

STATE OF ILLINOIS)
)SS
COUNTY OF LEE)

In the Matter of the Petition
 of
BSW DevCo, LLC, Big Sky Repower
Lee County, Illinois

Testimony of Witnesses
Produced, Sworn and
Examined on this 4th day
of January, A.D., 2021,
before the Lee County
Zoning Board of Appeals

Present:

Mike Pratt (via Zoom)
Craig Buhrow
Gene Bothe
Glen Hughes
Bruce Forster, Chairman

Alice Henkel, Secretary
Dee Duffy, Zoning Enforcement Officer

Honorable Judge Timothy Slavin, Facilitator

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INDEX

Witness: JAMES KUTEY (continued)

Examination Page

Attorney Streicker (Cont'd Direct)	9
Ms. Duffy	37
Mr. Buhrow	39
Mr. Bothe	42
Mr. Hughes	44
Mr. Pratt	48
Mr. Lawson	56
Mr. Montavon	62

Witness: TERRY VAN DE WALLE

Examination Page

Attorney Streicker (Direct)	65
Mr. Montavon	107

EXHIBITS

Exhibit Marked

Petitioner's Exhibit Number 8	25
Petitioner's Exhibit Number 9	68

End 110

1 JUDGE SLAVIN: All right. My cell phone
2 says it's 6 o'clock, so it must be 6 o'clock.

3 Welcome back, everyone. I call out of
4 recess from December 16th, Lee County Zoning
5 Board of Appeals hearing on Petition 20P1555,
6 Steward Creek -- excuse me, BSW DevCo, LLC's,
7 petition for Special Use Permit to construct --
8 to repower, as they're calling it, a wind energy
9 system.

10 The Zoom meeting ID, for those of you who
11 aren't already on Zoom but are straggling to
12 find it, in case you're listening on YouTube,
13 the meeting ID is 915-3923-9154. Repeating,
14 915-3923-9154. Password is, as it has been
15 continually, 209840.

16 If you want to join us -- want to view
17 us -- not join us -- view us or listen to us on
18 YouTube, you go to your browser,
19 www.youtube.com, all run together. In the
20 search bar type "Lee County IL," just I-L,
21 "Zoning Board of Appeals." Don't be worried
22 about upper- or lowercase letters. A drop-down
23 box should allow you to pick the session date
24 you want. If you want to watch us live, it's

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In Totidem Verbis, LLC (ITV)

1 obviously January 4th, 2021.

2 And Happy New Year, everyone.

3 For technical assistance, you may call
4 815.973.3449.

5 I note, back from the holidays and present
6 in attendance are Zoning Board of Appeals
7 members: Chair, Mr. Forster; Vice Chair,
8 Mr. Buhrow; Mr. Bothe is with us; and
9 Mr. Hughes. They are all personally present.
10 Over my shoulder, I note the presence of the
11 Honorable Mike Pratt, who is joining us on Zoom.

12 Mr. Streicker is here with one of his
13 company representatives. Our IT expert, Alice,
14 and her mentor, Mike McBride, are present. The
15 court reporter is present. And, of course,
16 himself as well.

17 We have nine people in the Old -- in the
18 Third Floor Courtroom of the Old Lee County
19 Courthouse.

20 Ms. Duffy, Mr. Boonstra, and Mr. McBride
21 are hovering around the edges outside. Meaning,
22 there are 12 people in the facility but only
23 nine in the meeting room, which complies with
24 the governor's present mitigation protocol.

1 All right. I think that's all the -- no,
2 it's not. I apologize. In anticipation of one
3 or two more future dates for this matter,
4 actually, three, would everybody get out their
5 calendars, please, and bear with me as we go
6 through this again.

7 (A discussion was held off the
8 record.)

9 JUDGE SLAVIN: Okay. So the -- after
10 tomorrow night -- well, I'll just say, after
11 tonight, the available dates are Tuesday,
12 January 5th, Monday, February 1st, and Tuesday,
13 February 2nd.

14 MR. STREICKER: Judge, January 19th?

15 JUDGE SLAVIN: No, I don't think so. It
16 was, but now it's not okay.

17 I think now that's all the housekeeping
18 stuff, and you may proceed.

19 MR. STREICKER: Thank you, Judge, and
20 thank you, members of the ZBA. I hope everybody
21 had a nice New Year's, and we're happy to be --

22 JUDGE SLAVIN: Just a minute. We have one
23 more person in the room. Let's count heads.

24 MR. STREICKER: That's Terry, our second

1 witness.

2 JUDGE SLAVIN: One, two, three -- I can't
3 count. That's ten. Yeah, okay. Good.

4 MR. STREICKER: Can you hear me?

5 JUDGE SLAVIN: What's the number?

6 MR. STREICKER: Nine.

7 JUDGE SLAVIN: Say again.

8 MR. STREICKER: Nine.

9 JUDGE SLAVIN: Let me try.
10 How about now?

11 MR. STREICKER: Okay. Perfect.

12 JUDGE SLAVIN: I do everything around
13 here.

14 MR. STREICKER: Again, thanks to
15 everybody. As you remember when we met, I
16 believe it was December 16th, we presented Jim
17 Kutey, and we got through about an hour and 15
18 minutes of his testimony. As we start off
19 tonight, we have Jim here again to finish up,
20 and I think that you'll find this to be the most
21 interesting part of the testimony because we're
22 really going to get into the heart of the
23 repowering, why we're doing this, and what the
24 repower project is going to look like.

1 We are also going to talk about the
2 planned decommissioning process this evening,
3 which I'm sure is of interest to all of you,
4 briefly go through some more of the Lee County
5 Ordinance criteria and how we believe that this
6 planned Ordinance meets that criteria, and
7 provide all of you with a very brief update on
8 where we are with a Road Use Agreement.

9 We did, as you may remember, work out one
10 with Lee County and a number of townships in
11 2019, and we're working through that process on
12 a parallel track with this.

13 And then we will briefly touch upon the
14 two categories of Variance requests.

15 So with that.

16 JUDGE SLAVIN: You may.

17 Since it's been two weeks, you need to be
18 put under oath or affirmation.

19 (James Kutey was sworn.)

20 JUDGE SLAVIN: Thank you.

21 THE WITNESS: Thank you, Judge.

22 MR. STREICKER: Thank you.

23 JAMES KUTEY,

24 having been first duly sworn, was examined and

1 testified as follows:

2 CONTINUED DIRECT EXAMINATION

3 BY MR. STREICKER:

4 Q. Mr. Kutey, as you remember, we left off in the
5 testimony on the 16th talking about the various
6 Ordinance standards, and specifically with
7 regard to setbacks and the FAA criteria that we
8 have to meet, and we are now ready to transition
9 into what, as you heard me mention to the ZBA
10 members, is one of the most interesting parts of
11 your testimony, which is, let's talk about the
12 repowering specifically.

13 So if we can, start off with talking about
14 how the repowered turbines are different than
15 the existing turbines. I think that's probably,
16 along with the reuse of the existing turbine
17 towers, really the key of this whole repowering.

18 A. Absolutely, Mr. Streicker.

19 Thank you, and thanks, again, to the
20 members and Judge Slavin.

21 Since the project development construction
22 originally occurred approximately ten years ago,
23 there have been significant advancements and
24 improvements in the wind turbine technology.

1 All turbines will be sourced from a tier one
2 manufacturer, that tier one manufacturer being
3 GE.

4 Tier one is a term used in the wind
5 industry, it typically refers to one of the top
6 three manufacturers: GE, Vestas, and Siemens
7 Gamesa.

8 Compared to the current, existing wind
9 turbines, which are now, as I said, almost a
10 decade old, the proposed repowered GE turbines
11 will provide state-of-the-art technology
12 advancements to the project site which will
13 allow the repowered turbines to produce
14 significantly more energy per turbine,
15 approximately 30 percent more, and reduce the
16 operation and maintenance costs of the units.
17 Furthermore, repowering the project will reduce
18 the total number of wind turbines from 114 to 97
19 and will increase production of clean, renewable
20 energy in Illinois.

21 The project will use turbines from the
22 GE 2.7-116 family. These include the
23 2.5 megawatt 116 and the 2.3-megawatt 116
24 variants. These are described in the GE

1 document which are included in the Zoning -- in
2 the application entitled, "Technical
3 Documentation, Wind Turbine Generation Systems
4 2X-116/127."

5 Q. Following up on that, Mr. Kutey, I'm going to
6 present you with what's been marked as
7 Petitioner's Exhibit 1, which is our petition in
8 this case and application. Exhibit D to that
9 application, I believe, is the document you
10 referred to; is that correct?

11 A. That is correct, sir.

12 Q. And just to give the Board members a little
13 more color on what's in this document, is there
14 anything you would like to highlight for them?
15 And specifically, I think with regard to the
16 GE 2.7 family -- and, now, they heard before in
17 2019 about the GE 2.3 and the 2.5 and now we're
18 talking about a 2.7, but how does all that come
19 together?

20 A. The 2.7-megawatt family of turbines are
21 composed of three different-sized units: a 2.7,
22 a 2.5, and a 2.3. They all have 116-meter rotor
23 diameter. The units themselves are identical;
24 they are the same size, the same machinery, the

1 same technology. They vary only in the software
2 that's applied to the units to make them a 2.7
3 unit, a 2.5-megawatt unit, or a 2.3-megawatt
4 unit.

5 And it's a specific unit -- turbine family
6 that GE has developed specifically for
7 repowering units and allows them to sort of mix
8 and match the sizes so that they can meet the
9 actual size of the project that's warranted.

10 Q. Okay. So to summarize for the Board, all the
11 turbines that we're talking about are part of
12 this GE 2.7 family, but when you, as a
13 developer, go to order the turbines, you would
14 instruct GE to either produce the turbines with
15 a software package at a 2.5-megawatt or 2.3; is
16 that correct?

17 A. That's correct.

18 Q. Okay. So the external structure is all the
19 same?

20 A. That is correct. They are identical.

21 Q. Okay. And I think either you or I had
22 mentioned it in my opening comments, but with
23 the developers here, we have a 239-megawatt
24 project, correct?

