

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 Thursday,
October 8, 2020.

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VOLUME IV

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1 Thursday Morning Session,
2 October 8, 2020.

3 - - -

4 ALJ WILLIAMS: Let's go ahead and go on
5 the record. Good morning, Ms. Gibson.

6 Will the Applicant call its next witness.

7 MR. SECREST: Yes, thank you, your Honor.
8 May the Applicant call Eddie Duncan.

9 MS. CHILCOTE: All right. Mr. Duncan,
10 you have been promoted to a panelist. You should be
11 able to turn on your camera, you have, and also
12 unmute yourself.

13 THE WITNESS: Can you hear me?

14 ALJ WILLIAMS: There you are, yes. I was
15 trying to figure out where you were going to appear.
16 Good morning, Mr. Duncan, how are you?

17 THE WITNESS: Good; yourself?

18 ALJ WILLIAMS: I'm well. Thank you. I
19 am Mike Williams. I am one of the Administrative Law
20 Judges overseeing this morning's hearing. I am going
21 to begin by swearing you in. Would you raise your
22 right hand.

23 (Witness sworn.)

24 ALJ WILLIAMS: Okay. Please proceed,
25 Mr. Secrest.

1 MR. SECREST: Thank you, your Honor.

2 - - -

3 EDDIE DUNCAN

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

6 DIRECT EXAMINATION

7 By Mr. Secrest:

8 Q. Good morning, Mr. Duncan.

9 A. Good morning.

10 Q. Will you please state your full name for
11 the record.

12 A. Eddie -- Edward Charles Duncan.

13 Q. Thank you. And will you please state by
14 whom you are employed and your business address.

15 A. I am employed by Resource Systems Group
16 or RSG and we're located or headquartered at 55
17 Railroad Row, White River Junction, Vermont.

18 Q. Thank you, Mr. Duncan.

19 Do you have in front of you your prefiled
20 testimony?

21 A. I do.

22 Q. Great.

23 MR. SECREST: Your Honor, may I move to
24 have Mr. Duncan's prefiled direct testimony marked as
25 Applicant Exhibit 41?

1 ALJ WILLIAMS: So marked.

2 (EXHIBIT MARKED FOR IDENTIFICATION.)

3 MR. SECREST: Thank you, your Honor.

4 Q. Mr. Duncan, is that a true and accurate
5 copy of your prefiled direct testimony in this case?

6 A. Yes, it is.

7 Q. Great. Do you have any changes or
8 revisions to that testimony?

9 A. I do not.

10 MR. SECREST: Okay. Thank you. I tender
11 Mr. Duncan for cross-examination, your Honor.

12 ALJ WILLIAMS: Thank you, Mr. Secrest.
13 Mr. Van Kley?

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

15 - - -

16 CROSS-EXAMINATION

17 By Mr. Van Kley:

18 Q. And good morning, Mr. Duncan.

19 A. Good morning.

20 Q. For how many wind projects have you
21 provided acoustic services?

22 A. I don't know the exact number off the top
23 of my head. Dozens and dozens. As a firm, we are up
24 over 100.

25 Q. And have you done all of this work on

1 behalf of the wind developer?

2 A. No.

3 Q. Who are some of the other folks that you
4 have worked for on wind projects?

5 A. Yeah. So we first started into this by
6 getting asked to do it by the Maine Land Use
7 Regulatory Commission so we worked for the State of
8 Maine. We've also done research for the State of
9 Massachusetts in wind turbine acoustics. We also do
10 work for the State of Minnesota in reviewing wind
11 turbine applications. And we've also viewed a number
12 of wind farms for local jurisdictions.

13 Q. Have you personally worked on any of the
14 projects for the government agencies?

15 A. Yes, I have.

16 Q. Could you describe the sounds that wind
17 turbines make.

18 A. Yes. So wind turbines produce primarily
19 two types of sounds. One category is aerodynamic
20 sound that's produced primarily from the blades
21 moving through the -- the air as they spin, and the
22 other is mechanical or -- and electrical sound which
23 are usually grouped together because they all are
24 generated up in the hub.

25 Q. And what do the aerodynamic sounds sound

1 like?

2 A. It varies. It depends on which part of
3 the aerodynamic mechanism is producing it but
4 generally the general description is that it's a
5 broadband sound that sounds like a whooshing or a
6 swishing if you are in close proximity. If you back
7 away from it, you typically use that -- lose that
8 swishing and whooshing sound and it's more of a
9 constant sound, broadband sound in the background.

10 Q. Uh-huh. And could you describe the
11 mechanical sounds.

12 A. Yes. So the mechanical sounds are
13 generated up in the nacelle and you typically don't
14 hear them or they are difficult to hear in the field.
15 And so, you know, you may only occasionally hear
16 them, but they are -- some of them could potentially
17 be tonal from the gears or from the electrical
18 equipment and other sounds might be -- well, they
19 just sound mechanical like something is turning if
20 the yaw is changing directions.

21 Q. Do turbines make what would be
22 characterized as a clanking sound?

23 A. No, not typically.

24 Q. Your report submitted as part of the
25 Application in this case provides us with some

1 background in sound monitoring for the project area
2 for the Emerson Creek wind project, correct?

3 A. Yes, it does.

4 Q. Uh-huh. And for purposes of your and my
5 discussion here today, when I refer to "the project
6 area," I am referring to the project area for the
7 Emerson Creek wind project.

8 A. Understood.

9 Q. Shorten my questions a little bit. What
10 is background sound?

11 A. Background sound is all encompassing
12 sound that you would hear if you go out into the
13 environment; sources near and far that are occurring
14 both naturally and manmade.

15 Q. In the project area, what do you believe
16 the sources of background sound are?

17 A. Yes. So there's a variety of background
18 sounds in the project area. Those include geophonic
19 sounds which would be sound generated primarily by
20 wind. And that would be through foliage or grass or
21 around a structure.

22 The other sources include biogenic sounds
23 which would be birdcalls, animals, dogs barking,
24 things of that nature, insects.

25 And then the other sources of sound are

1 primarily manmade which would be agricultural
2 equipment that's operating or being worked on or
3 mechanical systems associated with agricultural
4 equipment like fans and things like that during
5 harvest season.

6 And then the third would be
7 transportation sources. So traffic noise, train
8 sounds, and aircraft flyovers.

9 Sorry. You'll also have the everyday
10 residential sources. So people maintaining their
11 equipment, kids playing outside, things of that
12 nature.

13 Q. Is it fair to say that a 10 dBA increase
14 in sound level sounds twice as -- twice as loud to
15 the human ear?

16 A. It depends on the nature of the source
17 but, generally speaking, the rule of thumb is that a
18 10-decimal increase in broadband sound is perceived
19 as a doubling of loudness.

20 Q. What was the purpose for your
21 measurements of background sound in the project area?

22 A. Yes. So the -- the purpose -- I'm sorry.
23 I have some feedback there.

24 The purpose of the background sound level
25 measurements was to quantify the existing background

1 sound levels throughout the project area and also to
2 identify the type of sources that exist in the
3 project area today so we are both characterizing and
4 quantifying the soundscape of the project area.

5 Q. And what was the ultimate goal for the
6 background sound measurements?

7 A. Yeah. So the ultimate goal I think is
8 twofold. The primary goal is to quantify the
9 existing background sound levels in the area for the
10 purposes of determining the limit that's applied per
11 the sound-level standard for wind development in the
12 State of Ohio.

13 The other is to just identify those
14 sources so we can characterize what the existing
15 soundscape of the area is.

16 Q. And what's the relationship between the
17 background sound and a new source of sound such as
18 wind turbines? Why is it important to know what the
19 background sound is when you're siting a wind turbine
20 project?

21 A. Well, there -- there are a number of
22 reasons that you would take background sound levels
23 when siting a new project, particularly a wind
24 turbine project. I'll focus on that specific since
25 you mentioned wind turbine acoustics or wind turbine

1 projects. The one is that there is a regulatory
2 limit in this case and that regulatory limit is a --
3 a relative standard, so 5 decibels above background
4 sound levels, and so we need to quantify what those
5 background sound levels are.

6 The other is that a developer or -- any
7 party really may want to quantify what the existing
8 sound levels are in an area prior to the installation
9 or construction of a project so they have a
10 before/after comparison.

11 Q. Uh-huh. Is it true that the background
12 sound is measured to find out what existing sound in
13 a project area is available to mask the sound of the
14 new source?

15 A. What do you mean by "is available"?

16 Q. That is, the background sound is -- is
17 present in the project area.

18 A. I'm not sure I understand the question.
19 If you could restate it.

20 Q. Sure. Is it fair to say that -- that the
21 levels of background sound are measured to determine
22 the existing sound in a project area that is
23 available to mask the sound of a new source that will
24 be brought to the project area?

25 A. It could be used for that purpose.

1 That's not the primary purpose why we conducted
2 background sound monitoring in this case.

3 Q. What was your primary purpose?

4 A. To quantify the existing background sound
5 levels in the area for purposes of regulations.

6 Q. Let's go to your written direct testimony
7 that has been marked as Applicant's 41 and I would
8 like you to go to page 5 of that testimony.

9 A. I'm there.

10 Q. Let's go to Question and Answer 9, the
11 question being how did you select your monitoring
12 stations.

13 A. Yes.

14 Q. The first sentence of your answer states
15 "Each location was selected as representative of a
16 given landscape or soundscape experienced by
17 sensitive receptors in and around the project area."
18 Did I read that correctly?

19 A. That's correct.

20 Q. First of all, what's the meaning of the
21 term "sensitive receptors" as used in that sentence?

22 A. The meaning of the term "sensitive
23 receptors" as used in that sentence is the same
24 meaning that would be used in the regulation which is
25 an occupied building which when we're doing the

1 pre-construction ambient sound level measurements we
2 are primarily looking at residences.

3 Q. How many locations did you select for
4 your background measurements?

5 A. We did a total of nine measurement
6 locations throughout the project area.

7 Q. At any point did you change your
8 locations that you were planning to use for the
9 background measurements?

10 A. When selecting the background sound level
11 measurements, we often will select more than one
12 location for what we would refer to as a given
13 soundscape so we'll essentially have a polygon of
14 monitor A Area and we might have one or two locations
15 within that area.

16 We -- from that desktop exercise we
17 select a preferred location and a backup location and
18 in some cases when we get to the field, we will
19 select the backup location over the preferred
20 location for reasons such as there might be too much
21 extraneous noise at the preferred location that we
22 were not aware of during the desktop selection of
23 those locations. So we may have switched from a
24 primary to a backup once we got to the field to do
25 micrositeing.

1 Q. So each location for the background sound
2 measuring was deemed by you to be representative of
3 the soundscape or landscape for that location,
4 correct?

5 A. Well, the soundscape would be
6 representative of the soundscape at that location
7 because it's monitoring that location. There's no
8 judgment call by me on that. If you put a monitor in
9 a spot, the soundscape in that spot is representative
10 of the soundscape in that spot.

11 Q. Right. So continuing with this line of
12 thinking then, the soundscape or landscape at one
13 monitoring station is not necessarily representative
14 of that at another of the monitoring locations you
15 used for the background study, correct?

16 A. That's correct.

17 Q. Going to page 7 of your testimony, and
18 we'll take a look at the information you placed there
19 about Monitor 6.

20 A. I'm there.

21 Q. Okay. For Monitor 6, the second sentence
22 refers to a minor arterial road along which the
23 monitor was placed. Do you see that?

24 A. I see that.

25 Q. By the -- by the term "monitor" -- or

1 "minor arterial road," were you referring to Ohio
2 State Road 4?

3 A. I will have to refer to another exhibit
4 to confirm that.

5 Q. Okay.

6 A. If I may.

7 Q. Yes, you may. And you may want to take a
8 look at your report, page 33. So we would be going
9 to your report which is marked as Exhibit G to the
10 Application.

11 A. I have Exhibit G open. You said page 33?

12 Q. Yes.

13 A. Yes, I see that. I would like to review
14 the map that is earlier in the report if that's okay.

15 Q. Yeah, that would be fine.

16 A. Yeah. So the minor arterial road would
17 be Ohio 4.

18 Q. What's your definition of a minor or
19 arterial road?

20 A. Yeah. So it's not really my definition.
21 It's the State DOT definition. They produce county
22 maps that have categorization of different
23 classifications of roadways and so we used the Ohio
24 DOT information to come up with those descriptors for
25 the roadways.

1 ALJ AGRANOFF: And just so we are clear
2 for the record, "DOT" stands for?

3 THE WITNESS: Department of
4 Transportation. I have to apologize. I don't know
5 if that's what you call it in Ohio.

6 ALJ AGRANOFF: Okay. Thank you.

7 Q. (By Mr. Van Kley) Do you know what the
8 transportation department's definition of a minor
9 arterial road is?

10 A. I don't recall off the top of my head
11 now. I know that's printed on the maps that they
12 produce.

13 Q. Ohio State Road 4 actually is a -- a
14 heavily traveled road, isn't it?

15 MR. SECREST: Objection, speculation.

16 ALJ WILLIAMS: To the extent he knows.

17 A. I have not reviewed that information.

18 Q. Do you know whether Ohio State Road 4 is
19 used for traffic to Lake Erie from southern parts of
20 Ohio?

21 A. I don't know that.

22 Q. Let's go to page 8 of the testimony,
23 Question and Answer 10.

24 A. Okay. I'm there.

25 Q. And in Answer 10 you identified two

1 acoustics standards that you utilized in selecting
2 monitoring locations; is that correct?

3 A. I'm sorry. Could you repeat the
4 question?

5 Q. Yes. Does your answer to Question 10
6 identify two acoustics standards that you represent
7 that you followed in order to select the monitoring
8 locations for the background sound study?

9 MR. SECREST: Objection to the
10 characterization as "standards."

11 ALJ WILLIAMS: If he understands the
12 question, he can proceed. If not, we will ask for
13 clarification. Mr. Duncan, do you understand what's
14 being asked?

15 THE WITNESS: Yes.

16 A. Those -- I believe you're referring to
17 documents that are referenced in that question, ANSI
18 documents?

19 Q. Yes.

20 A. Yes. So there are two standards that we
21 discuss in the response to that question. Those are
22 used, in part, to select monitoring locations, both
23 macro and micro, and also dictate other information
24 about monitoring being conducted.

25 Q. And Question 10 refers to them as

1 industry standards, right?

2 A. Yes. Those are -- ANSI is American
3 National Standards Institute.

4 Q. All right. So let's talk about the first
5 ANSI standard identified in Answer 10 which is ANSI
6 S12.9-2005/Part 2. Do you have a copy of 10
7 available to you?

