I personally am not aware of anything
7 like that.

8 Q. Go to condition 23 on page 6 of the Joint
9 Stipulation. And you'll see a reference to the
10 submission of a mitigation plan or adaptive
11 management strategy in that condition. Let me know
12 when you have found that.

13 A. Condition 23?

14 Q. Yes, sir.

15 A. Okay.

16 Q. All right. Are you aware of any
17 requirement to publish a notice publicly for that
18 type of information?

19 A. I am not.

20 Q. Go to condition 27 on page 6 of the
21 Stipulation.

22 A. I see it.

23 Q. That condition refers to mapping of
24 habitat areas for the upper -- for the upland
25 sandpiper.

1 A. Uh-huh.

2 Q. Do you know of any requirement that that
3 information be public noticed?

4 A. No.

5 Q. Same question with regard to the
6 requirement in condition 28 on page 7 concerning the
7 mapping of the northern -- northern harrier preferred
8 nesting habitat sites.

9 A. I am not aware.

10 Q. And then go to condition 34 on page 8 of
11 the Stipulation which refers to the shadow flicker
12 study. And I note that it does say here that the
13 Applicant shall docket that study. So based on this
14 information, would it be your expectation that the
15 shadow flicker study would be published or a notice
16 concerning that study would be published in the
17 media?

18 A. I would not be aware of any requirement
19 that that would occur. It would be published on the
20 docket based on this condition, and it would be then
21 distributed via the docketing notification lists.

22 Q. Then in paragraph 37, we have a
23 requirement for a microwave path study. Do you
24 expect that will be required to be public noticed?

25 A. I am not aware of a requirement.

1 Q. With respect to the requirements to
2 submit deliverables to the Power Siting Board Staff
3 as required by this Joint Stipulation which would
4 include those deliverables that we have discussed
5 today, other than the shadow flicker study that will
6 be docketed, do you see any requirement that any of
7 those deliverables be docketed when you look at this
8 Joint Stipulation?

9 A. Without looking through the conditions
10 one by one, I'm not comfortable giving a 100 percent
11 answer on that. I looked to the two conditions that
12 I did play a part in, conditions 10 and 11, which do
13 regard notification to the public in terms of
14 starting construction and start of facility
15 operations so there would be those notices regarding,
16 you know, the project.

17 Q. Uh-huh. If there is any requirement that
18 any of these deliverables be loaded to the public
19 docket on the Power Siting Board's website -- well,
20 let me start over with that.

21 Where this Joint Stipulation does not
22 require the docketing of a deliverable, is there any
23 other requirement that such a deliverable be docketed
24 to your knowledge?

25 A. Not to my knowledge.

1 MR. VAN KLEY: All right. I have no
2 further questions at this time.

3 ALJ WILLIAMS: Thank you, Attorney Van
4 Kley.

5 Mr. Margard, any redirect?

6 MR. MARGARD: Just very briefly. Thank
7 you, your Honor.

8 - - -

9 REDIRECT EXAMINATION

10 By Mr. Margard:

11 Q. Mr. Butler, you've indicated you are not
12 aware of requirements that various plans, strategies,
13 maps, and studies and so forth be publicly noticed.
14 Are you aware whether any of these that are specified
15 in the Stipulation might themselves contain terms
16 that would require some kind of notice? You're just
17 speaking about Board requirements; is that correct?

18 A. That's the way I understood the question,
19 yes.

20 Q. Not --

21 A. The requirements for, you know, rule
22 requirements that the Board has that would require
23 the Applicant to publish notice of one thing or
24 another.

25 Q. And you don't have any personal knowledge

1 or any specific knowledge of any publication or
2 notice requirement that might be contained within any
3 of these documents, correct?

4 A. I do not. I do not. Having not been
5 involved in the review of those particular areas of
6 the Staff investigation, I do not.