1 A. Correct.

2 Q. And we're limited to that output by our PJM
3 interconnection?

4 A. That is correct, sir.

5 Q. Okay. So what you, as a developer, have to do
6 is really put a puzzle together and order the
7 correct number of 2.5s and 2.3s, so by the time
8 the project is repowered it still equals 239.4
9 megawatts?

10 A. 239.4, I believe, is the right number, and that
11 math works out to 90 - 2.5 units and 7 - 2.3
12 units.

13 Q. And if I could, I'm referring to Section 3.1 of
14 Exhibit D right now, which is entitled "Rotor."
15 It looks like there's two classes of turbines.
16 If you could just describe for the Board which
17 one is the 2.7 family and -- so they can see
18 some of the commonality here.

19 A. They are all 2.7 -- part of the 2.7 family.
20 The 116-meter rotor diameter can be applied to
21 the 2.7, the 2.5, or the 2.3. Only -- the 2.7
22 is the only unit that would get the larger,
23 127-meter rotor diameter.

24 Q. And we're not going to use that 127-meter

1 diameter?

2 A. We are not.

3 Q. So when I'm looking at Section 3.1 here, it
4 looks like there's two columns in white.

5 There's a left column that's marked 2.0-2.7-116?

6 A. Correct.

7 Q. And a column on the right that's marked
8 2.2-2.8-117?

9 A. Yes.

10 Q. We're only talking about the first column?

11 A. The column on the left.

12 Q. With the 116 designation?

13 A. Correct.

14 Q. And that matches the rotor diameter?

15 A. That is correct.

16 Q. Okay. And, Mr. Kutey, you have heard me, and I
17 know you have discussed this as well, that you
18 think this new family of turbines is going to
19 offer a number of benefits. Locally, I think
20 one of the primary benefits is that it's a
21 quieter turbine; is that correct?

22 A. That's correct, sir. It's quieter particularly
23 at lower wind speeds, and turbines are much more
24 noticeable to an observer at low speeds than

1 they are at higher wind speeds. At higher wind
2 speeds, the noise from the turbine is actually
3 drown out by the sound and the noise of the
4 higher winds that rustles trees, crops, and, you
5 know, anything else that may -- and the noise of
6 the wind itself.

7 Q. Okay. And to back up, the fact that you
8 believe this is going to be a quieter turbine,
9 you have commissioned a sound study for this
10 project, correct?

11 A. That's correct, and we have modeled that with
12 the 2.5 unit, which is, of course, as I
13 previously described, identical, and Burns & Mac
14 is our contractor for that. They have done a
15 study, they have done a study with the 97 units,
16 and that proves out that that's quieter, at
17 least theoretical. They will actually be out in
18 the field subsequent to the commissioning of the
19 turbines and verify that.

20 Q. Okay. And I think we'll be able to hear from
21 the Burns & Mac expert tomorrow in the hearing?

22 A. Tomorrow is the correct date for that.

23 Q. Assuming we go tomorrow.

24 A. Yup.

1 Q. Then if I could, Mr. Kutey, besides the
2 turbines, you know, we have told the ZBA that we
3 intend to use the existing foundations. Can you
4 describe the process of how you figure out if a
5 foundation is actually reusable for purposes of
6 a repowering?

7 A. Yes, indeed. I'll start with the original
8 foundations. The original foundations are
9 designed with the appropriate amount of rebar
10 and concrete in them based on the loads that the
11 individual turbines, you know, put out. Okay.
12 They also incorporate all the particular codes
13 -- local, State, and federal -- that are
14 necessary to build structures like this.

15 Then in a repower situation, what happens
16 is, we look at the new load profile of the new
17 units -- in this case, the GE units -- and we
18 verify on paper that the load envelope is within
19 the limits of the original foundation. Okay,
20 and that work has been done. That's more of a
21 desktop study, and the desktop studies confirm
22 that all the loads are indeed within the
23 appropriate envelope of that.

24 We take the codes from the current year,

1 in this case it's 2020, and update those and
2 then look at -- go into the field, and we
3 examine the turbines, we examine the
4 foundations, looking for any abnormalities,
5 cracks, you know, any adverse soil conditions
6 that result from that, and verify that since
7 there are no indications of failure -- those
8 being cracks, those being soil imperfections --
9 then we'll conclude the new loads and that the
10 new -- the foundations are indeed adequate for
11 the new technology.

12 Q. Okay. And would that be a third-party engineer
13 that's going out in the field and making that
14 determination?

15 A. That would be Barr Engineering. They are
16 indeed a third-party engineer. They did the
17 original foundations. They have all the
18 documentation from the original foundations, and
19 they are now doing the final field studies for
20 the repowered foundation.

21 Q. Okay. So ultimately Barr would be out in the
22 field, and they'll tell you whether or not the
23 foundations are adequate?

24 A. That's correct. But right now, on paper, they

1 are indeed adequate. And, you know, in the
2 simplest, you know, description of that, the
3 foundations themselves are typically overbuilt,
4 you know, initially, and they are overbuilt with
5 a safety factor of what we call 3X. They are
6 three times as strong as they need to be.

7 And once we go out in the field and verify
8 that there are no deficiencies noted in the
9 actual foundations, then you can, you know,
10 relax, if you will, the 3X, and verify that
11 these are good, you know, for another 20 years.

12 Q. I want to follow up on one other statement that
13 you made that this GE 2.7 family of turbines was
14 designed for repowering; is that correct?

15 A. That is correct, sir.

16 Q. And if I could turn your attention to Section
17 2.11 of Exhibit D. It's entitled, Tower and
18 Foundation. As I understand it, the tower
19 adapter that's being discussed here, is that the
20 real -- one of the real keys to this turbine
21 family?

22 A. Yes, it is. The turbine adapter that you
23 described is a transition piece, and the
24 transition piece is a uniquely-designed element.

1 It's about 3-foot tall, and it bolts onto a
2 competitor's tower, in this case the Suzlon
3 tower, and translates that to a GE footprint,
4 where the GE nacelle is mounted atop that.

5 Q. And is this tower adapter, is this one of the
6 things that we, as BSW, the Applicant here,
7 learned about between 2020 and 2019 -- excuse
8 me, between 2019 and 2020 that's really allowed
9 us to think more about reusing existing towers?

10 A. Yes. Yes, indeed.

11 I think -- just to clarify, I think we
12 knew about it. I think, you know, in 2019 there
13 was some other factors that made it -- that made
14 it more favorable to replace the towers, but
15 this gives us an alternative process, if you
16 will, and allows us to have a whole lot less
17 impact on the landscape, the underlying land.

18 We'll have fewer trucks. We won't be
19 taking down towers. We'll produce less waste.
20 It's just a cleaner, more cost-efficient job.

21 Q. That's good to hear.

22 Let me ask you about the collection lines.
23 For having an existing project, there are
24 existing collection lines out in the field. Do

1 any of those have to be upgraded or modified?

2 A. We expect that we'll be upgrading up to 4,000
3 linear feet of those collection lines. And
4 upgrade is probably not the right description
5 for that. These are more modifications.

6 And, recall, we're taking away 17 units,
7 and the collection lines go to that particular
8 turbine, if you will. Once that turbine goes
9 away, we're going to have to redirect those
10 collection lines to carry the energy back to,
11 you know, the substation. So these are more
12 new -- new and modified collection lines than
13 they were upgraded.

14 Q. All right. Good.

15 Now that we have talked about the
16 repowering, if we can, let's take the ZBA
17 members through the construction plan. How are
18 we actually going to carry out the repower?

19 A. Perfect.

20 The construction plan has a number of
21 steps. Initially we'll begin by clearing any
22 necessary vegetation and installing what we call
23 stormwater pollution prevention plan, you know,
24 best management practices. That is typically

1 what we see: the silt fence that's out there,
2 the soil erosion, and sediment control. And
3 we'll also do topsoil stripping if that's
4 necessary.

5 After this, we'll upgrade the access roads
6 for the cranes and the rows that will be coming
7 down those roads and install a staging yard or a
8 laydown area for the equipment that will be
9 delivered.

10 These two steps get us set up for the
11 turbine work. Then the new turbine components
12 will be delivered to each site location. At
13 that time, the upgrades to the collection and
14 replacement of collection lines will be
15 undertaken, and then we'll be installing crane
16 pads, erecting the new turbine generators if --
17 as necessary.

18 And the erection of the 97 new units will
19 proceed in parallel with the decommissioning of
20 the 17 units. As I said, those will be
21 concurrent.

22 Once the new units are standing, they will
23 go through the commissioning process, whereby
24 they are actually placed in service and

1 connected to the grid. Then comes cleanup,
2 where the site is restored, the disturbed areas
3 are stabilized, and ground cover can be
4 re-established as necessary.

5 Q. And give us an idea of what the current, at
6 least, thinking is with regard to the timeline
7 for this project.

8 A. We anticipate that, you know, February 21 to
9 about May 21 will be the time frame for
10 mobilization. The completion of the engineering
11 studies and the preparation, the decommissioning
12 and installation will occur from about June to
13 November of 2021, with December '21 right now
14 targeted as when we expect the repowered project
15 to reach commercial operations.

16 Q. Okay. You heard me at the beginning of our
17 discussion today talk about Road Use Agreements.

18 A. Yup.

19 Q. And I know it would probably be of interest to
20 the ZBA members. What do we anticipate needing
21 or happening with the roads as part of this
22 repowering process?

23 A. We anticipate that -- some temporary widening
24 of the access roads and the foundation areas in

1 order to facilitate construction. We'll need to
2 build crane pads adjacent to the turbines for
3 the construction process. However, when the
4 construction process concludes, the access roads
5 will be returned to their current width of
6 approximately 16 feet and the foundation areas
7 will be returned to their current width of about
8 60 feet.

9 Q. Okay.

10 A. Further, we are in discussion with the various
11 road commissioners to put in place Road Use
12 Agreements with both Lee County, with Bureau
13 County, and the various Townships that are
14 involved.