8 A. I do.

9 (EXHIBIT MARKED FOR IDENTIFICATION.)

10 Q. Okay. And is LR Exhibit 10 a copy of
11 ANSI Standard S12.9-2005/Part 2 that you refer to in
12 your Answer 10?

13 A. I'm sorry. I'm referring back to my
14 testimony question real quick. It's -- this is a
15 copy of ANSI 12.9/Part 2. It is not the 2005
16 version. It does not appear to be anyways. It is a
17 2013 version.

18 Q. Okay. Are you aware of any changes to
19 this ANSI standard with respect to the procedures for
20 selecting background sound monitoring locations that
21 you utilized in designing your background sound
22 study?

23 A. I'm sorry. Am I aware of any changes?
24 Could you repeat that part?

25 Q. Yeah. Are you aware of any changes that

1 were made in the ANSI standard that we're looking at,
2 between 2005 and the present time, that affects the
3 selection of background monitoring stations?

4 A. I'm not aware of any changes in that time
5 period.

6 Q. Okay. So would you tell me what -- what
7 provisions in ANSI S12.9 provided you with procedures
8 that you utilized to select the monitoring locations
9 for the background sound study.

10 A. Yes. One moment. Yes. So if I could
11 refer you to page 2 under "Definitions," there is a
12 definition there for deterministic spatial sampling
13 which would be the method that's used for selecting
14 the monitoring locations in this case.

15 And then if we move down to page 6 and 7,
16 it speaks about microphone locations and as an
17 example, at the top of page 7, placement of
18 microphones to minimize, you know, reflections from
19 sound from nearby buildings, obstructions, things of
20 that nature. It talks more about the micrositeing of
21 microphone locations.

22 Q. And what sections apply there?

23 A. Primarily minimizing the influence of
24 other local sources on the measurement and minimizing
25 the influence of reflections of sound from nearby

1 buildings or obstructions. That is at the top
2 left-hand side of page 7.

3 Q. Okay. What section number is that
4 procedure provided by?

5 A. That is 7.4.2.

6 Q. Did you utilize any other procedures in
7 ANSI S12.9 to select monitoring locations?

8 A. No. That is it for this standard.

9 Q. Okay. Would you go back to section 5.1.1
10 of the standard on page 2 and read into the record
11 the language of that section.

12 A. You said section 5.1.1?

13 Q. Yes.

14 A. That is 5.1.1, "deterministic spatial
15 sampling: sampling of sound levels at measurement
16 sites selected by person(s) who believe the levels at
17 these sites to be representative of the sound levels
18 in the total area from which the sites are selected."

19 Q. All right. Thank you.

20 Referring you back to Answer 10 of your
21 testimony in Applicant Exhibit 41, I would like you
22 to take a look at the sentence that is on lines 12
23 and 13 which reads as follows: "The wide-area survey
24 method used is similar to the 'deterministic spatial
25 sampling method' described in Section 5.1.1 in ANSI

1 S12.9 Part 2." Do you see that sentence?

2 A. Yes.

3 Q. Can you explain to us why the wide-area
4 survey method that you used is similar to the method
5 described in section 5.1.1 of the standard?

6 A. Yes. So the -- the wide-area survey
7 method is looking at a variety of soundscapes
8 throughout a large area that are located in areas
9 that are representative of sensitive receptors
10 throughout the project area and so the deterministic
11 spatial sampling method is a judgment call by the
12 person who is conducting the monitoring for locations
13 that are representative of those soundscapes.

14 And so we use the wide-area survey method
15 that looks at a variety of factors throughout the
16 project area including where we anticipate those
17 background sounds will be that we talked about
18 earlier in my testimony and the background sounds
19 that would be experienced at residences and we select
20 locations similar to how the description of
21 deterministic spatial sampling is described in ANSI
22 12.9 Part 2.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 Q. Let's go to another exhibit which has
25 been marked as LR Exhibit 11. Do you have that

1 document available?

2 A. I believe so. Let me bring it up. I'm
3 there.

4 Q. Okay. Great. Can you tell me what --
5 well, first of all, let's identify this. Is this a
6 copy of ANSI Standard S12.9 Part 3 2013?

7 A. Yes, that's correct.

8 Q. And that's the standard that is the
9 second standard referred to in your Answer 10 of your
10 testimony?

11 A. Yes.

12 Q. Can you tell me what, if any, procedures
13 in LR Exhibit 11 were utilized to select monitoring
14 locations for your background sound study?

15 A. Yes. One moment. I'm almost there.
16 Okay. So if I could refer you to section 3 on
17 page 2, there is a definition on section 3.1 for
18 "background sound" and that definition being
19 "all-encompassing sound associated with a given
20 environment without contributions from the source or
21 sources of interest." The microphone locations
22 are -- or the locations of where the monitors are
23 placed is attempting to collect all-encompassing
24 sound of an area, not sound from a specific source,
25 so that is given consideration when placing a

1 microphone out.

2 There's also section 6 on page 6 and it
3 talks about where to place a microphone and, for
4 instance, it mentions that microphones shall be
5 located at least 7.5 meters from any surface where
6 reflections may influence the measured sound pressure
7 levels, or microphones shall be located at one of the
8 following two positions and then it offers two other
9 options for positions.

10 Q. So this in section 6.1?

11 A. The second part of my answer is in
12 section 6.1, yes.

13 Q. Okay. Which of the sections in part 6
14 apply here or which of those sections did you utilize
15 to select monitoring locations?

16 A. Part (b), locating microphones at least
17 7.5 meters from any surface where reflections may
18 influence the --

19 Q. That's the section 6.1?

20 A. Yeah, 6.1(b).

21 Q. Okay. And what else?

22 A. Well, there's notes that we -- in section
23 6.1 that we use for general guidance in selecting
24 monitoring locations that also refer to reflections
25 off of surfaces, things of that nature.

1 Q. Did you utilize any other procedures in
2 ANSI S12.9 Part 3 to select monitoring locations?

3 A. Not that I recall.

4 Q. Let's go back to your report that was
5 identified as Exhibit G of Applicant's Exhibit 1, the
6 Application. And I would like you to take a look at
7 page 22.

8 A. I'm there.

9 Q. All right. Starting on the first
10 paragraph at the top of that page, do you see a
11 sentence that identifies the average nighttime Leq
12 across the project area as 44 dBA?

13 A. I see that.

14 Q. Okay. Just so the record has this
15 information in it, would you explain what "dBA"
16 means?

17 A. "dBA." The "dB" is shorthand for decibel
18 and "A" is shorthand for "A-weighted." Decibel is a
19 unit-less measure of sound pressure level. So sound
20 pressure is measured in pascals and it goes from, you
21 know, 20 micropascals up to 20 million micropascals,
22 and since that range is so large in sound, it's
23 truncated down to -- using a logarithmic function,
24 down to essentially zero decibels up to around
25 120 decibels using that logarithmic function. So

1 once you convert pascals over to sound level, it's
2 referred to as a decibel.

3 The A-weighted is -- A-weighted is a
4 weighting that's given to the various frequencies
5 that go into that dBA dB level; so it discounts some
6 low frequency, enhances some high frequency, which
7 mimics how the human ear perceives sound.

8 Q. Earlier in your testimony you used the
9 term "broadband" to describe sound. Could you
10 explain what broadband means?

11 A. Yeah. Broadband is a sound that's
12 composed of a variety of frequencies with none of
13 those frequencies sticking up really as a prominent
14 discrete tone. So if you picture a bar graph with a
15 bunch of frequencies that represents sound level,
16 they would all kind of be either relatively the same
17 level or a smooth transition from one -- one
18 frequency to the next. White noise would be a great
19 example of broadband noise.

20 Q. Looking at Table 3 on page 22 of
21 Exhibit G, is that a summary of background sound
22 levels that you obtained from the project area in
23 your background sound study?

24 A. Yes, that's a summary of the background
25 sound levels that were measured during the background

1 monitoring periods.

2 Q. Directing your attention to the Leq
3 averages for night, you'll find those numbers in the
4 fourth-from-the-last column on the right; is that
5 correct?

6 A. That's correct.

7 Q. The lowest average background sound level
8 for any of the monitoring stations was 35 dBA?

9 A. The lowest for nighttime was 35 dBA, yes.

10 Q. Right. Yeah. All my questions right now
11 are related to this column.

12 A. Okay. Yes, the lowest in that column is
13 35.

14 Q. Yeah. And the highest was at Monitor 6
15 which is 52. And Monitor 9, correct?

16 A. That's correct.

17 Q. Now, the -- the background sound level of
18 35 at Monitor 7 is not representative, for example,
19 of the background sound level that was found at
20 Monitor 6, correct?

21 A. Yes. So the overall background sound
22 level at Monitor 7 is not representative of the
23 overall background sound level at Monitor 6.

24 Q. Let's go back to your testimony on
25 page 11.

1 A. I'm there.

2 Q. Okay. Did you measure background sound
3 at any locations other than the nine locations listed
4 in Table 3 on page 22 of your report?

5 A. Not for this project, no.

6 Q. Have you done that for any other project?

7 A. I have.

8 MR. SECREST: Objection, relevance.

9 ALJ WILLIAMS: We will let him answer.

10 A. I've measured background sound levels all
11 around the country.

12 Q. Okay. Yeah, I was just talking about the
13 area in or near the project area. Have you done any
14 other sound measurements for background other than
15 the nine locations listed in Table 3 in your report
16 for this project area?

17 A. No, I have not.

18 Q. Let's go to Question and Answer 18 of
19 your testimony identified as Applicant Exhibit 41.

20 A. I'm there.

21 Q. And I also would like you to take a look
22 at what's been marked as LR Exhibit 8 if you have
23 that available.

24 A. I have that open as well.

25 Q. All right. Your answer to Question 18

1 refers to the 2018 WHO Europe Environmental Noise
2 Guidelines for the European Region, correct?

3 A. That's correct.

4 Q. Is LR Exhibit 8 a copy of those
5 guidelines?

6 A. Yes, it is.

7 Q. Do you also have a copy of LR Exhibit 9?

8 A. I do.

9 Q. And LR Exhibit 9 is a copy of the
10 noise -- of the Night Noise Guidelines for Europe
11 2009, correct?

12 MR. SECREST: Mr. Van Kley.

13 A. We got mixed up.

14 MR. SECREST: I believe we have those
15 flip flopped. We have 8 as being 2009 and 9 being
16 2018.

17 MR. VAN KLEY: Okay. Maybe I just
18 miswrote it in my outline. Let me just double-check.
19 Appreciate the tipoff. Okay. You are correct.

20 (EXHIBIT MARKED FOR IDENTIFICATION.)

21 Q. (By Mr. Van Kley) All right. So let's do
22 this all over again, Mr. Duncan, make sure we have
23 the record straight. LR Exhibit 8 is a copy of the
24 WHO Night Noise Guidelines for Europe 2009, correct?

25 A. That's correct.

1 (EXHIBIT MARKED FOR IDENTIFICATION.)

2 Q. Okay. And LR Exhibit 9 is a copy of the
3 2018 Environmental Noise Guidelines for the European
4 region, correct?

5 A. That's correct.

6 Q. And it's LR Exhibit 9 that is referenced
7 in the first sentence of your answer to Question 18
8 of your testimony, correct?

9 A. Yes, that's correct.

10 Q. Okay. Now, the 2018 WHO Europe
11 Environmental Noise Guidelines for the European
12 Region do not supercede the Night Noise Guidelines
13 for Europe of 2009; is that correct?

14 MR. SECREST: Object to the extent it may
15 call for a legal conclusion.

16 ALJ WILLIAMS: I'll let him try to
17 explain the interface between 2009 and 2018.

18 A. Hold on one second, please. I recall it
19 being more specific language than I am seeing at this
20 moment in this document about the relation but they
21 do not specifically say, as I can see, that -- it
22 does not use the term "supercede." It talks about it
23 as a -- an evolutionary step.

24 Q. Okay. What do you mean by your statement
25 that it appears to be an evolutionary step?

1 A. I mean what the document says. It says
2 that it is an evolutionary step. The information in
3 this document represents "the next evolutionary
4 step." I can't interpret specifically what they mean
5 by the term "evolutionary."

6 MR. VAN KLEY: All right. Okay. Your
7 Honor, I think I am at a pausing point here. If you
8 could give me maybe 10 minutes to check my notes to
9 make sure I don't have anything more, I think that we
10 can conclude my cross-examination.

11 ALJ WILLIAMS: That seems appropriate.
12 We will take an early break. We will be back at
13 10:10. Off the record.

14 (Recess taken.)

15 ALJ WILLIAMS: Ms. Gibson, we will go
16 ahead and go back on the record and we'll return to
17 Mr. Van Kley's cross-examination.

18 MR. EUBANKS: I want to make one
19 statement real quick. You might see my camera off
20 intermittently now and then because unfortunately my
21 niece went into labor, dropped her one-year old off
22 at my doorstep, so I'm waiting on the grandparents to
23 come but that's what you are going to see maybe for
24 the next half an hour until they get here to get the
25 baby.

1 ALJ WILLIAMS: By all means do what you
2 have to do and obviously, yeah, certainly take care
3 of what you need to take care of. I appreciate the
4 information, Mr. Eubanks.

5 Okay. Mr. Van Kley.

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

7 Q. (By Mr. Van Kley) Mr. Duncan, let's go
8 back to LR Exhibit 9 which is a copy of the
9 Environmental Noise Guidelines for the European
10 Region 2018. And I would like to direct your
11 attention to the "Foreword" of that document which is
12 on page vii, small vii.

13 A. I'm there.

14 Q. Let's go to the fourth paragraph on that
15 page. And you'll see the following first sentence in
16 that paragraph: Following the publication of WHO's
17 community noise guidelines in 1999 and noise -- and
18 night noise guidelines for Europe in 2009, these
19 latest guidelines represent the next evolutionary
20 step, taking advantage of the growing diversity and
21 quality standards in this research domain."

22 Is this what you were looking at when you
23 answered my question with a statement that the 2018
24 guidelines are the next evolutionary step?

25 A. Yes, that's the exact sentence I was

1 referring to.

2 Q. The rest of the paragraph reads as
3 follows: "Comprehensive and robust, and underpinned
4 by evidence, they will serve as a sound basis for
5 action. While these guidelines focus on the WHO
6 European Region and provide policy guidance to Member
7 States that is compatible with the noise indicators
8 used in the EU's Environmental Noise Directive, they
9 still have global relevance. Indeed, a large body of
10 the evidence underpinning the recommendations was
11 derived not only from noise effect studies in Europe
12 but also from research in other parts of the world -
13 mainly in Asia, Australia and the United States of
14 America." Did I read all that correctly?