7 MR. MARGARD: That's all. Thank you,
8 your Honor.

9 ALJ WILLIAMS: Attorney Van Kley, any
10 recross?

11 MR. VAN KLEY: Yeah.

12 - - -

13 RECROSS-EXAMINATION

14 By Mr. Van Kley:

15 Q. I guess I didn't understand the
16 question -- or the last question or the answer,
17 Mr. Butler. Could you explain?

18 A. I don't think I could -- I wouldn't
19 explain the question.

20 Q. Okay. What's the question you thought
21 you were answering?

22 A. Are -- would there be requirements
23 outside of the Board rules somewhere contained in
24 those documents that relate to those conditions that
25 you discussed that would require notification to the

1 public of those subjects. Did I understand the
2 question correctly?

3 Q. Yeah, I think you did, but I'm still not
4 understanding what you are saying. So let me explore
5 it a little bit. Can you give me an example to
6 illustrate a type of report that would -- in itself
7 would contain a requirement for public notice?

8 ALJ WILLIAMS: I am not trying to be
9 difficult here, Attorney Van Kley. He was asked if
10 he was aware of any other requirements besides the
11 rule, the Board rule requirements, and he said no.
12 So for him to try to provide examples of other
13 potential requirements seems a little bit impossible
14 or unreasonable in response to the question. I am
15 giving you some latitude to ask the question. I am
16 just not sure he has an answer as to what else might
17 be required.

18 MR. VAN KLEY: Yeah. I thought he was
19 backtracking on that answer and that's why I wanted
20 to explore it further.

21 ALJ WILLIAMS: I will give you some
22 latitude. I am not sure that's what I am sensing but
23 feel free to try to ask and make sure we are all on
24 the same page.

25 MR. VAN KLEY: Yeah. Okay.

1 Q. (By Mr. Van Kley) So are you aware of any
2 public notice requirements that may be contained in a
3 deliverable itself?

4 A. No.

5 MR. VAN KLEY: Okay. All right. Very
6 good then. I have nothing further.

7 ALJ WILLIAMS: Attorney Margard, I assume
8 you are satisfied?

9 MR. MARGARD: I am. Thank you, your
10 Honor, and would renew my motion for admission of
11 Exhibit 3.

12 ALJ WILLIAMS: Just look to see if
13 anybody is frantically wanting to ask questions. I
14 see none. Attorney Van Kley, response to Exhibit 3.

15 MR. VAN KLEY: No objection.

16 ALJ WILLIAMS: It will be admitted.

17 (EXHIBIT ADMITTED INTO EVIDENCE.)

18 ALJ WILLIAMS: Mr. Butler, thank you for
19 your testimony.

20 THE WITNESS: Thank you.

21 ALJ WILLIAMS: All right. I will invite
22 Staff to call their next witness.

23 MR. MARGARD: Thank you, your Honor.
24 Staff would call Mr. Tyler Conklin to the stand,
25 please.

1 MS. KING: Mr. Conklin, you've been made
2 a panelist, and you have been unmuted.

3 THE WITNESS: Can everybody hear me?

4 ALJ WILLIAMS: Good afternoon,
5 Mr. Conklin.

6 THE WITNESS: Good afternoon.

7 ALJ WILLIAMS: You are the last witness
8 of the day in all likelihood so welcome to the
9 hearing. Thank you for your patience. I am going to
10 swear you as we begin here. Would you raise your
11 right hand.

12 (Witness sworn.)

13 ALJ WILLIAMS: Thank you.

14 Attorney Margard.

15 MR. MARGARD: Thank you. As a
16 preliminary matter, I would request the prefilled
17 testimony of Tyler Conklin, filed in this matter on
18 September 21, 2020, be marked as Staff Exhibit No. 4.

19 ALJ WILLIAMS: So marked.

20 (EXHIBIT MARKED FOR IDENTIFICATION.)