15 Q. Okay. And describe further for the ZBA
16 members, am I correct that we had Road Use
17 Agreements finalized in 2019 that have timed out
18 since construction did not start?

19 A. That's correct. They were good for a year, and
20 since construction didn't start within that
21 year, they timed out, as you said.

22 Q. Okay. And for purposes of 2020, is it correct
23 to say, what we have been talking about with the
24 road districts is updating the exhibits to those

1 agreements, some of our transportation plans, et
2 cetera, but we hope to enter into a Road Use
3 Agreement that's similar in material terms to
4 the 2019 agreements?

5 A. Yeah, absolutely. There's some new language
6 that will go into those agreements. That
7 language is in draft form right now, but I would
8 argue that 95 percent of it is the same as the
9 2019 agreement.

10 Q. Am I correct, just so everybody knows, that the
11 entities we're working with right now on the
12 Road Use Agreements would be Lee County, Walnut
13 Township, Ohio Township, LaMoille Township, and
14 East Grove Township?

15 A. That is correct.

16 Q. Then if I could, Mr. Kutey, let's turn our
17 attention again, and now that we have talked
18 about the construction of the project, let's
19 talk about how we plan to decommission the
20 project. I know that you had previously
21 mentioned that the project had entered into an
22 Agricultural Impact Mitigation Agreement; is
23 that correct?

24 A. Yes, sir.

1 (Petitioner's Exhibit Number 8
2 marked for identification.)

3 Q. All right. I'm going to hand you what's been
4 marked as Exhibit 8, and this is part of the
5 packet that I handed out to the Board last week.

6 If you could, describe what's been marked
7 as Petitioner's Exhibit 8 for the members.

8 A. Sure. This is the Agricultural Impact
9 Mitigation Agreement. It's an agreement between
10 BSW DevCo, LLC, and the Illinois Department of
11 Agriculture. It was signed on March 6th, 2019.
12 It remains effective.

13 Q. Okay. And are you familiar with this
14 agreement?

15 A. Yes, I am.

16 Q. And if you could, take the Board through the
17 AIMA and how it's related to the decommissioning
18 project.

19 A. Sure. Initially, decommissioning is governed
20 by a number of agreements: the AIMA that we
21 just introduced, the individual land leases, as
22 well as explicit decommissioning agreements made
23 with the County. All these ensure that
24 decommissioning is both completed and completed

1 properly and funded properly, with the
2 requirements of removing the turbines, the
3 cabling, and restoring the soil to its original
4 condition.

5 The AIMA provides specific procedures for
6 how construction and decommissioning occur and
7 things such as cable depth, decompaction,
8 construction during wet weather and the like.
9 And the process decommissioning -- and the
10 project life will entail the removal of the
11 project turbines, decommissioning the
12 foundations down to 48 inches below the natural
13 grade, removal of the pad-mounted transformers,
14 and any underground collection that's -- up to
15 48 inches below grade, removal of the road
16 material, and restoration of the site back to
17 its natural grading condition.

18 Q. All right. Thank you, Mr. Kutey.

19 Then if you could, take the Board through
20 sort of a deep dive into how each turbine will
21 be taken down. How are we proposing to do this?
22 By what method?

23 A. We're proposing to decommission the turbines
24 using one of two different methods. The first

1 method, the proposed, will consist of
2 disassembling the turbines' major components
3 using a crane. This will include the removal of
4 the turbine rotor and blades, the removal of the
5 nacelle, and then the removal of each of the
6 four turbine tower sections in sequential steps
7 until all the turbine components are on the
8 ground. Once the major turbine components are
9 on the ground, they will be dismantled and
10 removed from the site.

11 The second proposed method will be the
12 tilt-fell method. The tilt-fell method is a
13 detailed engineering plan that includes the
14 cutting of the steel tower at the base of the
15 turbine tower section, and with the use of
16 positioned cables connected to the nacelle, the
17 turbine will be pulled down in a planned
18 location. The tilt engineered plan will analyze
19 all critical conditions existing at the time,
20 including wind direction, wind speed, and
21 allowable stresses on the individual units.

22 Once the turbine has been tilted over, the
23 turbines will be dismantled and removed from the
24 site.

1 Q. And what factors go into deciding which method
2 you're going to choose to use?

3 A. It really comes down to the schedule and
4 availability of the equipment.

5 The crane method uses heavy lifting cranes
6 and equipment to dismantle the turbines, and it
7 takes a longer duration to remove each component
8 one by one in the disassembly process.

9 With the tilt-fell method, we can fell a
10 turbine using medium-duty equipment, and it
11 takes very little time to tilt and fell the
12 turbines relative to the dismantling procedure.

13 We're still in the planning stages and
14 talking with two contractors right now about
15 both options. We'll be evaluating, you know,
16 their schedules and their pricing, and we think
17 that the tilt method -- the tilt-fell method,
18 you know, gives us greater flexibility to allow
19 us -- you know, particularly around scheduling.
20 And the process of removing the tower is
21 completed in a shorter amount of time, using
22 less equipment. This significantly reduces the
23 duration and amount of disturbance required for
24 removing a turbine from any site.

1 Q. And let's -- if you can take the members
2 through, how do you ensure that the
3 decommissioning method is done safely?

4 A. Both of the options that I described previously
5 require the construction team to have site
6 safety and security teams secure the site to
7 ensure that all non-authorized personnel are
8 removed from the active project site. These
9 include clearly-marked boundaries and visible
10 signs that will alert people to the hazards.

11 Additionally, the use of meetings, like
12 the plan of the day and onsite job safety
13 analysis, are used to ensure that all authorized
14 workers are informed daily of the tasks being
15 completed and are made aware of the hazards
16 being performed onsite.

17 The use of audio and visual signals, you
18 know, with heavy equipment operators is
19 paramount in these processes, and all authorized
20 personnel will be required to have the
21 appropriate and proper training and the
22 knowledge of the site safety protocols before
23 being allowed to work, you know, on such a
24 project.

1 Q. And once a turbine is decommissioned, what
2 happens then? Is it recycled? How are the
3 components dealt with?

4 A. The turbines will be salvaged and cut into
5 smaller pieces so that they can be transported
6 off site, and most of the equipment will be set
7 for recycling and reused to make other projects,
8 particularly the steel components.

9 Q. And lastly, you mentioned that there's a number
10 of agreements that are sort of interlocking when
11 it comes to decommissioning, whether it was
12 landowner leases, the AIMA agreements with the
13 County, et cetera. Would those be equally
14 applicable to both the decommissioning -- the
15 planned decommissioning of 17 turbines that we
16 talked about that are part of the original
17 project and ultimately the remaining 97, when
18 those are decommissioned?

19 A. Yes, certainly. When the turbines were
20 originally constructed about ten years ago, the
21 developer put in place a decommissioning plan
22 committing to both Bureau and Lee Counties that
23 the turbines would be decommissioned in a
24 certain way.

1 For the purposes of the 17 turbines that
2 we're talking about that are not being
3 repowered, this is their end-of-project life,
4 and the existing decommissioning agreement
5 explicitly pertains to them.

6 For the purpose of the repowered turbines,
7 there are specific requirements that will be
8 undertaken by BSW DevCo contained in these
9 agreements to ensure that the repowered units,
10 including the taking down of the older Big Sky
11 turbines, is done safely and sustainably.

12 Q. Mr. Kutey, I'm going to again present you with
13 what's been marked as Petitioner's Exhibit 1,
14 which is the application. I believe Exhibit K
15 to the application is the decommissioning plan
16 we have been talking about; is that correct?

17 A. That's correct, Exhibit K.

18 Q. And this is the decommissioning plan between
19 the project, Big Sky Wind, and the County,
20 correct?

21 A. Correct.

22 Q. Turning gears briefly, and for the last time,
23 back to the Lee County Ordinance. In relation
24 to the topics that we have just been covering,

1 there are a number of specific Ordinance
2 provisions that we have to comply with. So I
3 wanted to take you through some of those
4 briefly.

5 First, Lee County requires that the
6 minimum distance between the ground and any wind
7 turbine blades shall be 15 feet, I believe.

8 Will that be the case, the new turbines
9 will comply with that provision?

10 A. Yes. Based on the turbine models that are
11 proposed, it is anticipated that the ground and
12 the turbine blades, the clearance will be over
13 75 feet.

14 Q. And additionally, the Lee County Ordinance
15 requires posting of warning signs for potential
16 hazards, and then all cables, ropes, and wires
17 around the turbines will need to be marked to
18 prevent harm.

19 Will we be complying with that provision?

20 A. Yes, sir. We have standard signage compliant
21 with all federal, State, and local requirements.
22 And the turbines themselves are freestanding and
23 do not require ropes or wires to secure them.

24 Q. Okay. Another Ordinance provision states that

1 tower construction is to be done according to
2 all applicable Illinois statutes. I take it, it
3 goes without saying, that we will be compliant
4 with that?

5 A. All construction will be compliant with the
6 applicable State statutes.

7 Q. And the Ordinance requires that all electrical
8 distribution lines shall be located underground.

9 Will this be the case?

10 A. All electrical distribution lines will indeed
11 be located underground.

12 Q. And next, Mr. Kutey, the Ordinance requires
13 that all wind turbines shall be designated with
14 an automatic overspeed control to render the
15 systems inoperable when the winds are blowing in
16 excess of speeds the machine is designed for.
17 All WECS shall have a manually-operable method
18 to render the system inoperable in the event of
19 a structural or mechanical failure of any part
20 of the system, including automatic overspeed
21 control. And all WECS shall be designed with
22 automatic control to render the system
23 inoperable in the case of loss of utility power
24 to prevent the WECS from supplying power to a

1 de-energized electrical distribution system.

2 If you could, take the Board through that
3 system and how we intend to comply with that.

4 A. Sure. The product will use the aforementioned
5 GE turbines. They have redundant braking
6 systems, which include both aerodynamic
7 overspeed controls, including variable pitch,
8 tip, and other similar systems, and, secondly,
9 mechanical brakes. Mechanical brakes are
10 operated in a fail-safe mode. Stall regulations
11 shall not be considered a sufficient braking
12 system for overspeed.