15 A. I believe so.

16 Q. Okay. So directing your attention then
17 to the third sentence which states that these
18 guidelines still have global relevance; do you see
19 that?

20 A. Yeah. They don't say that verbatim, but
21 yes.

22 Q. Yeah, I skipped some words in the middle
23 between "while these guidelines" and "they still have
24 global relevance," right?

25 A. Yes.

1 Q. Yeah. The guidelines that are referred
2 to in the sentence about that are said to still have
3 global relevance are the earlier guidelines in 1999
4 and 2009 that are referred to in the first sentence
5 of that paragraph, right?

6 MR. SECREST: Objection, speculation.

7 ALJ WILLIAMS: We will let him answer as
8 to his understanding of that language.

9 A. I think the reference is ambiguous.

10 Q. Are the night -- are the Night Noise
11 Guidelines for Europe in 2009 the same document that
12 is referred to in LR Exhibit 8? I am sorry. Let me
13 rephrase that.

14 Is -- is LR Exhibit 8 a copy of the Night
15 Noise Guidelines for Europe in 2009 referenced in the
16 first sentence of the fourth paragraph of the
17 "Foreword" on page vii of LR Exhibit 9?

18 A. It is my understanding that that's the
19 document that they are referencing.

20 MR. VAN KLEY: Okay. Thank you. I have
21 no further questions at this time.

22 ALJ WILLIAMS: Thank you, Attorney Van
23 Kley. I know Judge Agranoff had at least one
24 question. We will let him ask his question or
25 questions and then we'll turn it over to you,

1 Mr. Secrest, for redirect.

2 ALJ AGRANOFF: Thank you, Judge Williams.

3 - - -

4 EXAMINATION

5 By ALJ Agranoff:

6 Q. Hello, Mr. Duncan.

7 A. Hello.

8 Q. Good morning.

9 A. Oh, there you are. Sorry.

10 Q. It's "Hollywood Squares."

11 The one question I did have in the
12 discussion that you were having with Mr. Van Kley
13 with respect to Exhibit LR 11 and there was some
14 references to taking into account reflections off of
15 a surface. Could you give me a little bit more
16 understanding of what that actually entails?

17 A. Yes. So it's generally standard practice
18 when you are measuring sound levels, background sound
19 levels in the field, to not place a microphone close
20 to a large vertical surface to avoid having
21 reflections off of that large vertical surface
22 amplify sound from any localized sources in the area.
23 So you wouldn't typically place a microphone next --
24 immediately next to a house, immediately next to an
25 outbuilding, something of that nature.

1 Q. Okay. And are there parameters as to
2 what the size is that you are attempting to avoid?

3 A. In terms of the size of the --

4 Q. The surface.

5 A. The vertical reflective surface?

6 Q. Yes.

7 A. Yes. So large -- yeah, so large vertical
8 area sources would really be a structure. And it
9 wouldn't be as important for smaller vertical
10 reflective sources, although even like, for example,
11 a large tree or a large pole, you wouldn't want to
12 place it right next to it. You need to back up a
13 little bit from it and that is because that surface
14 will reflect less sound than a large vertical surface
15 due to the nature of the wavelengths of frequencies.
16 So you can go closer to smaller vertical surfaces
17 than large vertical surfaces. We generally try to
18 avoid large vertical surfaces as much as possible.

19 Q. But in terms of actually defining what
20 large and small is, how does that happen?

21 A. It's related to the wavelength of the
22 sound that you actually care to measure. So a large
23 vertical surface by -- like a few meters in diameter
24 would -- a few meters in diameter would be considered
25 a large vertical surface that we would want to back

1 away from.

2 Q. Okay. But is that actually a standard
3 that is incorporated anywhere?

4 A. Not that I recall as a standard. It's
5 scientific -- it's related to the scientific size of
6 the wavelength of sound.

7 ALJ AGRANOFF: Okay. Thank you. That
8 was my only question.

9 ALJ WILLIAMS: Thank you, Judge Agranoff.
10 Attorney Secrest, any redirect?

11 MR. SECREST: Briefly, your Honor. Thank
12 you.

13 - - -

14 REDIRECT EXAMINATION

15 By Mr. Secrest:

16 Q. Mr. Duncan, do you still have in front of
17 you what was marked as LR Exhibit 10?

18 A. I do.

19 Q. And that is the ANSI S12.9-1992/Part 2;
20 is that right?

21 A. That's correct.

22 Q. You were asked some questions on
23 cross-examination related to portions of this
24 document that you may have relied upon in completing
25 your noise assessment. Do you recall those

1 questions?

2 A. I do.

3 Q. Might there have been other portions of
4 this document you relied upon in completing your
5 noise assessment?

6 A. There may have been.

7 Q. You just can't recall at this time?

8 A. Yeah. In reviewing the document quickly
9 during live testimony, I can't say that I have
10 reviewed every portion of it to say that there is
11 nothing that I am missing there.

12 Q. Fair enough.

13 Do you still have LR Exhibit 9 in front
14 of you?

15 A. Yes.

16 Q. And that is the World Health Organization
17 2018 Night Noise Guidelines for Europe?

18 A. Correct.

19 Q. Are you aware of any countries that
20 adopted these guidelines into standards?

21 A. I am not, no.

22 MR. SECREST: Okay. Thank you. No
23 further questions.

24 ALJ WILLIAMS: Thank you.

25 Attorney Van Kley, any recross?

1 MR. VAN KLEY: No, your Honor.

2 ALJ WILLIAMS: I am not seeing any
3 parties frantically waving as though they would like
4 to interject at this time so, with that, we'll turn
5 to the exhibits. Mr. Secrest.

6 MR. SECREST: Thank you, your Honor. May
7 the Applicant move for the admission of Applicant's
8 Exhibit 41.

9 ALJ WILLIAMS: Attorney Van Kley?

10 MR. VAN KLEY: No objection.

11 ALJ WILLIAMS: 41 will be admitted.

12 (EXHIBIT ADMITTED INTO EVIDENCE.)

13 ALJ WILLIAMS: Mr. Van Kley, do you want
14 to move your exhibits.

15 MR. VAN KLEY: Yes, your Honor. We would
16 move for admission of Exhibit 8, 9, 10 and 11.

17 MR. SECREST: No objection, your Honor.

18 ALJ WILLIAMS: They will be admitted,
19 Exhibit LR 8, 9, 10, and 11, as part of the record.

20 (EXHIBITS ADMITTED INTO EVIDENCE.)

21 ALJ WILLIAMS: Okay. Mr. Duncan, thank
22 you so much for your participation. You are now
23 excused.

24 Attorney Secrest, we will invite you to
25 call your next witness.

1 MR. SECREST: Thank you, your Honor. May
2 the Applicant call Michael MaRous.

3 ALJ WILLIAMS: Judge Agranoff will be
4 overseeing this piece of the proceedings. Are you
5 ready, Judge Agranoff?

6 ALJ AGRANOFF: I am. I am waiting for
7 Mr. MaRous.

8 MS. CHILCOTE: Mr. MaRous, you have been
9 promoted to panelist. You can turn your camera on.
10 I have unmuted you.

11 THE WITNESS: Can you hear me?

12 MS. CHILCOTE: We can. Can you turn your
13 camera on for us.

14 THE WITNESS: Yes. I just got to get the
15 mouse on the screen. Do you see me?

16 ALJ AGRANOFF: Yes, I do. Good morning,
17 Mr. MaRous.

18 THE WITNESS: Good morning, counsel.

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

21 (Witness sworn.)

22 ALJ AGRANOFF: Please proceed,
23 Mr. Secrest.

24 MR. SECREST: Thank you, your Honor.

25 - - -

1 MICHAEL MAROUS

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. MaRous.

7 A. Good morning, counsel.

8 Q. Would you please state your full name for
9 the record.

10 A. Michael S. MaRous.

11 Q. Will you please let us know by whom you
12 are employed and your business address.

13 A. I am employed by MaRous & Company, a real
14 estate appraisal consulting firm located at 300 South
15 Northwest Highway, Suite 204, Park Ridge, Illinois.

16 Q. Thank you, Mr. MaRous. Do you have in
17 front of you your prefiled direct testimony?

18 A. I do.

19 Q. And is that a true and accurate copy of
20 your prefiled testimony?

21 A. It is.

22 Q. Do you have any changes to that
23 testimony?

24 A. I do not.

25 MR. SECREST: Thank you.

1 Your Honor, may I have Mr. MaRous's
2 prefiled direct testimony marked as Applicant's
3 Exhibit 40?

4 ALJ AGRANOFF: It shall be so marked.

5 (EXHIBIT MARKED FOR IDENTIFICATION.)

6 MR. SECREST: And I also tender
7 Mr. MaRous for cross-examination.

8 ALJ AGRANOFF: Thank you.

9 Mr. Van Kley.

10 - - -

11 CROSS-EXAMINATION

12 By Mr. Van Kley:

13 Q. Good morning, Mr. MaRous.

14 A. Good morning, counsel.

15 Q. Let's learn a little bit about your
16 experience and background. Are you a real estate
17 broker?

18 A. In the state of Illinois, yes.

19 Q. Uh-huh. And do you -- are you engaged in
20 the purchase and sale of -- let me ask you this, are
21 you engaged in assisting customers in the purchase
22 and sale of properties?

23 A. On an occasional basis.

24 Q. Well, during the last year, how many
25 transactions have you been involved with?

1 A. Approximately 5 to 10.

2 Q. So how much of your time would you say is
3 spent in assisting clients in the sale or purchase of
4 properties?

5 A. As a broker?

6 Q. Yes.

7 A. Less than 5 percent.

8 Q. Are you familiar with the term "paired
9 sales analysis"?

10 A. I am.

11 Q. Okay. Would you explain what that term
12 means?

13 A. Simply, it is taking two comparable
14 properties that are quite similar, with the one
15 property being proximate in this situation to a
16 turbine, and a comparable property that's not
17 proximate to a turbine. Analysis and adjustments are
18 made to determine for that factor if an adjustment is
19 necessary.

20 Q. Would you say that it is accurate to
21 state that a paired sales analysis compares
22 transactions of properties with similar
23 characteristics, one of which is affected by a factor
24 and the other which is not?

25 A. That's a fair analysis, yes.

1 Q. And in order for a paired sales analysis
2 to be valid, the properties to be compared should be
3 nearly identical except for the factor being
4 analyzed?

5 A. Ideally, yes. But identical is not
6 something that generally happens in market condition.

7 Q. Would you go to your prefiled direct
8 testimony identified as Applicant Exhibit 40. And I
9 would like to start with some questions about
10 Answer 8 on page 4.

11 A. I am there.

12 Q. Okay. Great. Now, in this answer, you
13 state that you reviewed some sales transactions in
14 Paulding County, Ohio, using a paired sales analysis,
15 correct?

16 A. Correct.

17 Q. And in -- in that exercise you paired
18 four homes that are located nearby a wind project
19 with other homes that are not located near a wind
20 project, correct?

21 A. Correct.

22 Q. In other words, you did -- you did four
23 paired sales analyses there, right?

24 A. Correct.

25 Q. Can you tell me how many homes with views

1 of turbines in Paulding County have been sold since
2 the wind farms were built there?

3 A. I cannot provide the exact number. I can
4 provide some -- a general answer to that question.

5 Q. Go ahead.

6 A. Somewhere probably in excess of 50 since
7 the first wind farm I think was opened in about 2012,
8 approximately.

9 Q. But you did not include all of these
10 homes in your study, correct?

11 A. Correct.

12 Q. You only chose four of those homes to
13 include in your study?

14 A. Correct.

15 Q. Did you do anything to determine whether
16 the four homes you selected had a view of at least
17 one wind turbine?

18 A. Yes, I did.

19 Q. How did you go about doing that?

20 A. No. 1, I drove the properties; and,
21 No. 2, I used Google Earth to look at an aerial view,
22 where possible, also more of a street view.

23 Q. In Answer 8 of your testimony, you also
24 refer to paired sales data in areas of several other
25 states, correct?

1 A. Yes.

2 Q. Were those paired sales analyses that you
3 personally performed?

4 A. Correct.

5 ALJ AGRANOFF: When you say "correct,"
6 are you saying that you did perform those analyses or
7 that you did not?

8 THE WITNESS: No, I did, your Honor.

9 ALJ AGRANOFF: Okay.

10 Q. (By Mr. Van Kley) Let's go to page 5 of
11 your testimony. And we'll talk for a while about
12 your answer to Question 9.

13 A. Yes.

14 Q. In the first paragraph of your answer to
15 Question 9 you state that you conducted a survey of
16 county auditors or a deputy auditor in three counties
17 in which wind farms with more than 25 turbines
18 currently are operational. Are those all counties in
19 Ohio?

20 A. Yes.

21 Q. Which counties did you conduct this
22 survey for?

23 A. Would it be possible to look at my report
24 to be accurate?

25 Q. Sure. Absolutely.

1 A. Thank you.

2 Q. And by your report, what are you
3 referring to? Are you referring to a report attached
4 to your testimony?

5 A. Yes. On Roman numeral XXIV page, which
6 is in the addenda of that report, the three counties
7 are Hardin, Paulding, and Van Wert.

8 Q. Did you conduct a similar survey of real
9 estate agents in any other Ohio county?

10 A. I don't understand the question because
11 we were talking about auditors and deputy auditors,
12 and that answer is I did conduct that survey where
13 there are wind farms over 25 turbines. I didn't
14 conduct that survey in areas where there were not
15 wind farms. I did talk to and interview brokers in
16 Paulding and Van Wert.

17 Q. Are you aware of any Ohio counties, other
18 than the three counties you named, in which there are
19 more than 25 wind turbines located?

20 A. Not that have been operating, you know,
21 for over six months, no.

22 Q. With regard to the report that you
23 attached to your testimony which is entitled "Market
24 Impact Analysis, Emerson Creek Wind Farm, Erie, Huron
25 and Seneca County, Ohio," is that a peer-reviewed

1 paper?

2 A. No, it is not.

3 Q. Do you consider it to be accurate
4 notwithstanding that it's not peer reviewed?

5 A. I do consider it to be accurate.

6 Q. Going back to your answer to Question 9
7 on page 5 of your testimony identified as Applicant
8 Exhibit 40, let me ask you a few more questions about
9 that answer. Isn't it true that county auditors have
10 an incentive to keep their tax revenues for their
11 counties at a steady level?