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1 TYLER CONKLIN

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

4 DIRECT EXAMINATION

5 By Mr. Margard:

6 Q. All right. Please state your name and
7 your business address.

8 A. My name is Tyler Conklin, and my business
9 address is 180 East Broad Street, Columbus, Ohio
10 43215.

11 Q. And by whom are you employed and in what
12 capacity, please?

13 A. I am a Utility Specialist 1, employed by
14 the Public Utilities Commission of Ohio in the Office
15 of the Federal Energy Advocate.

16 Q. Mr. Conklin, do you have before you
17 what's been marked as Staff Exhibit 4?

18 A. Yes.

19 Q. And would you please identify that for
20 us.

21 A. My prefiled testimony.

22 Q. Yes, thank you. Was this document
23 prepared by you or at your direction?

24 A. Yes.

25 Q. And have you reviewed that document prior

1 to taking the stand today?

2 A. Yes.

3 Q. And as a result of that review, do you
4 have any corrections or changes of any kind to make
5 to your testimony?

6 A. No.

7 Q. And if I were to ask you the questions
8 contained in your testimony, would your responses be
9 the same today?

10 A. Yes.

11 Q. And in your opinion and to the best of
12 your knowledge, were those responses true and
13 reasonable?

14 A. Yes.

15 Q. Thank you.

16 Do you also have in front of you a copy
17 of the Staff Report of Investigation which has
18 previously been admitted as Staff Exhibit 1?

19 A. Yes, I do.

20 Q. And did you contribute to the drafting of
21 that document?

22 A. Yes, I did.

23 Q. And would you help identify for us which
24 sections you were responsible for.

25 A. I authored the economics section as well

1 as the decommissioning sections of the Staff Report.

2 Q. And have you reviewed those sections
3 prior to taking the stand today?

4 A. Yes, I have.

5 Q. And do you have any changes or
6 corrections to those sections of the Staff Report?

7 A. Yes. On page 34 of the Staff Report, I
8 believe I made a typo here where it says "based on a
9 total nameplate capacity of 200 megawatts," that
10 should be "300."

11 Q. Okay. Let's give folks a chance to get
12 there, if you would, please.

13 A. Yeah.

14 Q. All right. Give us that correction
15 again, please.

16 A. Yes. It should say based on a
17 nameplate -- total nameplate capacity of
18 300 megawatts, not 200.

19 Q. Okay. Any other changes or corrections?

20 A. No.

21 MR. MARGARD: Okay. Your Honor, I
22 respectfully move for the admission of Staff
23 Exhibit 4 and tender Mr. Conklin for
24 cross-examination.

25 ALJ WILLIAMS: Thank you, Attorney

1 Margard.

2 Attorney Van Kley.

3 MR. VAN KLEY: All right.

4 - - -

5 CROSS-EXAMINATION

6 By Mr. Van Kley:

7 Q. Mr. Conklin, I can't resist asking you,
8 what's entailed in your duties as a Federal Energy
9 Advocate, or whatever it was you said you do?

10 ALJ WILLIAMS: Is anybody else a little
11 faint?

12 A. I actually started there three days ago
13 so this is my third day on the job there. So as of
14 right now, just looking at the federal -- the federal
15 side of energy policy and how it affects Ohio.
16 Haven't gotten too deep into it yet but I'm hoping to
17 learn a lot and to do some good work there but, yeah.
18 No, I just started, so I don't have too much.

19 Q. All right.

20 MR. VAN KLEY: Judge Williams, are you
21 okay with the sound? I thought I heard you ask
22 something about it.

23 ALJ WILLIAMS: I can hear the witness
24 crystal clear. Attorney Margard was very faint, and
25 you are also a little faint, so I'm not sure. Just

1 try to project into the microphone for me.

2 MR. VAN KLEY: Okay. It sounds like we
3 have the scraping sound back too. And we were doing
4 so well.

5 ALJ WILLIAMS: Indeed. Indeed. The
6 witness is clear for me so hopefully a little more
7 amplification, we can maybe get the question as well.