13 Q. And I take it this is something GE is
14 specifically designed for, right, to be able to
15 meet these criteria?

16 A. Yes, indeed. All the manufacturers, you know,
17 are designed similarly.

18 Q. And a couple final questions, Mr. Kutey. You
19 heard me mention when I opened that one of the
20 things that we were seeking was a waiver from a
21 current County requirement that the project be
22 substantially underway within one year after the
23 permit issuance. If you could talk briefly
24 about the reasons why we would seek such

1 approval?

2 A. Well, I think the number one reason that we're
3 probably all familiar with is COVID-19. But
4 more generally speaking, you know, the need for
5 an additional year covers things that are just
6 in the unknown category. Again, we don't know
7 where COVID-19 is going to go and where that's
8 going to bring the availability of contractors,
9 you know, severe weather delays, and the typical
10 development issues that we face on a, you know,
11 day-to-day and annual basis.

12 Q. So it's really just building in some extra
13 timeline security?

14 A. That's correct.

15 Q. Okay. To account for the unknown.

16 A. Well put, yup.

17 Q. And then lastly, Mr. Kutey, in Section 4.2.9 of
18 the application, which is again, Petitioner's
19 Exhibit 1, we ask for, I believe, ten setback
20 Variances; is that correct?

21 A. Uh-huh.

22 Q. And those Variances are described in Exhibit E
23 to the application?

24 A. That's correct, Exhibit E.

1 Q. Okay. And if I am correct, all those Variances
2 are seeking the same thing, which is, since the
3 project was originally permitted in 2006 and
4 built in 2010, the Lee County Ordinance has
5 changed with regard to setbacks; is that
6 correct?

7 A. That's correct. And because we're reusing, you
8 know, foundations and towers and we don't have,
9 you know, the readily-available opportunity to
10 move those, the turbines were there back when
11 the Ordinances were different, the Ordinance has
12 changed since the original construction, and
13 hence we need the Variances, and there's ten
14 turbines we need Variances for. Those are
15 described, as you suggest, in Exhibit E.

16 Q. Okay. So to allow us to make best use of the
17 land, which, as you said, to reuse the turbine
18 towers and the foundations, these Variances are
19 necessary?

20 A. Sure, and to minimize the impact on land.

21 Q. So it's really a unique characteristic we have
22 here?

23 A. Yes, indeed.

24 MR. STREICKER: Judge, that concludes my

1 direct examination of Mr. Kutey.

2 JUDGE SLAVIN: All right. Very good.

3 Let's go around the horn. Mr. Boonstra,
4 questions of this witness?

5 MR. BOONSTRA: No questions. Thank you,
6 Judge.

7 JUDGE SLAVIN: Ms. Duffy?

8 MS. DUFFY: Yeah, I do have a question or
9 two.

10 EXAMINATION

11 BY MS. DUFFY:

12 Q. Can you explain what a restricter is for a
13 turbine?

14 A. I'm sorry?

15 Q. A restricter?

16 A. A restricter?

17 Q. Uh-huh. Kind of like a braking system, is that
18 what they would call a restricter?

19 A. I have never heard it called a restricter. If
20 it's a braking system, I can describe the
21 braking systems.

22 Q. I think you did earlier in your testimony.

23 MR. STREICKER: Yeah, why don't you go
24 ahead and describe it.

1 A. Yeah, there's two types of braking systems.
2 One is a mechanical brake, and it is quite the
3 same and quite analogous to a disk brake on an
4 automobile. There's a flywheel, and under
5 certain conditions, if the load is lost or
6 there's an overspeed condition, the brake will
7 apply itself, as a disk brake does, to stop the
8 unit.

9 And secondly and more primary, the --

10 (Brief interruption.)

11 THE WITNESS: I am sorry.

12 JUDGE SLAVIN: I think it came from the
13 Zoom screen.

14 THE WITNESS: Okay. Got it.

15 A. And more primary, you know, brakes are
16 aerodynamic in nature. If the load is lost,
17 right, the turbine blades will feather out of
18 the wind so that they're not taking advantage of
19 any wind, and that will cause the aero --
20 aerodynamically it to slow down.

21 Q. So there's two different types of braking?

22 A. Two different and absolutely unique.

23 If power is lost, again, for any reason,
24 the blades will spin out of the wind, all three

1 of them -- all three of those are independent on
2 each blade -- and it will essentially stall
3 itself.

4 MS. DUFFY: Okay. Thank you.

5 JUDGE SLAVIN: That's it.

6 ZBA members. Mr. Forster?

7 MR. FORSTER: No questions.

8 JUDGE SLAVIN: Mr. Buhrow.

9 MR. BUHROW: Yes, a couple things.

10 EXAMINATION

11 BY MR. BUHROW:

12 Q. When you repower this field out here, are you
13 going to be shutting down sections at a time and
14 still producing electricity in certain sections?

15 A. Yes, sir, that is the -- that is the plan. The
16 project has obligations, called capacity
17 obligations, to be able to deliver power at any
18 time. And secondary to that, there's no need to
19 shut down the entire project.

20 The -- think of the project as having 11
21 different strings or 11 different circuits, and
22 we can take down, we think, three or four of
23 those at a time and use a crane on an individual
24 circuit. If we use three cranes, we'll take

1 down three circuits. If we use four cranes,
2 we'll take down four circuits. And each crew
3 will run down, you know, a string of turbines
4 and either repower them or decommission those as
5 they walk down.

6 So revenue will continue, power generation
7 will continue, albeit a reduced level, but the
8 project will continue to operate at the same
9 time.

10 Q. And the same thoughts -- the decommissioning
11 then, that will be done after the repowering?

12 A. It's going to be done at pretty much the same
13 time.

14 Q. Okay.

15 A. If you think of a string of turbines, you know,
16 that crane is going to go straight down that
17 string. If it gets to a turbine that's going to
18 be decommissioned, it's going to decommission
19 it.

20 Rather than break that crane down or go
21 around it, a breakdown of a crane is a costly
22 and time-consuming event. So we are going to
23 send that crane right down, everything will be
24 staged, they'll repower one. If the next one is

1 coming down, that crane will take it down.

2 Q. Okay. And referring back to your previous
3 testimony a couple weeks ago, a couple of the
4 decommissioned ones were going to be near the
5 wetlands, as I recall. What was the problem
6 that people were talking about with the
7 wetlands, why, you know, they don't want to keep
8 using those turbines that were near the wetlands
9 and some of the endangered species? I just
10 didn't catch anything there.

11 A. I'll ask Terry to talk about that later. The
12 turbines you're referring to are Number 84 and
13 86, and those are adjacent to the Ryan Wetland
14 areas, which, my understanding, in the last
15 decade has grown larger and larger and larger
16 and has been a successful project.

17 All -- and they requested that we take
18 them down, and we're going to comply. But I
19 think Terry will have more to say about that.

20 MR. BUHROW: Okay. Thank you. That's
21 all.

22 JUDGE SLAVIN: Thank you.

23 Mr. Bothe?

24 EXAMINATION

1 BY MR. BOTHE:

2 Q. How do you determine who gets them and who does
3 not of the 17 that you take away?

4 A. We went through a process to make that
5 determination and came up with some rules.
6 First of all, we wanted to certainly minimize
7 noise and shadow flicker, which were, you know,
8 some historic problems, noise being the larger
9 one.

10 We wanted to minimize the impact to any
11 landowner who had only one turbine. If they
12 only had one, we didn't want to take one away.
13 We recognized, though, that they would still
14 receive payments for the collection line that
15 ran across their land. Where a landowner had
16 two or three or four turbines, it would -- all
17 other things being equal, it was easy to take
18 one away from them.

19 Also, again, think about 11 strings or 11
20 circuits, each one of those circuits carries
21 about 25 megawatts of energy, and the design of
22 the collection system is about that capacity.
23 So we took away approximately -- well, at least
24 one turbine from every string, because we were

1 putting larger units in, so that we could keep
2 the balance somewhat the same.

3 And, again, some feedback from the Soil
4 and Water Conservation Districts, 82 and -- or
5 84 and 86. Feedback from the town of Ohio was
6 another concern. So hopefully we have chosen
7 the right ones.

8 The last thing that needs to be done, as I
9 mentioned earlier, is the foundation engineer is
10 going to go out and inspect foundations. We
11 have told them the 17 we think that are going
12 away, but if he finds a turbine with a
13 foundation that's somehow cracked or damaged,
14 that turbine might have to go away and one of
15 these might have to stay. We don't expect that
16 to happen, by any means, but that's the last
17 step in the decision process.

18 MR. BOTHE: Thank you.

19 THE WITNESS: Thank you, sir.

20 JUDGE SLAVIN: Thank you.

21 Mr. Hughes?

22 MR. HUGHES: Yes, I have got a few
23 questions, and, actually, your last comment
24 leads me into one of those.

EXAMINATION

1
2 BY MR. HUGHES:

3 Q. How -- what's the process for verifying any
4 lack of deficiencies or deficiencies within a
5 foundation?

6 A. The -- as I mentioned earlier, the tabletop
7 exercise in the engineering analysis has been
8 done, and all of the foundations have now
9 passed, and there's probably 12 or 15 different
10 criteria that have to be analyzed.

11 The foundation design engineer is going to
12 go out into the field next and he's going to
13 examine those foundations. He's going to look
14 at -- down in the basement of the turbine you
15 can see a good part of the foundation. He'll
16 look for cracks, he'll look for deficiencies.
17 They'll also examine the bolts, you know, around
18 the base of the turbine and the grounding around
19 the base of the turbine for any issues.

20 The bolts are an interesting thing. They
21 do ping tests on the bolts. If one is somehow
22 hollowed out and it's a little sub-foundation,
23 it will ring a different tone. Pretty primitive
24 test but an effective one.