12 MR. SECREST: Objection, speculation.

13 ALJ AGRANOFF: I'll allow the question
14 from the standpoint of him giving his understanding
15 or opinion as to how county auditors may -- may focus
16 on the property values within their counties.

17 A. My experience which is significant in
18 real estate tax valuation and also as a former public
19 official, generally it is the objective to maintain
20 and increase tax levels where possible and where
21 legal.

22 Q. Go to the first bullet point in your
23 answer to Question 9 on page 5 of your testimony.

24 A. I'm there.

25 Q. This bullet point reads as follows:

1 Without exception, the auditors reported that there
2 was no market evidence to support a negative impact
3 upon residential property values as a result of the
4 development of and the proximity to a wind farm
5 facility. In some counties, the results from the
6 very real -- from the very rural nature of the area
7 in which the projects are located.

8 My question to you here is, whether you
9 are aware of any studies that have been performed by
10 the county auditors to support what they reported to
11 you as stated in this part of your answer?

12 A. That's -- that's a very good question and
13 that is an inquiry that I make when I interview the
14 auditors, and it appears that informal studies have
15 been made but nothing that was officially published.

16 Q. Did they provide you copies of any
17 informal studies?

18 A. They did not.

19 Q. So how did you communicate with these
20 county auditors or deputy auditors to obtain the
21 information you included in Answer 9 of your
22 testimony?

23 A. It's a little bit of a detailed answer,
24 but simply an investigation is done based on the
25 publication of wind facilities within the state and

1 within the county and that identification of the
2 various wind farms and generally the number of
3 turbines and the capacity. Then research is done to
4 find the name of the auditor and the phone number,
5 and I personally call them to request a phone
6 appointment at their convenience.

7 And at that point a phone appointment is
8 made, and then there basically is a conversational
9 interview discussing what I'm doing, why I'm doing
10 it, and then going into specific questions as to
11 their familiarity, and have there been any appeals
12 that were made, have any appeals been granted, have
13 there been any hearings, have they done studies of
14 the area where the wind has been developed, do they
15 live proximate to a wind farm, or do people in their
16 office have that experience, what feedback are they
17 getting from the local brokers, and are they valuing
18 property or making any adjustments plus or minus for
19 proximity to a turbine compared to similar properties
20 that are not proximate to a turbine.

21 And then it may have some additional
22 discussion as to other types of development that
23 create potential negative value and sometimes the
24 common response is a hog farm or dairy farm or coal
25 facility, and then what are the economic drivers of

1 the area, what are the trends of development, what
2 are the factors they are seeing that are positively
3 impacting value. So that's the tone of the
4 discussion.

5 Q. So you obtained this information by
6 talking to the county auditors or deputy auditors by
7 telephone.

8 A. Correct.

9 Q. During the second bullet point of
10 Answer 9 which states as follows: "In the past 18
11 months, the auditor's offices have not experienced a
12 real estate tax appeal based on wind farm-related
13 concerns. There have been no reductions in assessed
14 valuations related to wind turbines." Did I read
15 your testimony correctly?

16 A. Yes, you did.

17 Q. How long have wind farms existed in the
18 counties included in your survey?

19 A. Beginning of 2011.

20 Q. So that would be nine years ago at at
21 least one location.

22 A. Yes.

23 Q. But your question to auditors' office --
24 offices was whether just in the past 18 months
25 they've experienced an appeal.

1 A. That's correct. Because of sometimes
2 changes in the office or because of the volume of
3 number of properties they had, they don't necessarily
4 recall all the specifics. In every one of these
5 cases they were not aware of any successful appeals
6 since any of these wind farms came online.

7 But just to be tighter, I utilized 18
8 months. I could have easily so stated "since the
9 inception of the farm," but as you can see, you know,
10 one was opened in '11, one in '12, one in '16, one in
11 '17, and one in '18. And generally until we start
12 construction, there really wouldn't be any relevance
13 or opportunity to observe any tax appeals.

14 ALJ AGRANOFF: If I could ask just one
15 clarifying question. With respect to the response in
16 Question 9, was the premise that there were no more
17 than 25 turbines in total within the county or no
18 wind farms that were comprised of 25 or more
19 turbines?

20 THE WITNESS: 25 turbines in the county,
21 your Honor.

22 ALJ AGRANOFF: So 25 in total.

23 THE WITNESS: Correct.

24 ALJ AGRANOFF: Okay. Thank you.

25 Q. (By Mr. Van Kley) So in Paulding County,

1 with whom did you have your interview to obtain the
2 determination that you put in this answer?

3 A. I spoke with a series of brokers that
4 were involved in the residential transactions in
5 Paulding County. The first I think was a Dustin
6 Stoller who was involved in Comparable 2A who, you
7 know, verified that that property sold in the first
8 day that it was on the market and there was
9 absolutely no negative influence from the existence
10 of turbines.

11 I spoke with three other brokers who had
12 involvement with over 40 properties proximate to
13 turbines. I didn't memorize their names. I've got
14 additional information that I could answer that with
15 that's not in my report but there were a couple that
16 were generally the larger residential brokerage firms
17 in the Paulding market. And I had extensive
18 discussions with all of them in regard to the
19 development in wind in Paulding, and we discussed the
20 economics. We discussed the positive impact on the
21 schools and the fact that it became part of the
22 fabric of the community and just another agricultural
23 part of their area.

24 Q. Who in the county -- who in the Paulding
25 County Auditor's Office did you have the discussion

1 with that provided you the information from the
2 auditors that you included in Answer 9 of your
3 testimony?

4 A. Claudia -- Claudia Fickel, F-i-c-k-e-l.

5 Q. And is that the auditor?

6 A. She is either the auditor or the deputy
7 auditor but is involved in the valuation and setting
8 valuations of the parcels in Paulding County.

9 Q. And how long had she been in the --
10 employed by the county auditor's office at the time
11 you spoke to her?

12 A. I don't recall.

13 Q. You don't recall whether she had been
14 there longer than 18 months?

15 A. Well, I recall that she was experienced
16 over a considerable time period with the valuation
17 and value trends and impacts of turbines. How long
18 exactly she had her position, that I do not recall.

19 Q. Refresh my memory on the other two
20 counties or whose auditors or deputy auditors you
21 interviewed.

22 A. Sure. In Hardin, Michael Bacon. In Van
23 Wert, Philip Baxter.

24 Q. Okay. So the interview in the Hardin
25 County Auditor's Office, was that the auditor or

1 another employee?

2 A. Again, I didn't differentiate. He was
3 either the auditor or the deputy auditor.

4 Q. And do you know how long he had been
5 employed by the auditor's office at the time that you
6 interviewed him?

7 A. The exact longevity, no. But again, he
8 had experience with valuation and experience with the
9 Hardin real estate market and values for quite some
10 time.

11 Q. And with regard to your interview of the
12 person in the Van Wert County Auditor's Office, do
13 you know how long that person had been employed in
14 that office?

15 A. Mr. Baxter a similar answer there. The
16 exact longevity, no, but appeared to have significant
17 experience over a long time period and quite frankly
18 the big wind farm Blue Creek kind of is also in
19 Paulding and Van Wert so there's -- my understanding
20 there is some uniformity and some discussion between
21 the county auditors in looking at the impact of that
22 very large wind farm of 152 turbines.

23 Q. Let's go to the fourth bullet point of
24 your answer to Question 9 in your testimony. The
25 bullet states as follows: "Agricultural properties

1 are taxed based upon a productivity formula that is
2 not impacted by market data and external influences."

3 Did I read that correctly?

4 A. Yes, you did.

5 Q. The productivity formula that you're
6 referencing here is also known as the CAUV value in
7 Ohio?

8 A. Yes.

9 Q. And that productivity formula provides
10 that if land is used for an agricultural purpose,
11 then the land is based on its value for farming,
12 correct?

13 A. Yes.

14 Q. And it's based on the -- on the income
15 from farming that you would expect that land to have,
16 correct?

17 A. That is one of the measures, correct.

18 Q. Uh-huh. It's -- that productivity
19 formula is not based on what you would expect to sell
20 that property for on the open market, correct?

21 A. Correct.

22 Q. Let's go to page 6 of your testimony.

23 A. I have it.

24 Q. I would like to ask you some questions
25 about what you refer to as the LBNL study. This

1 study is not a paired sales study, correct?

2 A. That's correct.

3 Q. And, in fact, this -- the report on this
4 study gives examples of 24 different variables that
5 apply to the properties that were evaluated in that
6 study?

7 A. It provides many variables. I don't
8 recall if 24 is the exact number but that sounds
9 about correct.

10 Q. Do you recall how many of the properties
11 studied in the LBNL study were located within 1 mile
12 of a wind turbine?

13 A. The exact number, I would have to review
14 to provide that answer.

15 Q. Isn't it true that the number of
16 properties included in that study that were located
17 within 1 mile of a wind turbine and with a view of a
18 wind turbine constituted about 2 percent of the
19 entire dataset used for the modeling in that study?

20 MR. SECREST: Objection, asked and
21 answered. The witness said he would have to review
22 it.

23 MR. VAN KLEY: Well, I asked him
24 previously about the number. I am asking him now
25 about the percentage.

1 A. The exact --

2 ALJ AGRANOFF: One moment. One moment.

3 THE WITNESS: Sorry.

4 ALJ AGRANOFF: If you are able to opine
5 on the percentage without knowing the number, you are
6 certainly free to respond.

7 THE WITNESS: Sorry, your Honor.

8 ALJ AGRANOFF: That's okay.

9 A. Without all the facts and doing a review,
10 I would not be able to accurately answer that
11 question.

12 Q. You didn't review that information for
13 purposes of preparing your testimony?

14 A. I -- I reviewed it, but I did not
15 memorize it.

16 Q. Can you provide me with an approximate
17 percentage of the properties evaluated in that study
18 that were located within a mile of a wind turbine?

19 MR. SECREST: Objection, asked and
20 answered, and speculation.

21 MR. VAN KLEY: Previously I asked him
22 whether he knew the exact number, and now I am asking
23 whether he can approximate it.

24 ALJ AGRANOFF: I will allow the question
25 to the extent the witness knows.

1 A. Again, not knowing the specifics, as I
2 recall, approximately less than 10 percent. But
3 there were quite a few numbers of properties that
4 were included in this study. There were a lot of
5 numbers.

6 Q. Have you reviewed the visual impact
7 report included in the application for the Emerson
8 Creek wind project?

9 A. Not specifically. I am aware there is
10 one that was done, but in -- for this hearing I have
11 not reviewed it.

12 Q. So do you know how many wind turbines
13 will be visible to the properties located near the
14 project area?

15 A. That's not a question that can be
16 accurately answered because there's a variable with
17 the number of turbines that will be built, No. 1.
18 It's also a variable as to the view shields around
19 many of the residential properties that basically
20 limit viewing. And, No. 3, it's limited by weather
21 conditions. So that's not a specific answer that I
22 can provide because it's not possible.

23 Q. So you don't know whether the visual
24 impact analysis included in the report contains
25 answers to the three factors you just mentioned.

1 MR. SECREST: Objection. The witness
2 indicated he had not reviewed that.

3 ALJ AGRANOFF: I'll sustain the
4 objection.

5 Q. (By Mr. Van Kley) Let's go to page 8 of
6 your testimony.

7 A. Yes.

8 Q. And I would like to direct your attention
9 to Question and Answer 17 where you state that you
10 are not aware of any peer-reviewed study that has
11 concluded that wind turbines have an impact on
12 property values. Did I read that correctly?

13 A. You did.

14 Q. Are you aware of any studies that are not
15 peer-reviewed that have concluded that wind turbines
16 have a negative impact on property values?

17 A. There are many blogs that are on the
18 internet that have that conclusion just like in legal
19 opinions where there are different opinions.
20 Appraisers are -- appraisers have different opinions,
21 and I have seen other real estate professionals
22 provide both supportive and negative opinion.

23 Q. Are you aware of any studies whose
24 reports have been published in journals that have
25 indicated that property values are negatively

1 impacted by wind turbines?

2 A. The answer is yes.

3 Q. Okay. And how many such studies are you
4 aware of?

5 A. The only study that's been published in a
6 journal that I'm aware of is one that just came out
7 mid summer of this year that I became aware of after
8 my direct testimony was completed. The other I guess
9 you call them studies are information that I've seen
10 on blogs and on people's website, but I'm not aware
11 they've been published in a professional journal.

12 Q. Do you have available to you what's been
13 marked as LR Exhibit 7?

14 A. I do.

15 (EXHIBIT MARKED FOR IDENTIFICATION.)

16 Q. Okay. And this exhibit is entitled "Wind
17 Turbines, Solar Farms, and House Prices," correct?

18 A. That's correct.

19 Q. And the authors are Martijn Droes and
20 Hans Koster.

21 A. Correct.

22 Q. Is this the study that came to your
23 attention that you discussed?

24 A. Yeah. It was published in July of 2020.
25 That's correct.

1 Q. Yeah. And did you become aware of this
2 study for the first time because it was provided to
3 you as an exhibit in this proceeding?

4 A. No.

5 Q. How did you find out about this study?

6 A. I or others in my office track
7 peer-reviewed studies and publications and articles,
8 and I believe I became aware of it maybe a week or so
9 before I was made aware that it was an exhibit in
10 this matter.

11 Q. So did you find out about it only after
12 you had submitted your written direct testimony in
13 this case, or did you know about it before you did
14 that?

15 A. No, after I submitted my direct
16 testimony.

17 Q. Let's go to the third page of LR
18 Exhibit 7 which contains the abstract for the paper.

19 A. Yes, sir.

20 Q. And I would like to direct you to a
21 sentence or two sentences that start at the fifth
22 line of that abstract starting with the words "Using
23 detailed data."

24 A. I'm looking at it.

25 Q. Okay. Let me read those two sentences to

1 you and then I have a question or two about them.
2 The sentences state: "Using detailed data from the
3 Netherlands between 1985 to 2019, the results show
4 that tall wind turbines have considerably stronger
5 effects on house prices, as compared to small
6 turbines. For example, a tall turbine, more than
7 150 meters, decreases house prices within 2
8 kilometers by 5.4 percent, while a small turbine,
9 less than 50 meters, has an effect of 2 percent at
10 most and the effect quickly dissipates after 1
11 kilometer." Did I read the sentences correctly?

12 A. You did.

13 Q. Okay. So have you reviewed this paper?

14 A. I have.

15 Q. Okay. And so based on this information,
16 the paper is based on data from the Netherlands
17 between 1985 and 2019, correct?

18 A. That's what it says, yes.

19 Q. And according to this report, the authors
20 found that the presence of tall wind turbines has a
21 negative effect on house prices, correct?