8 MR. VAN KLEY: Yeah.

9 Q. (By Mr. Van Kley) All right.
10 Mr. Conklin, let's go to the Staff Report, page 33.

11 A. Okay. I'm there.

12 Q. And I see a heading labeled "Economics"
13 on that page.

14 A. Yes.

15 Q. Did you author that section of the Staff
16 Report?

17 A. Yes, I did.

18 Q. What did the Staff do to investigate the
19 economic impacts of the -- what were the potential
20 economic impacts of the Emerson wind -- Emerson Creek
21 wind project?

22 A. Well, I -- I evaluate all of the
23 Applicant's assertions or figures or estimated
24 impacts as required by the statute. And I do my best
25 to verify or make sure that these impacts are

1 reasonable or appear to be reasonable.

2 Q. What did you do to investigate whether
3 the Applicant's conclusions on economic impacts were
4 reasonable?

5 A. Which -- which impacts do you mean? The
6 jobs and earnings or costs or anything? I'm sorry.
7 Could you be a little more specific?

8 Q. Yeah. I could be more specific, but I'll
9 need to break it down a little bit, I think.

10 A. Okay.

11 Q. Which -- which types of information
12 provided by the Applicant did you independently
13 verify?

14 A. Well, I tried to independently verify
15 everything that the Applicant has submitted to the
16 best of my ability, whether that be cost estimates or
17 jobs earnings and output estimates, taxes and lease
18 payments. And so I try and research everything that
19 they submit and try and verify it as reasonable.

20 Q. Where did you obtain the information to
21 test the reasonableness of the Applicant's economic
22 information?

23 A. So, for example, the JEDI model. I
24 download the JEDI model, the wind model from the NREL
25 website, and I obtain the project inputs and I try to

1 upload those into the model and run the model for
2 myself and see what the output is and compare it to
3 the Applicant's proposed impacts.

4 Q. Were you successful in performing that
5 model?

6 A. Yes.

7 Q. And were the results of your modeled run
8 identical to the results of the Applicant's modeling?

9 A. I'm not sure if they were 100 percent
10 identical, but I believe they were probably -- I
11 think everything that I got from the model was -- was
12 reflected from what the Applicant had put in or had
13 reported. But I can't say for sure that every single
14 number was -- was the same.

15 Q. Did the Staff do its own independent
16 investigation of the potential economic impacts of
17 the facility?

18 A. No --

19 Q. Okay.

20 A. -- other than running the JEDI model and
21 comparing the results, no.

22 MR. VAN KLEY: All right. I have no
23 further questions.

24 ALJ WILLIAMS: Attorney Margard, any
25 redirect?

1 MR. MARGARD: No, thank you, your Honor.

2 ALJ WILLIAMS: In the interest of -- I
3 don't see anyone else frantically waving, so we will
4 pick up the exhibit.

5 MR. MARGARD: I would renew my motion,
6 your Honor.

7 ALJ WILLIAMS: Attorney Van Kley.

8 MR. VAN KLEY: No objection.

9 ALJ WILLIAMS: Then Exhibit 4 is
10 admitted.

11 (EXHIBIT ADMITTED INTO EVIDENCE.)

12 ALJ WILLIAMS: That concludes our
13 schedule of witnesses for today. Let's go over as
14 far as make sure -- we can go off the record, Karen.

15 (Discussion off the record.)

16 (Thereupon, at 4:17 p.m., the hearing was
17 adjourned.)

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1 CERTIFICATE

2 I do hereby certify that the foregoing is a
3 true and correct transcript of the proceedings taken
4 by me in this matter on Wednesday, October 7, 2020,
5 and carefully compared with my original stenographic
6 notes.

7
8

Karen Sue Gibson, Registered
Merit Reporter.

9
10

Carolyn M. Burke, Registered
11 Professional Reporter.

12 (KSG-6970)

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Case No(s). 18-1607-EL-BGN

Summary: Transcript in the matter of the Firelands Wind, LLC hearing held on 10/07/20 - Volume III electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.