1 And if they find anything that's
2 condemning, they'll condemn it. The Codes and
3 the regulations, you know, tell them what's
4 condemning and what's not condemning.

5 Q. Okay. That helps particularly with bolts, but
6 there's an actual basement area under the
7 foundations so that they can get visual
8 inspection of a good share of that foundation?

9 A. Yes, indeed. Yup. Yup.

10 Q. Okay. That was --

11 A. The critical part of the foundation is where
12 the pedestal meets the mushroom-shape-inverted
13 cone. That is the area where -- if you have a
14 problem, that is where it typically shows up.
15 And if they have to, they'll actually excavate
16 some of the soil to get a better look at that.

17 Q. Okay. That's what I was wondering.

18 Then, also, you were talking about
19 replacing cables, collection cables. And
20 within -- you didn't specifically state this,
21 but it's Section 3.5.1 on Page 38 of the
22 application. The existing collection cables
23 being replaced will be disconnected electrically
24 from the collection system and left buried in

1 the ground.

2 Why would they be left buried in the
3 ground when you're already exposing them,
4 they're going to be -- they're in the process of
5 decommissioning anyways?

6 A. If they are less than 48 inches -- well, they
7 are deeper than 48 inches, we'll disconnect them
8 and retire them in place, and that meets the
9 criteria that's in the decommissioning. Just
10 ripping those cables out of the ground will
11 cause more disturbance than anything else. 48
12 inches is typically picked because that's all
13 the low -- the depth that farm equipment
14 typically reaches.

15 Q. Okay. So those cables, whether for the 17 that
16 we're talking about now --

17 A. Yup.

18 Q. -- or the final decommission, if they're below
19 48 inches, are going to stay, just be left in
20 the ground permanently?

21 A. Yes, indeed.

22 Q. Okay. Final question, in the decommissioning,
23 Exhibit K, there is a copy of a letter of credit
24 which is the basis for ensuring the financial

1 viability of the decommissioning plan.

2 A. That's correct.

3 Q. That letter of credit is dated -- excuse me --
4 I think it's 2014, with an expiration date of
5 2015. The letter of credit provides for an
6 automatic extension of one year, which would
7 only take the letter of credit to 2016.

8 Is there a current letter of credit on
9 file? And if so, could we get a copy of it?

10 A. I don't know the answer to your question. I do
11 believe there's a current one on file, and
12 certainly you can get -- you will get a copy of
13 it when we resolve that.

14 Q. From the standpoint of that being financial
15 surety for the County --

16 A. Absolutely.

17 Q. -- it bothers me to see an old one in this
18 application.

19 A. Yup.

20 MR. HUGHES: All right. Thank you. That
21 would be it.

22 THE WITNESS: Thank you, sir.

23 JUDGE SLAVIN: Mr. Pratt?

24 MR. PRATT: Yes, Judge, I have several

1 questions. Can you guys hear me okay?

2 JUDGE SLAVIN: Yup, we can hear you great.

3 MR. PRATT: Perfect. Do you need to see
4 me?

5 JUDGE SLAVIN: Not necessarily. Do you
6 want to be seen?

7 MR. PRATT: No, not necessarily.

8 JUDGE SLAVIN: Okay. Go ahead. I can
9 hear it's your voice, so.

10 MR. PRATT: Okay.

11 EXAMINATION

12 BY MR. PRATT:

13 Q. Glen just asked my first question about the
14 cables being left in the ground. I had that
15 also.

16 So then the next question I had was, you
17 keep talking about the 2.5s and the 2.3s under
18 the 2.7 format. Why not use all 2.7s and
19 eliminate another eight towers?

20 A. I believe the answer to that -- well, using all
21 2.7s -- and think about this as just sort of a
22 mathematical exercise -- would overload certain
23 circuits. Right? And, again, the typical limit
24 on these circuits is about 25 megawatts.

1 And closer to the substation, the cable is
2 larger. And further away, the cable is smaller,
3 and it has ampacity ratings at its different
4 size.

5 And I think -- and I'm not the electrical
6 designer, but I think when you get to the
7 extremes, or furthest from the substation, the
8 cable that's in the ground doesn't support 2.7
9 units.

10 Q. Okay. So then back to your testimony a couple
11 weeks ago about the landowners that are
12 decommissioned. Did I understand that they will
13 continue to be paid or they won't continue to be
14 paid?

15 A. They will continue to be paid. For example --
16 I want to make sure I understand your question
17 right.

18 Q. Will they continue to be paid for the towers
19 that are decommissioned?

20 A. No, they will not; however, they will have --
21 think of, I have got a string of five turbines
22 and I take the middle one out, Number 3. The
23 collection cable passes through Number 3's
24 property, and so they would receive a payment

1 for the collection line that's on their property
2 that transfers energy from one side to the
3 other.

4 So the entire process and the entire
5 program was to ensure that every landowner who
6 was participating back in the original project
7 continues to participate at least at some level
8 in the repower project.

9 Q. So I assume the original leases with these
10 landowners allows that to happen?

11 A. The leases need -- some of those leases were
12 already modified to recognize that a turbine is
13 going away, but collection is still on their
14 particular property.

15 Q. Okay. So the other thing I'd throw out here,
16 so we're taking down 117 turbines out of this
17 whole project --

18 A. You're taking down 17, not 117.

19 Q. You're taking down 117 of the actual turbines
20 up on top of the towers, correct?

21 A. Okay. Yes, we're taking down the nacelles, the
22 blades, the rotors, and the pad mount
23 transformers are all going away.

24 Q. But we have always -- as we have gone through

1 these wind turbine projects, we have always had
2 trouble with the decommissioning plans, coming
3 up with what is the value at the end of the
4 project. So now we're taking down 117
5 components here. Surely you have a value that
6 you would place on them.

7 It would be an interesting experiment to
8 see how the decommissioning plan would play out
9 with the value you're assigning to them turbines
10 you're taking down. Do you understand where I'm
11 going with this?

12 A. I think I do. Go ahead.

13 Q. No, I'm just -- I would just --

14 JUDGE SLAVIN: I don't want to be
15 difficult, but let's ask a question.

16 Q. (By Mr. Pratt:) Okay. My question is, do you
17 have a value on them 117 turbines that you're
18 taking down?

19 A. As the project developer, no, I do not have a
20 value on that. The value -- the value of those
21 is, if you will, discounted in the price of the
22 new equipment.

23 For -- and I'll explain it this way: GE,
24 as the supplier of the new equipment, is going

1 to take possession of the old equipment, and
2 they are responsible for the decommission and
3 the scrapping of that equipment. They have
4 agreements with scrappers, they have agreements
5 with, you know, folks who will take and reuse
6 that, you know, equipment.

7 So from the developer's perspective, no,
8 we don't see the value. We see it as some kind
9 of discount, if you will, in the price of the
10 new turbines, but I can't put a number on that.

11 Q. Okay. Thank you.

12 Next question. In your testimony a couple
13 weeks ago, you talked about shadow flicker.

14 A. Yup.

15 Q. 26 residents would be above the 30 hours of
16 shadow flicker; is that correct?

17 A. That's correct.

18 Q. So once you remove the towers, you made a
19 comment that you're going to remove towers that
20 cause shadow flicker. Is the -- go ahead.

21 A. Nope, go ahead. I'm sorry to interrupt there.

22 Q. Is the 26 after you've removed the towers that
23 are causing shadow flicker now?

24 A. The 26 are -- the 26 exceedances are the result

1 of the 97-turbine array. So answer is, yes,
2 there will be 26 exceedances after that.

3 And it's important to remember that those
4 exceedances are all done on a theoretical basis.
5 In other words, when Burns & Mac does their
6 study, they do it in a very conservative manner.
7 Okay. It assumes that the sun is always shining
8 and that there is, you know, shadows every day.
9 When the sun is not shining, you know, that
10 becomes quite muted.

11 So the 26 exceedances are theoretical.
12 And that's the reason, subsequent to the
13 construction of the repowered project, Burns &
14 Mac will come back and do an actual shadow
15 flicker study using the same receptors as in the
16 theoretical study.

17 Q. Then you also stated that you were contacting
18 all the affected flickers -- people affected by
19 flicker and getting waivers signed --

20 A. Yes, sir.

21 Q. -- is that correct?

22 A. That's correct. That process is ongoing, yup.

23 Q. So you're only contacting the 26 above the 30
24 hours, is that correct, and getting a waiver

1 from the 26?

2 A. I believe there's more than the 26 that were --
3 but I'm not positive of the number. There are
4 some waivers that were obtained back in 2019
5 when there were -- based on different turbines
6 and different arrays. That I know.

7 Once we have taken those, the 26 -- some
8 of those were a subset of the 26 that are in the
9 current study.

10 I'll suggest that the Burns & Mac guys
11 will be able to add much more detail to that.

12 Q. That may be the point at which to ask my
13 further questions.

14 So also in the process of doing wind
15 turbines we set up a complaint system. So here
16 we have a project that has been on for ten
17 years. Does anybody -- do you guys have a
18 history of complaints that have been filed
19 against your company, hence against this
20 project?

21 A. I don't know the answer to that. It's not my
22 company. I'm a contractor to the project, and
23 that's just some history I don't have. Perhaps
24 Mr. Streicker knows.

1 MR. STREICKER: I can't testify.

2 JUDGE SLAVIN: He's not here to answer
3 questions.

4 THE WITNESS: Oh, okay.

5 JUDGE SLAVIN: You're under oath. You
6 answer the question.

7 THE WITNESS: I understand.

8 Q. (By Mr. Pratt:) So then the waivers that are
9 created -- that are needed because the towers
10 have -- are too close to the setback lines, you
11 stated they were all created because this -- the
12 Ordinance had changed?

13 A. That's correct, sir.

14 Q. So are these -- and I don't have all my
15 paperwork with me here to look at each of them,
16 so maybe that answer would be in the paperwork.
17 But are they created by nonparticipating
18 neighbors or are they all created on
19 participating?