22 A. It's an interesting question, Counsel.
23 In some parts it does, and some parts it does not.
24 But there's more to this study when properly
25 analyzing it, taking -- or learning from the study

1 that was done and as it may impact the subject
2 property in Ohio.

3 Q. Okay. Well, let's talk a little bit more
4 about what you just said and specifically what the
5 paper says in that regard.

6 Where do you see information showing that
7 the turbines have a negative effect on house prices?
8 Let's start with that.

9 A. I am going to start to answer that
10 question, if you don't mind, with basically page 2,
11 the last full paragraph which states "These
12 Discussion Papers often represent preliminary or
13 incomplete work, circulated to encourage discussion
14 and comment." And two paragraphs above that, "Any
15 opinions expressed here are those of the author(s)
16 and not those of the Centre for Economic Policy
17 Research."

18 Then throughout the report there's, you
19 know, a discussion that makes reference to impacts of
20 market conditions, makes reference to impacts in
21 relation to density, makes reference to impacts of
22 coastal conditions with higher-valued properties.
23 And makes -- and it makes discussion with other
24 studies that have been done and so -- and just to be
25 on the record, comparing the Netherlands to the

1 subject counties located, the population density is
2 almost 9 times in the Netherlands than it is in the
3 subject-market counties, and the housing -- average
4 housing price is almost triple so it's really -- plus
5 it's a different country so it's really kind of an
6 apples-and-oranges comparison.

7 Q. Well, let's go through everything you
8 just said. Let's start with the statements on the
9 second PDF page of LR Exhibit 7. And you were
10 reading from the last paragraph on that page just
11 above the copyright notice, correct?

12 A. That's correct.

13 Q. It says there that "These Discussion
14 Papers often represent preliminary or incomplete
15 work, circulated to encourage discussion and
16 comment." And that advisory is -- is a general one
17 related to discussion papers issued under the
18 auspices of the Centre for International Trade and
19 Regional Economics, correct?

20 A. Which the subject falls under, yes.

21 Q. Okay. So this advisory doesn't
22 specifically say that this paper represents
23 preliminary or incomplete work, does it?

24 MR. SECREST: Objection,
25 mischaracterization. That's exactly what it says.

1 MR. VAN KLEY: That's exactly what it
2 does not say and that's why I am asking him.

3 Q. Do you need the question repeated?

4 ALJ AGRANOFF: One moment. Does the
5 witness have familiarity with that particular
6 paragraph that we're looking at right now?

7 THE WITNESS: Just what I've read, your
8 Honor. And information and doing the research in
9 regard to the -- basically the organization that it
10 was published under.

11 ALJ AGRANOFF: Do you have familiarity
12 with statements such as this in other papers?

13 THE WITNESS: I have seen them, yes.

14 ALJ AGRANOFF: Okay. Then I will allow
15 the question.

16 A. Could you restate the question, please?

17 Q. Yeah. Let me just -- I'll just restate
18 it rather than reread -- rather than reading it.
19 This statement states that discussion Papers often
20 represent preliminary or incomplete work, rather than
21 saying that all of them represent preliminary or
22 incomplete work, correct?

23 A. It's basically in almost the title page
24 of the document so that's an interpretation
25 obviously. It's referencing all the papers which

1 would include the subject.

2 Q. But it says they often represent
3 incomplete or preliminary work, right, not that they
4 always do.

5 MR. SECREST: Objection, asked and
6 answered.

7 MR. VAN KLEY: Well, he evaded the
8 question.

9 ALJ AGRANOFF: He can confirm that the
10 document indicates that these discussion papers often
11 represent.

12 A. That's what the document says. That's my
13 answer.

14 Q. Okay. Do you see any statements in LR
15 Exhibit 7 that specifically represents that this
16 paper is preliminary or incomplete work? And if so,
17 would you point to it.

18 A. Sure. The title page called it
19 "Discussion Paper Series." The second page again in,
20 I guess, the fourth line "Discussion Paper." Then in
21 the first introductory it calls it "This Discussion
22 Paper." After the first bullet point, the paragraph
23 references again that these are the opinions of the
24 authors and not those of the Centre for Economic
25 Policy. And kind of follows up with similar

1 disclaimers. Then we already discussed what I would
2 say the last full paragraph representing a
3 preliminary paper or incomplete work.

4 ALJ AGRANOFF: And that last full
5 paragraph you are referencing is on what page?

6 THE WITNESS: It's not numbered. It's
7 just the page that has a bolded title of "Wind
8 Turbines, Solar Farms, and House Prices."

9 ALJ AGRANOFF: So it's the third page of
10 the PDF?

11 THE WITNESS: I believe it's the second
12 page of the PDF.

13 ALJ AGRANOFF: Well, the first one is the
14 "Discussion Paper Series."

15 THE WITNESS: Yes.

16 ALJ AGRANOFF: And then the next one
17 would be "Wind Turbines, Solar Farms, and House
18 Prices."

19 THE WITNESS: Correct. That's the page I
20 am referring to.

21 ALJ AGRANOFF: Okay.

22 Q. (By Mr. Van Kley) That's the same
23 paragraph you and I have been discussing that states
24 these discussion papers often represent preliminary
25 or incomplete work, correct?

1 A. That's correct. I'm just going through
2 the relatively lengthy document. I would say that
3 probably summarizes it. I mean, there's also a lot
4 of statements and a lot of numbers and a lot of words
5 throughout. It's a numbered 26 pages document with
6 looks like three footnoted pages thereafter, 27, 28,
7 and 29.

8 Q. With regard to the reference to this
9 study as -- or this report as a discussion paper, all
10 of the papers in the Discussion Paper Series for the
11 Centre on International Trade and Regional Economics
12 are called "Discussion Papers," correct?

13 MR. SECREST: Objection to speculation
14 unless the witness has reviewed other papers.

15 A. As I --

16 ALJ AGRANOFF: One moment, Mr. MaRous.
17 Please wait after an objection is stated. If you
18 could wait until giving your response so a ruling
19 could be made.

20 If you are aware of the answer to the
21 question that was asked of you, you can respond. And
22 if you need the question read back, we can do that.

23 A. I cannot provide an answer because I have
24 not reviewed all of the papers in the discussion
25 series.

1 Q. Earlier you stated that this report or
2 the study described in this report is an
3 apples-to-oranges comparison to studies that would
4 involve real estate in the United States; is that an
5 accurate paraphrase of what you said?

6 A. No.

7 Q. All right. Why don't you say it again.

8 A. The study or discussion paper that was
9 published in the Netherlands that has almost 9-plus
10 times the population density of the Erie, Huron, and
11 Seneca County areas and almost three times the
12 average house value plus including sales and markets
13 in coastal markets, in my opinion is an
14 apples-and-oranges comparison to the project in Erie,
15 Huron, and Seneca County, Ohio.

16 Q. Okay. Let's talk about each one of those
17 factors then. Why do you think that greater density
18 of houses in the Netherlands makes a difference?

19 A. Since -- sorry. Simply population
20 density tends to reflect more urbanized areas which
21 generally reflects a different character and many
22 times reflects a different character of development
23 and economic factors.

24 Q. Why does that make a difference in the
25 impact a turbine would have on house values?

1 A. Because it's not a comparable situation
2 and proximity situation. The subject area has a
3 significant rural aspect. It's not in a coastal or
4 basically an urban market and it is simply generally
5 reflected by the differences in population density.

6 Q. Why does that make a difference in the
7 house prices as affected or not affected by the
8 turbines?

9 A. Well, the further check is to look at
10 average house prices and the average house prices in
11 the Netherlands are almost triple the average house
12 prices in the three counties the subject is located
13 so it further corroborates, but generally with
14 greater density, greater intensity of use, greater
15 economic opportunity, the house prices will be
16 higher.

17 Q. So the house prices would be -- the house
18 prices would be higher in the Netherlands?

19 A. Oh, they are higher. They average
20 \$360,000 when euros are converted to dollars.

21 Q. Uh-huh.

22 A. I'm just using the information, the
23 dataset that this -- these authors provided and then
24 compared it to the subject in the three counties in
25 Ohio and basically the economic influences on the

1 subject counties.

2 Q. Is it your opinion that a higher-value
3 house will be more greatly impacted by the nearby
4 presence of a wind turbine than a smaller-valued
5 house?

6 A. Well, that's a very general question.
7 And again, in these three counties, the average house
8 price is a little less than \$130,000. And in the
9 country in the Netherlands it's about \$360,000. And
10 it's a whole different character and change of the
11 area, more urbanized, more coastal, so it's a
12 different comparison and it tends to go with the
13 consistency of development.

14 And the subject area has relatively low
15 density. It's rural. It's a rural economy
16 influenced obviously by crops and dairy and many
17 times other animal products, and wind and solar are
18 just another part of the agricultural community so
19 it's a different comparison when looking at a coastal
20 and urban environment.

21 Yet, if the average house price is a
22 million dollars, do you look at it differently? You
23 have to go to the market to look at the market. In
24 this situation really the best market was Paulding
25 and it had excellent comparison, a lot of sales

1 transactions, a lot of visibility of turbines, and
2 the brokers stating that no negative impact and
3 actually positive to the schools and positive to the
4 economy. That's the apples-to-apples comparison
5 rather than going, you know, to Europe for an
6 entirely different comparison.

7 Q. Yeah. So going back to the question that
8 I actually asked, can you tell me whether a home with
9 a higher value generally has a -- experiences a
10 greater impact from the presence of wind turbines
11 than a home of lower value?

12 A. And that's a good question. And the
13 answer it really depends because it goes to the
14 fabric of the economy. And when the addition of a
15 wind farm adds to the economic vitality and viability
16 of an economy, it benefits the entire area. Do you
17 look at higher price points as another data point to
18 look at? Sure, but it depends on the situation. So
19 it's not a black and white answer.

20 Q. Go to page 7 of LR Exhibit 7.

21 A. I'm there.

22 Q. Go to the heading for Data, Section 3,
23 then under that do you see a Section 3.1 entitled
24 "Data on wind turbines and housing values"? Are you
25 there?

1 A. I am.

2 Q. Okay.

3 ALJ AGRANOFF: What page is that again?

4 MR. VAN KLEY: That's on page 7.

5 ALJ AGRANOFF: 7 of 7, okay.

6 MR. VAN KLEY: Yeah. Not PDF page 7 but
7 7 of the actual report.

8 ALJ AGRANOFF: Thank you.

9 Q. (By Mr. Van Kley) You see there the
10 second sentence in that paragraph states: "We define
11 turbine height as the axis height plus half the
12 diameter of the rotor blades," correct?

13 A. Yes, that's what it says.

14 Q. Okay. Is the axis of a wind turbine the
15 same thing as the hub of the wind turbine?

16 A. I believe so.

17 MR. VAN KLEY: All right. I think I have
18 no further questions at this time.

19 ALJ AGRANOFF: Thank you.

20 Before we get to redirect, any clarifying
21 questions from other counsel?

22 If not, Mr. Secrest.

23 MR. SECREST: Your Honor, may I have a
24 few minutes to confer with those who are smarter than
25 me?

1 ALJ AGRANOFF: Yes. Why don't you take a
2 10-minute break?

3 MR. SECREST: Perfect. Thank you, your
4 Honor.

5 ALJ AGRANOFF: You're welcome. Thank
6 you.

7 (Recess taken.)

8 ALJ AGRANOFF: Let's go back on the
9 record.

10 Karen, are you good? Okay. And at this
11 time, Mr. Secrest.

12 MR. SECREST: Thank you, your Honor.

13 - - -

14 REDIRECT EXAMINATION

15 By Mr. Secrest:

16 Q. Mr. MaRous, are Market Impact Analyses,
17 such as the one you prepared for this project and
18 that is attached to your prefiled direct testimony,
19 are those typically peer reviewed?

20 A. No, they are not.

21 MR. SECREST: Okay. Thank you,
22 Mr. MaRous.

23 Nothing further, your Honor.

24 ALJ AGRANOFF: Thank you. Based on that
25 limited question, Mr. Van Kley, anything on recross?

1 MR. VAN KLEY: Nothing, nothing further.

2 ALJ AGRANOFF: Okay. Thank you.

3 THE WITNESS: Thank you. I will sign
4 off.

5 ALJ AGRANOFF: Not yet.

6 THE WITNESS: Okay.

7 ALJ AGRANOFF: Stay where you are.

8 - - -

9 EXAMINATION

10 By ALJ Agranoff:

11 Q. I just wanted to go back, Mr. MaRous, and
12 make sure that you and I were saying the same thing
13 with respect to your answer in Question 9 of your
14 direct testimony. Let me know when you are there.

15 A. Yes, your Honor. I'm there.

16 Q. Okay. And I had asked you whether or not
17 your focus was on counties where there were 25
18 turbines or more -- or more than 25 turbines situated
19 in those specific counties and you said that was your
20 focus and that it was not looking at wind farms that
21 had 25 turbines or more in -- on that particular
22 project. Is that what your answer was?

23 A. Yes, your Honor.

24 Q. Okay. And -- but then when I am looking
25 at your response to that question and if you look at

1 the second line to your answer there, I believe there
2 you are talking about wind farms with more than 25
3 turbines currently in operation.

4 A. So both are correct. So the basic cutoff
5 is 25 in a county and then generally the only
6 information available becomes with a larger probably
7 over 10 turbines in a wind farm and 25 is probably
8 the natural break for the size of the beginning of
9 wind farm.

10 Q. Okay. So in actuality you were looking
11 at wind farms that had 25 or more turbines?

12 A. Generally speaking, that's correct, yes.

13 Q. Okay. Thank you.

14 A. Sorry for the confusion.

15 ALJ AGRANOFF: That's okay. That's why
16 we go through these questions.

17 Based on my one question, any follow-up
18 from counsel?

19 MR. SECREST: No, your Honor. Thank you.

20 ALJ AGRANOFF: Mr. Van Kley? You're on
21 mute.

22 MR. VAN KLEY: The answer is still no.

23 ALJ AGRANOFF: Okay. Thank you.

24 At this time, Mr. Secrest, would you like
25 to deal with the exhibits associated with Mr. MaRous?

1 MR. SECREST: Thank you, your Honor. May
2 the Applicant move for admission of what has been
3 marked as Applicant Exhibit 40.

4 ALJ AGRANOFF: Any objection?

5 MR. VAN KLEY: No objection.

6 ALJ AGRANOFF: Exhibit 40 shall be
7 admitted as part of the record at this time.

8 (EXHIBIT ADMITTED INTO EVIDENCE.)