20 A. I think it's both, actually. The number -- I
21 can give you the turbine numbers, if you'd like.

22 Q. No, that's fine. I'm just trying to figure out
23 whether it's -- and, I guess, have you contacted
24 all of them people that are going to be affected

1 by the waivers?

2 A. All the waivers -- and I'll just correct that.
3 Page 46 of Section 4.2.9 that you referenced
4 earlier, all of the Ordinance waivers are from
5 participating project landowners. It's not
6 anticipated we'll seek any nonparticipating
7 waivers in Lee County.

8 MR. PRATT: Okay. That's all my
9 questions, Judge.

10 JUDGE SLAVIN: Thank you.

11 Just a minute here.

12 Okay. Let's see if any Interested Parties
13 have questions. The only Interested Parties are
14 those on Zoom, and to raise your hands -- well,
15 I see Mr. Lawson has his hand raised.

16 Mr. Lawson, if you can hear me, we'll
17 unmute you. Questions of Mr. Kutey?

18 MR. LAWSON: Okay. Can you hear me?

19 JUDGE SLAVIN: Yup, sure can.

20 MR. LAWSON: Thank you. I just had a
21 couple quick questions.

22 EXAMINATION

23 BY MR. LAWSON:

24 Q. The first question is, when this was originally

1 planned back ten years ago, what was the life
2 expectancy of the current turbines?

3 A. It was 20 years at that time.

4 Q. Okay. What's the current expectancy of the
5 turbines now that you're putting up?

6 A. 20 years, and that 20 years is based on what we
7 think is the limiting element, and that's the
8 foundations.

9 Q. Okay. So if this -- if it was 20 years and
10 you're adding another 20, you could possibly go
11 over the 10 years then with the actual bases and
12 the towers? I guess, you --

13 A. No, I think -- perhaps you misunderstood. We
14 are -- think of it this way: we are
15 recertifying these foundations -- which I think
16 you referred to as the base of the towers, we
17 are recertifying these foundations for 20 years
18 forward.

19 Q. Okay. Okay. Is it possible that in ten years
20 a newer turbine could come out and we'll be back
21 in this process again?

22 A. I think it's entirely possible that that could
23 happen. My -- you know, my nonstructural
24 engineering thoughts, though, suggest that the

1 foundations would not be good for another 20
2 years.

3 Q. Okay. How -- the whole project in its total, I
4 think you mentioned 240 megawatts?

5 A. 239.4, I believe, yeah.

6 Q. What -- how many acres does a tower occupy?

7 A. How many acres?

8 Q. Or how much land, I guess, does one tower
9 occupy, whether it's an acre or --

10 A. When you think about, you know, the footprint
11 of a tower, you know, as a developer, I think
12 that the -- you know, the footprint is probably,
13 you know, a 60-foot radius around the base of a
14 tower, and, you know, the driveway or the
15 approach road that goes to it.

16 If your question is different, how many
17 turbines could I put on an acre, that's a
18 different question.

19 Q. Okay. I guess, let me rephrase my question.
20 With the -- there's roughly a hundred -- a
21 hundred towers that you will be -- after
22 decommissioning?

23 A. 97, correct, sir.

24 Q. So how many acres would you say those 107

1 towers occupy?

2 A. I would say that -- I would calculate that
3 60-foot radius and multiply that by 97 and add
4 some roads in there.

5 But you're asking me about the project
6 dimensions, right? There's probably closer to
7 20,000 acres that the project itself sits on.

8 Q. Okay. So -- but, I guess, my question would be
9 each individual tower. And, I guess, to maybe
10 help you understand the question, I'm comparing
11 them to -- we're actually looking or considering
12 allowing a solar farm to occupy 3,843 acres to
13 produce 500 megawatts.

14 I'm just curious, how -- I'm just curious
15 to how this compares to something like that.

16 JUDGE SLAVIN: That's not a question.
17 Just, please, ask him a question.

18 Q. (By Mr. Lawson:) Okay. How many acres does
19 each tower occupy? A half acre?

20 A. I'd guess more like a quarter of an acre.

21 Q. Quarter of an acre?

22 A. Yeah.

23 Q. Okay. So times 107 is how many acres?

24 A. Times 97.

1 Q. Okay. I'm sorry, 97.

2 A. Let's just say a hundred quarter acres, that's
3 25 acres.

4 Q. So you could possibly do a 500-megawatt project
5 on 50 acres?

6 A. You'd crowd the wind turbines in there and you
7 wouldn't have a very efficient one, but, yes,
8 you could do it.

9 Q. Okay. Now are there any fences around these
10 wind farms?

11 A. No.

12 Q. No high fences or barbed wire fences?

13 A. No, sir.

14 Q. Are there any security lights or cameras on
15 these towers?

16 A. No, no security lights. There's FAA lights on
17 the top of these towers on very specific units
18 as defined by the FAA.

19 Q. Okay. Do these towers only produce wind
20 when -- or do these towers only produce power
21 when the sun shines?

22 A. When the wind blows.

23 Q. Well, I guess, do they --

24 JUDGE SLAVIN: The question was -- let --

1 Mr. Lawson, please.

2 The question was, do these towers only
3 produce power when the sun shines?

4 THE WITNESS: The answer is no.

5 Q. (By Mr. Lawson:) Okay. So do these towers
6 produce power at night?

7 A. Yes.

8 Q. Do these towers have the potential of producing
9 power 24 hours a day?

10 A. Yes.

11 MR. LAWSON: Okay. That's all the
12 questions I have. Thank you very much for your
13 time.

14 JUDGE SLAVIN: Thank you.

15 THE WITNESS: Thank you, Mr. Lawson.

16 JUDGE SLAVIN: I see Marty Montavon.

17 If you have questions, Marty, we'll unmute
18 you. I see your hand is not raised, but I
19 didn't want to go through the explanation, since
20 you're the only one on Zoom. If you have got
21 questions, we'll unmute you.

22 Marty, do you have any questions?

23 MR. MONTAVON: Yes. Can you hear me?

24 JUDGE SLAVIN: Yup.

EXAMINATION

BY MR. MONTAVON:

Q. In regards to those Variances that we signed in 2019, do those have to go back and be re-signed again now also?

A. No, sir.

Q. And how do we get a copy of those? Did you hear me?

A. Yes, I did. I'm trying to think of the most efficient way here.

If you -- do you typically contact the folks at the O and M building over in -- right here in Lee County?

Q. We have, but not with much luck with that stuff.

Another landowner and myself both were questioning where those Variances that we signed went to, and we never got a copy sent to us at any time.

A. Okay. Well, I can follow up on that and get you the Variance. It would be --

Q. Okay. And another -- I'm sorry?

A. It would be in your name, sir?

Q. Yes. Yeah, there's several -- it's in my

1 wife's --

2 JUDGE SLAVIN: Any other questions?

3 Q. (By Mr. Montavon:) Also, about the
4 decommissioning and the tilt method where you
5 drop them, what about with regards to
6 foundations of houses that are very close to
7 some of those? Have you thought about that?

8 A. I'm not sure I understand the question.

9 Q. When that thing falls and hits the ground, is
10 it going to damage current foundations that are
11 nearby?

12 A. Oh, yes, the engineering team that has done the
13 work on the tilt-fell method has taken that into
14 consideration.

15 Q. Okay. So each one is -- each turbine is
16 different in that respect?

17 A. Each one is unique, yes, sir.

18 MR. MONTAVON: Okay. That's all I have.

19 JUDGE SLAVIN: Thank you.

20 Alice, am I missing anybody else on Zoom?

21 MS. HENKEL: No.

22 JUDGE SLAVIN: Okay. Very good. Let's
23 take a break and we'll pick up at 25 after
24 maybe.

1 (A recess was taken at 7:18 p.m.
2 and proceedings resumed at
3 7:30 p.m.)

4 JUDGE SLAVIN: Folks who are listening, we
5 are having technical issues with the next
6 presentation, so bear with us. We're not
7 ignoring you.

8 (A recess was taken at 7:30 p.m.
9 and proceedings resumed at
10 7:36 p.m.)

11 JUDGE SLAVIN: All right. Ladies and
12 gentlemen, back to work.

13 Those of you on Zoom, if you can hear us,
14 we're ready to begin.

15 Sir, do you want to raise your right hand.

16 (Terry VanDeWalle was duly
17 sworn.)

18 JUDGE SLAVIN: Let's see, I think,
19 Mr. Kutey, if you would give up your seat, I
20 hate to boot you like that, but -- actually --
21 okay. You may inquire.

22 TERRY VAN DE WALLE,
23 having been first duly sworn, was examined and
24 testified as follows:

DIRECT EXAMINATION

BY MR. STREICKER:

Q. Mr. VanDeWalle, would you please state your name and spell it for the record.

A. Yes. Terry VanDeWalle. T-E-R-R-Y, V-A-N, capital D-E, capital W-A-L-L-E.

Q. And what's your current business address?

A. 2300 Swan Lake Boulevard, Suite 202, Independence, Iowa, 50644.

Q. Okay. And could you briefly describe your applicable educational background for the Board members?

A. Sure. So I have a bachelor of science degree in animal ecology and a master's degree in biology.

Q. Okay. And where are those from?

A. The bachelor's is from Iowa State University and the master's is Drake University.

Q. And how are you currently employed, sir?

A. I currently work as a principal biologist for Stantec Consulting Services.

Q. Okay. And do you specialize in any particular area or field?

A. In -- my office is primarily a renewables

1 office, and so most of the work we do, probably
2 90 percent of the work we do, is with wind. We
3 also do some solar. We really specialize in
4 both pre- and post-construction surveys for
5 birds and bats. We also do wetlands, cultural
6 resources, really all of the pre-construction
7 surveys for wind farms. And then we also do
8 bird and bat -- or really bat and eagle
9 permitting for wind farms as well.

10 Q. And what are your current job duties?

11 A. So my current job is, I do manage our
12 Independence, Iowa, office, and I then supervise
13 a team that does work on the -- again, on these
14 wind farms, and so we -- with these
15 pre-construction surveys, we're doing, you know,
16 bird and bat surveys. In post-construction, we
17 go out and are looking for dead birds and bats
18 below the turbines.

19 So my job really is to supervise the
20 studies that are done and the documents that are
21 produced.

22 Q. And how long have you been working in this
23 industry?

24 A. I have been an environmental consultant for

1 almost 30 years now, been working in the
2 renewables field for 14.

3 Q. Okay. And tell us a little bit about your
4 employer, Stantec.

5 A. Sure. Stantec is a -- we're really an
6 international company. It's headquartered in
7 Edmonton, Alberta. We do have 250 offices here
8 in North America and a little over 3- -- or 3900
9 environmental engineering staff between Canada
10 and the United States. We do have a little over
11 250 offices here in the Midwest, and we have
12 provided environmental and engineering services
13 for probably close to 500 wind farms now between
14 the United States and Canada.

15 Q. Okay. And you said you work primarily in the
16 renewable industry currently; is that correct?

17 A. I do, yeah. So, again, my office, primarily
18 renewables. We have worked on a little over 150
19 wind farms in 21 states at this point, including
20 35 years in Illinois.

21 Q. Okay. That was my next question, have you
22 worked in Illinois before?

23 And, sir, I understand that you're here
24 tonight to testify about the wildlife studies

1 that have been done for the project; is that
2 correct?

3 A. Correct.

4 Q. Okay. And have you prepared a presentation?

5 A. Yes.

6 (Petitioner's Exhibit Number 9
7 marked for identification.)

8 Q. Okay. And, sir, I'm going to hand you what I'm
9 going to mark as Petitioner's Exhibit Number 9.
10 If you could take a look at that for me and let
11 me know if you recognize that?

12 A. So this is the presentation I'll present
13 tonight.

14 Q. Did you personally prepare this presentation?

15 A. I did.

16 MR. STREICKER: If I missed anybody with a
17 copy of the presentation, I have extras here, if
18 anybody would like one.

19 Q. (By Mr. Streicker:) Prior to turning things
20 over to you, if you could just tell the Board
21 briefly what the purpose of your testimony is
22 here today?

23 A. Yeah, the purpose is to really review the
24 studies that my company -- that I and my company

1 have done at the site and to kind of discuss
2 where we are as of now.

3 Q. Okay. And that was a perfect segue, I think,
4 into my next series of questions for you, which
5 is, I'm showing you now what's been marked at
6 Petitioner's Exhibit Number 1, which is the
7 Petitioner's permit application that's at issue
8 in this hearing.

9 On Page 2.3 of that application,
10 specifically Section 2.2.2, it's entitled
11 Stantec; is that correct?

12 A. Yes.

13 Q. That is just another history of the company
14 that you have already provided?

15 A. That's correct.

16 Q. And then, flipping forward in the application,
17 on Page 4-8, and specifically Section 4.2.15,
18 it's entitled, Wildlife and Avian Survey and
19 Mitigation Plan; is that correct?

20 A. Correct.

21 Q. And is this one of the aspects that you and
22 Stantec worked on with regard to this
23 application?

24 A. Yes.

1 Q. And next I'm going to turn to Section 4.3.11 in
2 the application, which is entitled, Bird and Bat
3 Conservation Study?

4 A. Correct.

5 Q. Is it also correct to say that that's another
6 aspect of this application that Stantec and you
7 have worked on?

8 A. Yes. That's a document we have prepared.

9 Q. And flipping forward to Exhibit C to the
10 application, there's information provided about
11 Stantec; is that correct?

12 A. Yes.

13 Q. And to the best of your knowledge, is this
14 information accurate and up to date?

15 A. Yes, it is.

16 Q. Okay. And then lastly, a copy of your
17 professional curriculum vitae is included; is
18 that correct?

19 A. Yeah. That's my renewables résumé, yes,
20 limited to just the wind farm.

21 Q. Okay. So this CV is really just pertinent to
22 the wind farm that we're here to talk about
23 today?

24 A. Yes, sir.

1 Q. And is this current and up to date?

2 A. Yes, minus a couple projects probably, but yes.

3 Q. And then I'm flipping forward to Exhibit F to
4 the application, which is entitled, Site
5 Characterization Study. Is that a study you're
6 here to talk about tonight?

7 A. Yes.

8 Q. Prepared by you and Stantec?

9 JUDGE SLAVIN: Mr. VanDeWalle, can you do
10 us a favor. Every place is different, I
11 understand that. You have practically got to
12 swallow the microphone, you really do.

13 Q. (By Mr. Streicker:) So just to confirm,
14 Exhibit F to the application, which is marked
15 Site Characterization Study, that was prepared
16 by Stantec and yourself?

17 A. Correct.

18 Q. And lastly, sir, Exhibit H to the application
19 is entitled, Bird and Bat Conservation Study. I
20 take it the same answer would apply?

21 A. Correct.

22 Q. Okay. Thank you.

23 Now, Terry, why don't I turn it over to
24 you to talk to the Board, and could you take

1 them through your presentation?

2 A. All right.

3 Well, thank you. I appreciate the
4 opportunity to be here to tonight.

5 If we can -- we'll just kind of maybe
6 quickly move through the first couple slides.
7 The first slide, again, just my qualifications,
8 which I think we have already covered.

9 You can go on to the next slide.

10 The next one is, again, about Stantec,
11 which I think we have already covered.

12 Big Sky Project, we did start working on
13 this, at least this -- the repower project we
14 started working on in 2018, and the -- one of
15 the first things we did was -- and again, my
16 company's role here is really the environmental
17 piece of this, so the birds and the bats and
18 then threatened and endangered species.

19 So one of the first things we did in
20 December of 2018 then was to contact the
21 Illinois DNR through what's known as their
22 EcoCAT consultation. So EcoCAT is an online
23 system where we can insert the project
24 boundaries. So we tell the system where the

1 project is at, and then this online system will
2 tell us if there are any known occurrences of
3 threatened and endangered species in the area.
4 So we did that in -- the first time, anyway, in
5 December of 2018.

6 Subsequent to that though, the project
7 boundary changed. So we resubmitted it a couple
8 weeks later, got the new EcoCAT report. We'll
9 come back and talk more about the EcoCAT here in
10 a little bit when we discuss threatened and
11 endangered species.

12 But after we got the threatened and
13 endangered species information from the Illinois
14 DNR, we did have a meeting with them -- that was
15 in January of 2019 -- to discuss again the
16 project and any impacts on threatened and
17 endangered species.

18 After that, we prepared the -- a
19 threatened and endangered species risk
20 assessment. That was primarily for the listed
21 turtles. We'll come back to that here in a few
22 minutes as well.

23 After that, again, we met with the
24 Illinois DNR again to discuss that risk

1 assessment. Really all of this was designed to
2 reduce, to minimize and avoid the impacts to the
3 listed species, particularly the turtles
4 throughout the process.

5 We then -- it was determined at some point
6 that there could be an impact to the listed
7 turtles, and so the Illinois DNR suggested that
8 the project pursue an incidental take
9 authorization for the project since listed
10 turtles -- this is threatened or endangered
11 species that are protected under Illinois law.
12 This incidental take authorization is required
13 if there will be any mortality to those species.

14 And so we did prepare that incidental take
15 authorization. It was completed. It was
16 submitted to the Illinois DNR, filed on public
17 notice, went all the way through the comment
18 period. We received no comments.

19 The Illinois DNR was essentially ready to
20 issue the permit, but at that point the project
21 was put on hold and so the incidental take
22 permit was not issued.

23 However, in this past November, November
24 of 2020, I did contact the Illinois DNR to start

1 that process up again, and Illinois DNR has
2 indicated that they should be able to just issue
3 the permit now. We'll make some modifications
4 to the -- you know, the Applicant here should
5 not have to go back out on public notice.

6 Next slide, please.

7 So just quickly, to kind of run through
8 what -- the studies that we did. We did a
9 desktop habitat assessment and then some field
10 studies for species of concern, as are described
11 in the U.S. Fish and Wildlife Services
12 Land-Based Wind Energy Guidelines, and these
13 guidelines are really -- set forth this tiered
14 approach for how we should evaluate a site to
15 determine whether there are concerns for
16 essentially birds and bats and listed species.

17 So just quickly, the three tiers. The
18 first tier is, we do look at the site on a land
19 scale -- landscape perspective. So how does the
20 site fit into the bigger landscape of the county
21 or even the state? And what are -- you know,
22 what are the native communities, ecological
23 communities, or really broad-scale wildlife
24 issues?

1 Tier 2 then, we drill down to just the
2 site. We look at the project site and we
3 determine, you know, what specific habitat --
4 are there unique habitats in the project area?
5 This is where we do that EcoCAT search to
6 determine if there are threatened and endangered
7 species that are known from the project area.

8 And then Tier 3 are the field studies.
9 These are studies where we would actually go out
10 into the -- go out to the project site and maybe
11 do onsite habitat assessments or, for some
12 projects, there may be wildlife -- actual
13 wildlife studies done.

14 So the Land-Based Wind Energy Guidelines
15 is the process that Fish and Wildlife Service
16 recommends that you follow for these -- for
17 evaluating the risk of a project to wildlife.
18 That is -- that's the process we followed.
19 That's also the process then that's documented
20 or described in the site characterization report
21 that we prepared.

22 Q. This is the site characterization report in the
23 application?

24 A. That's correct, yes.

1 So we'll step through just a few of these
2 things. You know, taking a look at -- really
3 this is kind of now Tier 2, where we jump into
4 looking at the project site. One of the things
5 we look at is land cover. You know, we're
6 looking for natural habitats within the project
7 area. And I think this will probably be of no
8 surprise to anyone, but this site is primarily
9 agricultural. You know, about roughly 87
10 percent of the project area is cropland, so corn
11 and beans. There's a little bit of woodlands,
12 and there's also some developed land. So if you
13 look at the agricultural lands and the developed
14 lands together, it's over 90 percent of the
15 project area.