9 ALJ AGRANOFF: And anything else from
10 you, Mr. Van Kley?

11 MR. VAN KLEY: Yes. We would like to
12 move the admission of LR Exhibit 7.

13 ALJ AGRANOFF: Any objection?

14 MR. SECREST: None, your Honor. Thank
15 you.

16 ALJ AGRANOFF: There being no objection,
17 the aforementioned exhibit will be admitted as part
18 of the record at this time.

19 (EXHIBIT ADMITTED INTO EVIDENCE.)

20 ALJ AGRANOFF: And now, Mr. MaRous, you
21 are free to go.

22 THE WITNESS: Thank you, your Honor.
23 Appreciate it. Have a good day.

24 ALJ AGRANOFF: You as well. Thank you.

25 THE WITNESS: Yeah. Bye.

1 ALJ AGRANOFF: And why don't we go off
2 the record for a moment.

3 (Discussion off the record.)

4 (Thereupon, at 11:51 a.m., a lunch recess
5 was taken.)

6 - - -

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1 Thursday Afternoon Session,
2 October 8, 2020.

3 - - -

4 ALJ AGRANOFF: Let's go back on the
5 record.

6 And I believe, based on the conversations
7 that we had before we took lunch, that we are going
8 to now proceed with Mr. Doyle.

9 MR. SECREST: That's correct, your Honor.
10 May the Applicant call Benjamin Doyle to the stand.

11 ALJ AGRANOFF: Heather, could you please
12 have Mr. Doyle promoted.

13 MS. CHILCOTE: Mr. Doyle, you have been
14 promoted. You can turn on your video and speak at
15 this time.

16 THE WITNESS: Good afternoon, everybody.

17 ALJ AGRANOFF: Good afternoon, Mr. Doyle.

18 THE WITNESS: Good afternoon, your Honor.

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

21 (Witness sworn.)

22 ALJ AGRANOFF: Thank you. Mr. Secrest.

23 MR. SECREST: Thank you, your Honor.

24 - - -
25

1 BENJAMIN M. DOYLE

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 afternoon, Mr. Doyle. How are you?

7 A. Good, sir. How are you?

8 Q. Well. Thank you.

9 Will you please state your full name for
10 the record.

11 A. Benjamin Matthew Doyle.

12 Q. Thank you. And will you please let us
13 know by whom you are employed and your business
14 address.

15 A. Capitol Airspace Group, 5400 Shawnee
16 Road, Suite 304, Alexandria, Virginia, 20 -- 22312.

17 Q. Thank you. Do you have in front of you
18 your prefiled direct testimony?

19 A. I do.

20 MR. SECREST: Your Honor, may I move to
21 have that marked as Applicant Exhibit 43.

22 ALJ AGRANOFF: It shall be so marked.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 MR. SECREST: Thank you.

25 Q. Mr. Doyle, is that a true and accurate

1 copy of your prefiled testimony?

2 A. It is.

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

5 A. I do not.

6 MR. SECREST: I tender Mr. Doyle for
7 cross-examination, your Honor.

8 ALJ AGRANOFF: Thank you.

9 Mr. Van Kley.

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

11 - - -

12 CROSS-EXAMINATION

13 By Mr. Van Kley:

14 Q. And good afternoon, Mr. Doyle.

15 A. Good afternoon, sir.

16 Q. Are you a pilot?

17 A. No, sir.

18 Q. Have you ever possessed a pilot's
19 license?

20 A. No.

21 Q. In preparation for your work on the
22 Emerson Creek wind project or during -- during that
23 work, did you identify the airports that are in the
24 vicinity of the project area for the Emerson Creek
25 wind project?

1 A. Yes.

2 Q. Okay. And which airports did you
3 identify?

4 A. When we study a project, we look at all
5 of the airports in the vicinity, looking out 25
6 nautical miles. Specific to this project, I can't
7 name them all off the top of my head, I know that the
8 primary impacts that we identified were on Willard
9 Airport.

10 Q. During your course of work on this
11 project, did you have any communications with the
12 Willard Airport?

13 A. Yes.

14 Q. Okay. And what was the nature of those
15 communications?

16 A. If I recall correctly, I believe we spoke
17 about the impacts that we had identified on the
18 airport.

19 Q. Okay. Did these communications occur in
20 writing or verbally?

21 A. As I recall, it was a phone call, so
22 verbal.

23 Q. Okay. Do you recall the name of the
24 person to whom you spoke?

25 A. I don't, sir, not now.

1 Q. Other than that one -- it was just one
2 phone call?

3 A. If my recollection is correct, yes.

4 Q. Okay. Other than that phone call, did
5 you have any other communications, either verbal or
6 written, with the Willard Airport?

7 A. I don't remember if we had written
8 communications with them or not.

9 Q. What concerns did the Willard -- did the
10 representative of the Willard Airport express to you?

11 A. To be quite honest with you, much of that
12 call is lost to me. It's been quite a few months
13 since it occurred. I went back and I looked at my
14 meeting notes in preparation for that call and so we
15 are aware of what we intended to talk about. The
16 call itself is lost to me now.

17 Q. You didn't keep any notes documenting the
18 contents of the discussion?

19 A. I did not, sir.

20 Q. Do you recall any concerns that the
21 representative of the Willard Airport has expressed
22 to you?

23 A. Again, I don't recall much of the call.
24 I don't recall what his concerns may have been. I
25 know that we had identified the items that were

1 flagged in the FAA's Notices of Presumed Hazard, and
2 I believe, based on my preparatory notes, that we
3 discussed that but I don't recall much past that.

4 Q. How far from the boundary of the project
5 area is the Willard Airport located?

6 A. I don't have -- I don't have a
7 measurement for you. I would have to go back and
8 check our -- check the maps on it.

9 Q. Do you know whether aircraft flying to
10 and from the Willard Airport currently travel across
11 the project area?

12 MR. SECREST: Objection, vague.

13 ALJ AGRANOFF: Mr. Van Kley, if you could
14 be a little bit more specific in terms of framing the
15 origination and termination points of the travel that
16 you may be referencing.

17 MR. VAN KLEY: Well, I can break it down
18 to the "to and from" if that's what you are referring
19 to.

20 ALJ AGRANOFF: Please do.

21 MR. VAN KLEY: Okay.

22 Q. (By Mr. Van Kley) Okay. Can you tell me
23 whether aircraft flying to Willard Airport fly across
24 any parts of the project area?

25 MR. SECREST: Objection, vague, your

1 Honor.

2 MR. VAN KLEY: How is that vague? It's
3 really super clear.

4 MR. SECREST: Where is the flight
5 originating, flying what direction?

6 MR. VAN KLEY: I'm asking him whether any
7 aircraft going to Willard Airport fly across the
8 project area. It doesn't matter where they are
9 coming from. I want to know whether any of them fly
10 across that area.

11 ALJ AGRANOFF: If the witness knows, he
12 can answer.

13 A. I can't speak to specific flights. But I
14 will say that there is no restriction whatsoever for
15 aircraft to fly over top of a wind farm assuming that
16 wind farm was built in conformance with Federal
17 Aviation Regulations.

18 Q. Yeah. My question was whether aircraft
19 are currently flying across the project area in order
20 to get to the Willard Airport.

21 A. So to answer that question, the answer is
22 not as simple as the question makes it seem to be.
23 There is no limitation on the -- the route in which
24 an aircraft approaches or depart -- departs the
25 airport under certain flight rules. So certainly

1 there could be aircraft that are flying over top of
2 the wind farm. And that wouldn't be uncommon
3 anywhere around any airport.

4 Specific to -- to instrument procedures
5 or defined flight routes that dictate the manner,
6 altitude, and direction a pilot would fly, there are
7 I believe -- I would have to go back and check our
8 study but there are routes that would be en route and
9 egress from the airport that would be proximate --
10 that would be proximate to the airport -- or to the
11 wind farm. Does that answer your question?

12 Q. Yes, thank you.

13 The same question with regard to aircraft
14 flying out of Willard Airport. Do any of those fly
15 across the project area currently?

16 A. Again, definitively to state that they
17 are flying -- I can't tell you where they are flying.
18 Depending upon the nature of their -- of their flight
19 plan, but there's no limitation that keeps them from
20 departing out and over top of those wind turbines.

21 Q. If the planned wind turbines are
22 constructed in the project area, will that have any
23 effect on the elevations of the flights taken by
24 aircraft to Willard Airport?

25 A. Yes.

1 Q. And what are those potential effects?

2 A. The FAA identified that the turbines, as
3 proposed, would prompt an increase to a minimum
4 vectoring altitude used by the Toledo Terminal Radar
5 Approach Control. That's abbreviated TRACON,
6 T-R-A-C-O-N. Toledo TRACON is the terminal radar
7 facility that provides routing and positive control
8 of aircraft into and out of the airports in the area.

9 So those minimum vectoring altitudes
10 would be increased but the FAA determined that those
11 increases would have -- would not have a substantial
12 adverse effect on the air traffic controller's
13 ability to -- to route those aircraft and provide
14 that positive safe control. In essence what it means
15 is that at certain stages of flight, before an
16 aircraft is established on final, they would be 100
17 feet, 100 feet higher than they would be otherwise.

18 Q. And will that result in a super descent
19 by the aircraft into the airport?

20 A. It shouldn't. In most cases it should
21 not.

22 Q. Why not?

23 A. Well, it depends on where the -- so it
24 depends on whether the aircraft -- the pilot is
25 operating under an instrument flight plan. So

1 let's -- let's take that as Scenario A. If a pilot
2 is flying under an instrument flight plan and is
3 receiving vectors by Toledo TRACON, Toledo TRACON is
4 going to route that aircraft to a location in which
5 that pilot can pick up an instrument approach
6 procedure.

7 Once that pilot is established on the
8 instrument approach procedure, there is a standard
9 glide path angle and a set of fixes that that pilot
10 will fly from point to point to point. So the glide
11 path angle would be dictated as a result of the
12 instrument procedure, not the minimum vectoring
13 altitude.

14 In truth, when we look at minimum
15 vectoring altitudes, one of the things you have to
16 consider is an operation called "Vectors to Final"
17 which does take into consideration that glide path
18 angle and the ability of air traffic controllers to
19 put the aircraft in a position where they can
20 intercept that glide slope. None of that is affected
21 in this situation.

22 Q. Would the situation change if the
23 aircraft was not using the type of instrumentation
24 that you just identified in your answer?

25 A. If the aircraft was operating under

1 visual flight rules then they would not be subject to
2 the positive control by the air traffic facility, by
3 the TRACON, and, therefore, those minimum vectoring
4 altitudes would not be in play, meaning the pilot
5 would not be complying with those minimum vectoring
6 altitudes and would be relying upon their "See and
7 Avoid" requirement for visual flight.

8 Q. Does that mean that the descent into
9 Willard Airport would not be affected by an aircraft
10 using visual flight techniques?

11 A. Correct.

12 Q. And is the same thing true for aircraft
13 flying out of Willard Airport and their angle of
14 ascent?

15 A. There is one turbine that was determined
16 to -- by the FAA to have an impact on the -- on the
17 minimum climb gradient from the airport. That impact
18 was a 1-foot impact. So it would increase that
19 minimum climb gradient from 200 feet per nautical
20 mile to 201 feet.

21 Q. Will the existence of the turbines for
22 this project, if it's approved, result in aircraft
23 flying higher than they otherwise would in conditions
24 that threaten icing of the aircraft?

25 A. The -- with the minimum vectoring

1 altitudes, that aircraft would be operating at a
2 heighth that is higher after the turbines were
3 constructed than they are today. The -- the impact
4 on icing is, I think, a different question but, yes,
5 they would be operating at hundred foot higher. So I
6 would have to go back and check but I think it's
7 hundred feet.

8 Q. Yeah. And is that a situation, by flying
9 higher, that under certain circumstances could result
10 in the icing of aircraft that would not have occurred
11 if the plane was flying lower?

12 MR. SECREST: Objection, speculation.

13 MR. VAN KLEY: I think it's pretty well
14 known information in the aircraft industry.

15 ALJ AGRANOFF: If the witness feels that
16 he's capable of answering the question, he may.

17 A. I believe that the -- that the increase
18 to the minimum vectoring altitude would not endanger
19 an aircraft due to icing. The reason for that has
20 nothing to do with the altitude. It has everything
21 to do with how icing events are handled by the
22 aviator, by the pilot, and how the Federal Aviation
23 Regulations are -- or how the FARs and the training
24 of pilots prepare pilots to deal with icing events.

25 And so in the event that a pilot would

1 encounter icing, that pilot immediately would declare
2 an emergency, would contact the -- would be in
3 contact with traffic control and would take every
4 step and measure necessary at that point to remove
5 the aircraft from that icing environment. I don't
6 believe that the altitude that we're talking about,
7 with these minimum vectoring altitudes, has any play
8 in it whatsoever.

9 ALJ AGRANOFF: Mr. Doyle, if I could just
10 ask you to define the acronym "FAR."

11 THE WITNESS: Federal Aviation
12 Regulations, your Honor.

13 ALJ AGRANOFF: Thank you.

14 Q. (By Mr. Van Kley) Going back to my
15 original question then, would the existence of the
16 turbines planned for this project result in
17 situations where an aircraft would be iced in
18 situations where it currently would not be iced if
19 the turbines were not there?

20 A. I don't believe that I can answer your
21 question -- well, my answer to that would be no. I
22 don't believe that the turbines existence and that
23 increase of 100-foot minimum vectoring altitude would
24 have any play or any influence on an icing event with
25 a pilot or an aircraft.

1 I believe that -- that we have icing
2 protocols that pilots can plan for in advance, can
3 deal with in the event it occurs. And that that
4 altitude doesn't -- is not one of the variables that
5 would play into that.

6 Q. Okay. I'm still not sure that you've
7 answered my question. I understand the point you
8 are -- you're making that you don't believe that
9 icing is going to be a threat to the safety of the
10 aircraft. But my question is a little simpler which
11 is whether the aircraft, flying 100 feet higher than
12 it would if the turbines were not there, may result
13 in situations where the aircraft would be iced at
14 that elevation; whereas, it would not have been iced
15 if it were flying 100 feet lower.

16 MR. SECREST: Objection, your Honor. I
17 disagree with Mr. Van Kley. I believe Mr. Doyle has
18 answered that question twice now.

19 MR. VAN KLEY: I believe he has evaded it
20 twice. I haven't heard an answer to the question.
21 It's either yes or no. So maybe we can start there.

22 ALJ AGRANOFF: I'll allow the question.
23 And, Mr. Doyle, if you could just answer as to
24 whether or not there would be an increased likelihood
25 of icing due to the raising of the altitude of

1 100 feet.

2 A. I believe that the -- if the increase --
3 there is always going to be a potential for increased
4 icing at higher altitudes because the temperature
5 drops as you increase in height. I can't speak to
6 whether 100-foot would be a -- would be a measurable
7 difference in the temperature that would cause that
8 icing. So my answer is, could it increase? Yes.
9 But would it? No. Would it likely? No.

10 MR. VAN KLEY: Okay. All right. I have
11 no further questions.

12 ALJ AGRANOFF: Thank you.

13 Any clarifying questions, counsel, other
14 than Mr. Secrest or Mr. Van Kley?

15 Okay. Mr. Secrest.

16 MR. SECREST: May I have just one minute,
17 your Honor?

18 ALJ AGRANOFF: Certainly.

19 MR. SECREST: Thank you.

20 Your Honor, we do not have any redirect
21 for Mr. Doyle. Thank him for his time.

22 ALJ AGRANOFF: Thank you. Mr. Doyle, we
23 appreciate your testifying today.

24 THE WITNESS: Thank you, your Honor.
25 Have a good day.

1 ALJ AGRANOFF: You as well.

2 THE WITNESS: Bye-bye.

3 ALJ AGRANOFF: Okay. I believe next we
4 would have the Staff's witnesses.

5 MR. SECREST: Your Honor, may I move for
6 admission of Applicant's Exhibit 43?

7 ALJ AGRANOFF: You absolutely may.

8 MR. SECREST: Thank you.

9 ALJ AGRANOFF: Any objection?

10 MR. VAN KLEY: None here.

11 ALJ AGRANOFF: There being none,
12 Applicant Exhibit 43 shall be admitted as part of the
13 record at this time.

14 (EXHIBIT ADMITTED INTO EVIDENCE.)

15 ALJ AGRANOFF: And Mr. Eubanks.

16 MR. EUBANKS: Yes. I would like to call
17 to the stand Robert Holderbaum.

18 ALJ AGRANOFF: Heather, if you could
19 please have Mr. Holderbaum promoted.

20 MS. CHILCOTE: Mr. Holderbaum, you are
21 promoted to a panelist, and you are unmuted. You
22 should be able to turn your camera on now. There we
23 go.

24 ALJ AGRANOFF: There you are. Hello.
25 Please raise your right hand.

1 (Witness sworn.)

2 ALJ AGRANOFF: Thank you.

3 Mr. Eubanks.

4 - - -

5 ROBERT HOLDERBAUM

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

8 DIRECT EXAMINATION

9 By Mr. Eubanks:

10 Q. Hello. Could you state and spell your
11 name for the record.

12 A. Yeah. Robert Holderbaum. That's
13 R-o-b-e-r-t, H-o-l-d-e-r-b-a-u-m.

14 Q. Okay. And are you responsible for any
15 prefiled testimony in this matter?

16 A. Yes.

17 MR. EUBANKS: And I wasn't here in the
18 previous days, your Honor, but I believe that Robert
19 Holderbaum's testimony has been premarked as Staff's
20 Exhibit 7; is that correct?

21 ALJ AGRANOFF: I'm looking to see. Hold
22 on.

23 Yes.

24 (EXHIBIT MARKED FOR IDENTIFICATION.)

25 Q. (By Mr. Eubanks) So do you have before

1 you what has been marked as Staff's Exhibit 7?

2 A. I do.

3 Q. And could you -- do you recognize the
4 document?

5 A. Yes.

6 Q. Could you identify it.

7 A. Yep. It is my prefiled testimony.

8 Q. Is it your prefiled testimony as docketed
9 on the PUCO website?

10 A. Yes.

11 Q. Is it a true and accurate copy of your
12 testimony?

13 A. Yes.

14 Q. Would you like to make any corrections to
15 your testimony?

16 A. I do not.

17 Q. And if I were to ask you the same
18 questions, would you provide the same answers?

19 A. Yes.

20 MR. EUBANKS: With that, I would like to
21 have Staff's Exhibit 7 moved into the record, subject
22 to cross-examination.

23 ALJ AGRANOFF: Thank you, Mr. Eubanks.

24 Mr. Van Kley.

25 MR. VAN KLEY: All right. Thank you,

1 your Honor.

2 - - -

3 CROSS-EXAMINATION

4 By Mr. Van Kley:

5 Q. Mr. Holderbaum, do you have access to an
6 exhibit that has been labeled as LR Exhibit 16?

7 A. I'm not sure. Can you tell me what that
8 exhibit is?

9 Q. Yes. It is a copy of e-mails from --
10 from and to Margaret Rheude, U.S. Fish and Wildlife
11 Service, to Jennie Geiger.

12 A. I'm not sure. I had an e-mail that I
13 thought was correct from Margaret, but I'm not sure
14 it's the correct one.

15 Q. Well, maybe what we could do then is I
16 can e-mail this document to your counsel, and he can
17 e-mail it to you. And in the meantime while we are
18 doing this, I will start with a different line of
19 questions so we don't lose any time, if that's
20 acceptable to everybody.

21 ALJ AGRANOFF: Okay by me. Are you okay
22 with that?

23 ALJ WILLIAMS: The only caveat would be
24 we had a tough time getting e-mails through to the AG
25 earlier in the proceeding. So will you let us know

1 when you get it, Mr. Eubanks?

2 MR. EUBANKS: Okay.

3 ALJ WILLIAMS: Mr. Eubanks, do you have
4 the exhibit independently you could send?

5 MR. EUBANKS: I do not.

6 ALJ AGRANOFF: This is the same exhibit,
7 Mr. Van Kley, that we dealt with on Tuesday, correct?

8 MR. VAN KLEY: Yes. We discussed it with
9 Mr. Farmer, I think, or Mr. -- yeah, I think it was
10 Mr. Farmer.

11 ALJ AGRANOFF: Yes, that's what my notes
12 reflect.

13 MR. VAN KLEY: And I just e-mailed it to
14 Mr. Eubanks.

15 Q. (By Mr. Van Kley) Okay. So in the
16 meantime, Mr. Holderbaum, let's go to a different
17 exhibit and this is Exhibit K2 of the Application.
18 Do you have that in front of you?

19 A. I do not, but I can pull that up, I'm
20 sure, if it's in the Application.

21 ALJ AGRANOFF: If you could just hold for
22 a moment, Mr. Van Kley, while I retrieve that
23 document.

24 A. Could you point me towards that again
25 real quick while we have a second?

1 Q. Yeah, Exhibit K2. It would be Exhibit K,
2 as it appears on the Power Siting Board's website,
3 has been broken down by the Applicant and distributed
4 for purposes of this hearing into K1, K2, et cetera.

5 MR. EUBANKS: I received the e-mail from
6 Jack. I will pass it along.

7 ALJ WILLIAMS: Thank you, Attorney
8 Eubanks.

9 A. Mr. Van Kley, this is in the OPSB docket,
10 you said?

11 Q. Yeah. Exhibit K is in the docket. The
12 breakdown of Exhibit K, K1, K2, et cetera, does not
13 appear that way in the docket. It was distributed
14 that way, however, by the Applicant's counsel to all
15 counsel in the case.

16 A. I did not receive it from counsel, but I
17 have Exhibit K in the docket as labeled "U.S. Fish
18 and Wildlife and ODNR Correspondence."

19 Q. Okay.

20 A. Is that correct?

21 Q. Yes, it is.

22 A. Okay.

23 Q. All right. In that correspondence just
24 for your convenience, Mr. Holderbaum, I think the
25 page that I want to look at should be the seventh

1 page of the PDF of Exhibit K as it appears on the
2 Power Siting Board website.

3 A. The seventh page?

4 Q. The seventh page, yes. And you should be
5 looking for an e-mail from Keith Lott dated June 11,
6 2018, to Jennie Geiger.

7 A. Okay. I think I'm there.

8 Q. Okay. Great.

9 ALJ AGRANOFF: Mr. Van Kley, is that the
10 one 7:49 a.m.?

11 MR. VAN KLEY: Yes, sir.

12 ALJ AGRANOFF: Okay. Thank you.

13 ALJ WILLIAMS: So we are all in the same
14 place, that's K2, PDF page 2 of 6.

15 MR. VAN KLEY: That is correct.

16 Q. (By Mr. Van Kley) Mr. Holderbaum, have
17 you seen this e-mail before today?

18 A. I'm sure I have, yes. There's a lot of
19 e-mails about this subject.

20 Q. Did you review all of the documents in
21 Exhibit K at some point in time?

22 A. I believe so, yes.

23 Q. All right. Did you have any involvement
24 in discussing the bat surveys with the Applicant?

25 A. I cannot say specifically. I was on, you

1 know, several calls with OPSB Staff and the Applicant
2 on -- for ecological purposes, so I'm sure at some
3 point we discussed wildlife, yes.

4 Q. I would like you to take a look at the
5 third paragraph of Mr. Lott's e-mail on this page.
6 Are you familiar with the subject matter of that
7 paragraph?

8 A. Is -- is this the one that begins "For
9 Emerson North"?

10 Q. That's correct.

11 A. I'm not exactly sure what this paragraph
12 is about, no.

13 Q. All right. Okay. We are going to
14 continue on to discuss another document in Exhibit K.
15 This one is in Exhibit K4 and it will be the first
16 PDF page of that document. See if we can figure out
17 how to get you there on the webpage.

18 MR. SECREST: Your Honor, may I just note
19 for the record the references to the various numerals
20 such as K1, K2, K3, those are in the docket as well.

21 MR. VAN KLEY: Okay. Very good.

22 Q. (By Mr. Van Kley) Mr. Holderbaum, I
23 believe the document I want to discuss with you is on
24 the 19th page of the PDF you are on. And Mr. Secrest
25 is right, it does say in the previous page that this

1 is Exhibit K4. So if you find the cover sheet for
2 Exhibit K and then 4, it would be the next page.

3 A. I believe I'm there. Is it December 19,
4 2017; is that how it begins?

5 Q. Yes, it is.

6 A. Okay. Yes.

7 Q. All right. Looking at the text of that
8 e-mail, are you familiar with the subject matter of
9 that text of that e-mail?

10 A. I'm aware that -- I can read it, and I am
11 aware of what they are discussing, yes.

12 Q. Okay. Why don't you tell me what your
13 understanding is as to what's being discussed in this
14 e-mail.

15 A. I -- you know, I don't have any previous
16 understanding, if that's what you are getting at.
17 It's my understanding that, you know, they are
18 discussing previous acoustic surveys that were done
19 for the project.

20 Q. Do you know when the original application
21 in this case was filed with the Power Siting Board?

22 A. I believe in -- it has a 2018 case
23 number, so I believe in 2018. It's been a while.

24 Q. Have you had interactions with the Ohio
25 Department of Natural Resources concerning the bat

1 surveys done for this project?

2 A. Yes.

3 Q. During any of those interactions, did you
4 become aware of any reservations that were being
5 expressed by ODNR concerning the acoustic surveys
6 that were conducted by the Applicant?

7 MR. SECREST: Objection, vague as to
8 "reservations."

9 MR. VAN KLEY: I think it's a pretty
10 clear term.

11 A. You know, I do not remember any, no.

12 MR. SECREST: You are on mute, your
13 Honor.

14 ALJ AGRANOFF: I just realized that.
15 Thank you.

16 Mr. Holderbaum, are you familiar with the
17 conversations that may have taken place between the
18 Ohio Department of Natural Resources and the
19 Applicant with respect to the subject matter of the
20 e-mail that we are looking at?

21 THE WITNESS: I'm sorry. Can you repeat?
22 I just had a big truck drive by. I couldn't hear
23 you. I'm sorry.

24 ALJ AGRANOFF: That's okay. I was asking
25 whether or not you have any familiarity with the

1 subject matter of communications that may have taken
2 place between the Applicant and ODNR relative to the
3 e-mail that we're looking at at this point in time.

4 THE WITNESS: I'm aware that the
5 Applicant has coordinated with ODNR on that subject,
6 just as we have spoken with ODNR on that subject. In
7 terms of, you know, exactly what they talked about,
8 no. And in terms of ODNR having, by Mr. Van Kley,
9 reservations with their acoustic studies, I am not
10 aware of that, no.

11 ALJ AGRANOFF: Thank you.

12 Q. (By Mr. Van Kley) Do you know whether or
13 not ODNR's protocol for acoustic bat surveys changed
14 between the time that the Applicant performed its
15 acoustic surveys and the date of this e-mail on
16 December 19, 2017?

17 A. I am not aware, no.

18 Q. All right. At this point has LR Exhibit
19 16 arrived in your e-mail?

20 A. Yes.

21 Q. All right. If you would pull that
22 exhibit out, please.

23 A. Yeah. I believe this is the one I had.
24 I just didn't have the last e-mail that went to
25 Jennie Geiger.

1 Q. All right. So you have in front of you
2 what's been marked as LR Exhibit 16; is that correct?

3 A. Correct.

4 Q. I would like you to look at the second
5 e-mail in this exhibit which is an e-mail from
6 Margaret Rheude to Robert Holderbaum dated
7 February 27, 2020. Do you see that -- that e-mail?

8 A. Yes.

9 Q. Okay. Are you the person who is referred
10 to in this e-mail as Robert Holderbaum?

11 A. Yes.

12 Q. Okay. And it looks like you sometimes go
13 by the name of Ashton; is that correct?

14 A. Yeah. It's my middle name.

15 Q. Okay. So this e-mail was written to you,
16 correct?

17 A. The second one, yes, correct.

18 Q. Yes. If you look at the second paragraph
19 of that e-mail, you will see that Ms. Rheude states
20 she conducted an initial model run on summary data
21 provided to her. Do you see that?

22 A. I do.

23 Q. Do you know, based on indication from
24 Ms. Rheude or any other source of information, what
25 years that data was collected in?

1 A. Off the top of my head, I do not. I want
2 to say 2018 but that might not be right. It looks
3 like, you know, from the maps provided by the e-mail
4 says 2018 and 2019 and 2016 and 2017.

5 Q. Could you point out to us where on LR
6 Exhibit 16 you're looking?

7 A. Sure. It's -- if you scroll down, it's
8 the actual map on the eagle risk assessment. I just
9 see it in the key here is all.

10 Q. All right. So you believe that these
11 maps pertain to the eagle data that Ms. Rheude used
12 in her model?

13 A. I honestly can't speak to what she used
14 in her model. I just -- I remember in our Staff
15 Report we mentioned there were studies done in 2018.

16 Q. Do you know whether the U.S. Fish and
17 Wildlife Service has performed any other modeling on
18 risk to eagles from this project subsequent to
19 February 27, 2020?

20 A. I'm not aware, no.

21 Q. Are you aware of any modeling performed
22 by the Fish and Wildlife Service prior to the model
23 that is discussed in the e-mail from Margaret Rheude
24 to you dated February 27, 2020?

25 MR. EUBANKS: Objection, foundation. The

1 witness has already stated he doesn't know the year
2 of the model in the e-mail, so he can't answer that
3 question.

4 MR. VAN KLEY: Okay. Fair enough.

5 Q. (By Mr. Van Kley) Are you aware of a
6 model that was performed by the U.S. Fish and
7 Wildlife Service in 2014 for this project?

8 MR. SECREST: Asked and answered.

9 MR. VAN KLEY: No. I don't think so. I
10 didn't ask him that question previously.

11 ALJ AGRANOFF: I'll allow the question.

12 A. If it was part of the Application, I'm
13 sure I looked at it. If there were more updated
14 studies, then we would have, you know, considered
15 those since they are more recent.

16 Q. Since the time of this e-mail dated
17 February 27, 2020, have you had any communications
18 with U.S. Fish and Wildlife Service about risk to
19 eagles from this project?

20 A. I'm not sure. It wouldn't surprise me if
21 we did, and it wouldn't surprise me if we didn't.

22 Q. Are you aware of an inter-nest distance
23 that was calculated for this project?

24 A. I can't remember off the top of my head,
25 no.

1 MR. VAN KLEY: I have no further
2 questions.

3 ALJ AGRANOFF: Any clarifying questions
4 of other counsel?

5 If not, Mr. Eubanks.

6 MR. EUBANKS: I have no redirect, your
7 Honor.

8 ALJ AGRANOFF: Thank you, Mr. Holderbaum.
9 Appreciate your time.

10 Mr. Eubanks.

11 MR. EUBANKS: Yes. At this time I would
12 like to have Staff's Exhibit 7 moved into evidence.

13 ALJ AGRANOFF: Any objections to the
14 admission of Staff Exhibit 7?

15 MR. VAN KLEY: No.

16 ALJ AGRANOFF: There being none, it shall
17 be admitted as part of the record at this time.

18 (EXHIBIT ADMITTED INTO EVIDENCE.)

19 ALJ AGRANOFF: And we already had LR
20 Exhibit 16 as part of the record.

21 So at this time, Mr. Eubanks, would you
22 like to call your next witness?

23 MR. EUBANKS: Yes, your Honor. We would
24 call Jason Cross to the stand.

25 ALJ AGRANOFF: Heather, if you could

1 please have him promoted to a panelist.

2 MS. CHILCOTE: Mr. Cross, you have now
3 been promoted. You should be able to turn your
4 camera on. I have unmuted you.

5 THE WITNESS: You can probably hear me,
6 but it says -- hang on. It says -- can you guys hear
7 me?

8 ALJ AGRANOFF: We do.

9 THE WITNESS: Okay.

10 ALJ AGRANOFF: We don't see you.

11 THE WITNESS: All right. I'm giving it a
12 shot. It says an error. My webcam is being used by
13 another device. Let me close everything out on my
14 screen. That's a little strange.

15 MS. CHILCOTE: Jason, this is Heather.
16 Along the bottom of your control panel, you will see
17 the video button, the start video. There is a carrot
18 drop down next to that with the settings option.

19 THE WITNESS: I see that.

20 MS. CHILCOTE: Look and see if another
21 camera might be available there. Try to choose from
22 that point.

23 THE WITNESS: Yeah. It says all -- all
24 it can find is my rear camera, not my front camera.
25 Hang on. Let me -- let me see if something is open

1 in my task manager, and I will get rid of it.

2 Yeah. I am not sure what's open to not
3 cause my video to work.

4 MR. VAN KLEY: Your Honor, this is Jack.
5 My cross-examination is going to be pretty short for
6 this witness, so I would have no objection to
7 proceeding with my questioning just using audio.

8 ALJ AGRANOFF: Why don't we take a
9 5-minute break and see whether Mr. Cross would be
10 able to rectify the camera issue. And then we can
11 determine what the next step in our procedure is
12 going to be. We will come back at around 2 o'clock.
13 Thank you.

14 (Recess taken.)

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

17 And I believe we have now rectified the
18 technical issues with Mr. Cross's camera, so we are
19 good to go.

20 Mr. Eubanks, please proceed.

21 MR. EUBANKS: I can't quite remember if
22 we already called him to the stand and you have
23 already sworn him in?

24 ALJ AGRANOFF: No, I haven't sworn him in
25 because we couldn't see him.

1 MR. EUBANKS: Okay. At this time I would
2 like to call Jason Cross.

3 ALJ AGRANOFF: Thank you.

4 Mr. Cross, please raise your right hand.
5 (Witness sworn.)

6 ALJ AGRANOFF: Thank you.

7 - - -

8 JASON A. CROSS

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

11 DIRECT EXAMINATION

12 By Mr. Eubanks:

13 Q. Could you please state and spell your
14 name for the record.

15 A. My name is Jason Cross, J-a-s-o-n,
16 C-r-o-s-s.

17 Q. And are you responsible for prefiled
18 testimony in this matter?

19 A. Yes, I am.

20 MR. EUBANKS: Your Honor, I believe that
21 Jason Cross's prefiled testimony has been premarked
22 as Staff's Exhibit 6. If that is correct, please let
23 me know.

24 ALJ AGRANOFF: I will confirm that for
25 you. It's Staff Exhibit 6.

1 (EXHIBIT MARKED FOR IDENTIFICATION.)

2 Q. (By Mr. Eubanks) Do you have before you
3 Staff's Exhibit 6?

4 A. Yes, I do.

5 Q. Do you recognize the document?

6 A. Yes.

7 Q. Is it an -- and could you identify the
8 document?

9 A. It's my prefiled testimony as filed in
10 the docket.

11 Q. Is it a true and accurate copy?

12 A. Yes.

13 Q. Would you like to make any corrections to
14 your testimony?

15 A. No.

16 Q. And if I were to ask you the same
17 questions that you find in your prefiled testimony,
18 would you provide the same answers?

19 A. Yes.

20 MR. EUBANKS: With that I would like to
21 move to have what has been marked as Staff's
22 Exhibit 6 moved into the record, subject to
23 cross-examination.

24 ALJ AGRANOFF: Thank you.

25 Mr. Van Kley.

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

2 - - -

3 CROSS-EXAMINATION

4 By Mr. Van Kley:

5 Q. And good afternoon, Mr. Cross.

6 A. Good afternoon.

7 Q. Would you go to page 2 of your testimony,
8 to Question and Answer 7.

9 A. Yes. I'm there.

10 Q. Question 7 asks "Does this facility serve
11 the interests of electric system economy and
12 reliability," and then we have your answer there
13 saying that it does. What did you personally do in
14 order to determine whether this facility serves the
15 interests of electric system economy and reliability?

16 A. We -- I reviewed the feasibility study,
17 system impact study as required per our rules to
18 verify that when connected to the grid, it would not
19 harm in any way and be a reliable resource on the
20 grid.

21 Q. Uh-huh. Are you aware that wind energy
22 is considered to be an intermittent source of
23 electricity?

24 A. Yes, I am.

25 Q. Okay. And what's your understanding as

1 to the meaning of the term "intermittent" as it
2 applies to wind power?

3 A. So -- so full energy output of this
4 facility is 297.7, and the capacity side of that
5 would be 38.7 so that 38.7 megawatts is what's
6 available for capacity which the local utilities
7 could purchase for energy that could be relied upon.
8 It recognizes those wind facilities as -- that
9 capacity is at 13 percent. There's quite a mixture
10 of fuels in the system, coal, gas, solar, that will
11 help supplement during this intermittency of the
12 wind. I also believe that PJM offers some hedging
13 for higher cost of wind but that's outside of my grid
14 section so.

15 Q. In the course of your duties for the
16 Power Siting Staff as related to determining whether
17 a facility such as this will -- will serve the
18 interests of electric system economy and reliability,
19 do you look at experiences with wind turbine
20 production of energy in other states to see how that
21 wind energy has affected the electric system economy
22 and reliability in other states?

23 A. No. No. Staff relies upon PJM and their
24 studies for the interconnection of wind facilities.

25 Q. Are you aware of rolling blackouts that

1 have been experienced for electricity in California?

2 MR. SECREST: Objection, relevance, your
3 Honor.

4 MR. VAN KLEY: Has to do with electric
5 system -- it has to do with the effects of the wind
6 power on elect -- electric system economy and
7 reliability.

8 MR. SECREST: Different state, different
9 regulation, different interconnection.

10 MR. VAN KLEY: It doesn't matter. It
11 doesn't matter. It doesn't matter. It's the same
12 everywhere.

13 ALJ AGRANOFF: I will allow the question
14 to the extent, Mr. Van Kley, that you frame it in the
15 context of wind in other states.

16 MR. VAN KLEY: Yes. And I have, I
17 believe.

18 ALJ AGRANOFF: Thank you.

19 A. Yeah. I generally don't keep up with
20 what's going on in the western interconnection in
21 California.

22 Q. Are you aware of any negative effects
23 that the intermittent nature of wind energy in
24 California has had on that State's electric system
25 reliability?

1 MR. SECREST: Objection. Again, it's
2 irrelevant, your Honor.

3 ALJ AGRANOFF: Overruled.

4 A. Could you rephrase that again, or could
5 you repeat that question again?

6 Q. Yeah.

7 MR. VAN KLEY: Could we have the court
8 reporter read the question, please.

9 ALJ AGRANOFF: Karen, if you could please
10 do so.

11 (Record read.)

12 A. No, I have not. Just when I hear in the
13 news about, you know, the rolling blackouts and
14 things but not focused on what has been causing those
15 on that western interconnection.

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

18 ALJ AGRANOFF: Before we get to redirect,
19 any other clarifying questions from other counsel?

20 - - -

21 EXAMINATION

22 By ALJ Agranoff:

23 Q. Okay. I do have two questions before we
24 get to redirect. If, Mr. Cross, you could take a
25 look at Question 9 of your direct testimony, please.

1 A. Yes. I got it.

2 Q. Thank you. And there's a discussion
3 about the Interconnection Service Agreement and the
4 Interconnection Construction Service Agreement --

5 A. Yes.

6 Q. -- being required to be executed.

7 A. Yes.

8 Q. Who are the parties to those agreements?

9 A. The parties to those agreements would be
10 this wind facility and anybody that has to do any
11 work for them on the systems. I believe ATSI is the
12 other party part of this Interconnection Service
13 Agreement. The service agreement has not been issued
14 yet so, but it's usually always the EDU that's going
15 to be connected to -- if there is any work to be
16 performed by them.

17 Q. Okay. Who was the other entity that you
18 said would be the party to that agreement?

19 A. That would be FirstEnergy, ATSI, which is
20 American Transmission System, Incorporated.

21 Q. Okay. Thank you. And then just so the
22 record is clear, you used the acronym EDU.

23 A. Electric distribution utility.

24 Q. Thank you.

25 And then my other question is with

1 respect to Question 10.

2 A. I got that.

3 Q. Okay. And it indicates that pursuant to
4 Condition 13, it would cap the injection of energy
5 into the Bulk Power System at 297.7 megawatts. What
6 is the significance of that particular number?

7 A. Yeah. So -- so they applied -- the
8 Applicant applied for interconnection at an energy of
9 97 -- 297.7 megawatts. If -- if they want to inject
10 more of that, you know, say 300, 350, it's possible
11 that the grid could be harmed and there could be
12 reliability issues on the grid. The studies were
13 only performed up to an injection of 297.7 megawatts.

14 ALJ AGRANOFF: Okay. Thank you.

15 THE WITNESS: Yes, sir.

16 ALJ AGRANOFF: Any redirect, Mr. Eubanks?

17 MR. EUBANKS: No, your Honor.

18 ALJ AGRANOFF: Okay. Based on my two
19 questions, does other counsel have follow-up?

20 MR. VAN KLEY: No, your Honor.

21 ALJ AGRANOFF: Okay. Thank you,
22 Mr. Cross.

23 THE WITNESS: Thank you.

24 ALJ AGRANOFF: Mr. Eubanks, would you
25 care to move for the admission?

1 MR. EUBANKS: Yes. I would like to move
2 to have Staff's Exhibit 6 placed into the record.

3 ALJ AGRANOFF: Any objection?

4 MR. VAN KLEY: No.

5 ALJ AGRANOFF: There being none, Staff
6 Exhibit 6 shall be admitted as part of the record at
7 this time.

8 (EXHIBIT ADMITTED INTO EVIDENCE.)

9 ALJ AGRANOFF: And I believe that is all
10 the witnesses that we had scheduled for today which
11 means we're doing very well in terms of staying on
12 schedule.

13 And for tomorrow, Judge Williams, you
14 want to delve into that, or do you want me to?

15 ALJ WILLIAMS: I'll give you a break. To
16 recap, Mr. Marcotte will lead us off tomorrow,
17 followed by Witnesses Tauzer, Robinson, Mundt, and we
18 have Mr. Conway on the stand. Given how we are
19 proceeding, we'll lean into taking him if we are
20 going to be able to get it in within a reasonable
21 time period. Please keep him ready.

22 That's how we will proceed tomorrow.

23 MR. SECREST: If I may ask Mr. Van Kley a
24 question, as I typically do at the end of the day,
25 any reestimate as to the current estimate of cross so

1 we can let our witnesses know?

2 MR. VAN KLEY: Yeah. As I said this
3 morning, Mr. Marcotte is probably going to be about a
4 half hour of cross. Ms. Tauzer, I think, will
5 probably be two hours instead of three. Mr. Robinson
6 may be -- it's going to be one to two hours for
7 Robinson. I'm not sure how fast that will go. And
8 for Mr. Mundt I would stay with two hours at this
9 point in time.

10 MR. SECREST: Thank you. Appreciate it.

11 MR. VAN KLEY: Sure.

12 ALJ WILLIAMS: Anything else we need to
13 try to wrap up today? Again, I am not seeing any
14 frantic waves so, gyrations there.

15 So with that I think we will conclude for
16 the day. We will see everybody tomorrow at
17 9 o'clock.

18 We are off the record.

19 (Thereupon, at 2:13 p.m., the hearing was
20 adjourned.)

21 - - -

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25

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 Thursday, October 8, 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-6971)

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Case No(s). 18-1607-EL-BGN

Summary: Transcript in the matter of the Firelands Wind, LLC hearing held on 10/08/20 - Volume IV electronically filed by Mr. Ken Spencer on behalf of Armstrong & Okey, Inc. and Gibson, Karen Sue Mrs.