16 There is some suitable habitat in the form
17 of woodland there. Very little grassland or
18 open water or wetlands.

19 Next slide, please.

20 Next slide does look at wetlands, and so
21 this is a desktop assessment for wetlands. We
22 used the National Wetlands Inventory for this.
23 So this is the publicly-available wetland
24 information. And what you can see, again, is

1 that very little wetland is here. Wetlands,
2 things like cattail marshes or other types of
3 wetlands like that, very little of that.

4 Primarily what's in this project area
5 are -- at least what this system maps are as
6 wetlands or streams. Now, some of these streams
7 might be intermittent streams, meaning they
8 don't always have water in them. National
9 Wetlands Inventory tends to overestimate the
10 wetlands. But, again, in general you can see
11 there's very little wetlands.

12 Again, we look at wetlands because it's a
13 potential habitat for wildlife.

14 Next slide, please.

15 So Land-Based Wind Energy Guidelines do
16 list certain species of concern, and we'll just
17 kind of step through those. They call them
18 species of concern, although the first group are
19 migratory birds, which really includes a lot of
20 different species. But the migratory birds
21 would be the typical birds that you would expect
22 to see. Things like cardinals and robins, blue
23 jays, those are all migratory birds.

24 What we do see in this area is that there

1 really is limited nesting habitat. Again,
2 there's some woodland and there's a little bit
3 of wetland in the area. That's where primarily
4 we would expect to see nesting habitat for these
5 birds.

6 Most of these birds are not going to nest
7 in crop fields. You know, active crop fields
8 are not suitable nesting habitat. So, again,
9 it's -- the majority of the project area doesn't
10 provide suitable nesting habitat, but there is a
11 little bit.

12 We did take a look at the -- what's
13 publicly available for -- what's known for which
14 species of birds are found there, and for that
15 we used the breeding bird survey. Breeding bird
16 survey is an annual survey. They go out every
17 June. They go out to the same routes every June
18 and they look at the same survey points and
19 record the birds that they have seen.

20 You can see on the slide here that it's --
21 the closest breeding bird survey route to this
22 project doesn't actually run through the project
23 area, but it -- but it does -- but it gets very
24 close. It's within 15 miles of the project

1 area. You can see that the species that they
2 see there are all very common species that you
3 would expect to see. So crows and robins, barn
4 swallows, brown-headed cow birds, grackles,
5 house wrens, starlings, these are all, you know,
6 common species you would expect to see here in
7 an agricultural landscape in the Midwest.
8 Dickcissels that are on the list, they are a
9 little more of a grassland bird that are seen in
10 ditches and things like that.

11 So, again, there is really nothing really
12 of surprise here in the species that you're
13 seeing along this breeding bird survey route.

14 Next slide.

15 Eagles are one of the other groups that
16 the Land-Based Wind Energy Guidelines addressed.
17 Again, there's sort of limited habitat for
18 nesting for eagles. Eagles typically will --
19 they nest around food sources. So food sources,
20 in general, are large lakes and other large
21 bodies of water; however, kind of here in the
22 Midwest, when you're not along the river or
23 you're not out in a -- if you're not around a
24 lake, livestock operations will work as well .

1 A lot of times the livestock operators will --
2 you know, if they have a dead animal, they take
3 that out and put it in the field, and that
4 animal will attract eagles as well.

5 I'm not sure if there's any large-scale
6 livestock operations within the project area,
7 but typically not a lot of suitable habitat for
8 eagles.

9 Now, having said that, today, this day and
10 age, eagles can really be seen anywhere. So it
11 would not be a surprise to see one pass through
12 the area. There are no nests that I'm aware of
13 within the project area.

14 We also looked at another source of
15 publicly-available information, the Christmas
16 Bird Count. The Christmas Bird Counts are
17 conducted by the Audubon Society. They, as
18 their name applies, are done on Christmas Day,
19 and they go out to the same location every year.
20 They have a number of surveyors that -- or
21 observers that will look for birds.

22 During the Christmas Bird Count Surveys
23 that have been done at a site that -- or at a
24 location that's about two and a half miles

1 northwest of the project, they have seen eagles
2 there during the winter. So 82 eagles have been
3 observed since 2017.

4 So, again, not a surprise to see eagles
5 here in the Midwest. These are winter birds.
6 So they're not nesting, they are just birds that
7 are moving through. And if there's a food
8 source, they may stay all winter.

9 During these breeding bird surveys that I
10 mentioned though, those, again, are conducted
11 during the nesting season. Since 1966 there's
12 only been one bald eagle observed during those
13 surveys. So, again, that really points to the
14 fact that there's likely not nesting eagles
15 here. They are not seen during the nesting
16 season.

17 The other raptors, those are other birds
18 of pray. So hawks, owls, falcons, those kinds
19 of things. The most commonly-observed raptors
20 or birds of prey, again, are pretty common here
21 in the Midwest. Things like screech owls,
22 red-tailed hawks, kestrels, those are all common
23 Midwest species that you can see here in
24 Illinois.

1 And those were all during the Christmas
2 Bird Count, but very similar species seen during
3 those breeding bird surveys as well.

4 So we know that there is some bird
5 mortality at a wind farm, at wind turbines. You
6 know, wind turbines will kill some birds,
7 although, you know, bird mortality is typically
8 less than bat mortality. When wind really took
9 off here in the United States, everyone was
10 concerned about birds and we thought there would
11 be a lot of bird mortality. As it turns out,
12 bird mortality has been lower than bat
13 mortality. We'll talk about bats here shortly.

14 Nevertheless, the project is taking some
15 measures to reduce overall bird mortality at the
16 site. One of those is that the turbines are
17 self-supporting, they are not -- they are
18 unguyed. There are no cables or wires that come
19 off the turbines like you would see on, you
20 know, a radio tower maybe or something like
21 that. It is those guy wires that are most
22 dangerous for the birds. The birds fly into
23 those. So these turbines are unguyed.

24 The collection and communication lines are

1 buried. That avoids any kind of electrocution
2 risk for eagles or other birds.

3 The -- also in accordance with the
4 Land-Based Wind Energy Guidelines, the project's
5 substation lights will be a low-voltage light
6 and they will be pointed downwards, so they will
7 be down-shielded. That's important because, you
8 know, for instance, the fog we have been having
9 the last few days, it's on these foggy nights
10 that many birds -- or that birds are often
11 killed at wind turbines because they can't see,
12 you know, the turbines as they fly through.

13 Now, most birds, as they're migrating
14 through, they're flying higher than the
15 turbines. So there's really no risk. The risk
16 is when they fly down, you know, when they fly
17 down through that rotor system. What we know is
18 that lights at a substation or lights at the
19 base of the turbine, for instance, those lights
20 the birds will hone in on. They'll see those,
21 they'll fly down towards the light. That's when
22 they fly through them.

23 So by putting these -- the low-voltage
24 lights and down-shielding them, you can reduce

1 those mass mortality events that occur at wind
2 turbines. And that's been shown to be very
3 effective, and, again, the Land-Based Wind
4 Energy Guidelines recommends that.

5 In addition, all the employees on site
6 will be required to turn off the internal lights
7 of the turbines. Really it's for the same
8 reason. You know, you open the door to the
9 turbine and there's lights in there. When they
10 leave the light on on the inside and close the
11 door, you might see light around the edge of the
12 door. It may not be sealed tight. That light
13 could attract birds. So, again, turning lights
14 off inside reduces bat mortality.

15 And then personnel at the site, you know,
16 will receive periodic environmental awareness
17 training, and they will be instructed to look
18 for wildlife injuries and mortalities, and the
19 project will have a wildlife incident reporting
20 system to document.

21 Q. One question, Terry. These are all federally-
22 mandated -- or not mandated, but federal
23 recommendations for reducing bat mortality?

24 A. That is correct.

1 Q. And the project will be complying with all of
2 these recommendations?

3 A. That's right, yes. All of these are
4 recommended either through the Land-Based Wind
5 Energy Guidelines or other guidance from the
6 Fish and Wildlife Service. There are also --
7 they also recommended -- at least the burying of
8 the collection lines and things like that are
9 recommended by the -- by an industry group
10 that -- as a way to prevent electrocutions.

11 Q. So we're following best practices here?

12 A. That's correct, yes.

13 All right. Threatened and endangered
14 species. So this is that EcoCAT search. We did
15 the EcoCAT search, and the EcoCAT search came up
16 with a list of species, I think there's seven --
17 seven species that came up on that list. You
18 can see that five of those are plants --
19 actually, four are plants. One is a butterfly.

20 And we did habitat assessments for these,
21 and really none of the plants have a potential
22 to occur in the areas where the repowering would
23 occur. And so of this list of seven species,
24 there was really only the ornate box turtle and

1 the Blanding's turtle that were of concern.

2 And what we did find is that there's
3 highly-suitable habitat for the Blanding's
4 turtle and the ornate box turtle at the Ryan
5 Wetland and Sand Prairie.

6 Actually, my company -- in fact, I -- did
7 the original environmental work for Big Sky when
8 it was built the first time, and we identified
9 the Ryan area at that time as a concern for the
10 turtles.

11 I do know there was a question earlier
12 about those two turbines that this time around
13 they asked to remove. I will say that when we
14 did the original work for Big Sky ten years ago,
15 the project at that time was asked to set the
16 turbines back, I believe it was a quarter mile,
17 from the Ryan Wetland and Sand Prairie, and they
18 did -- the project did that at the time. I
19 think that the difference now is that, yeah, the
20 site has expanded, they have added some acreage
21 to it, and so some of those turbines are now
22 closer than they were originally, and that's the
23 reason for the request to remove those turbines.

24 What we did is, we identified that --

1 based on habitat, known habitat for the
2 Blanding's turtle and the ornate box turtle, we
3 identified 22 turbines that were located within
4 one mile of the Ryan Wetland and Sand Prairie as
5 potentially risky. We actually then added two
6 additional turbines that are located outside of
7 that but are in close enough proximity to known
8 turtle occurrences, know where turbines have
9 been seen, as risky as well.

10 Of the 22 potentially risky turbines,
11 there were 14 that were identified as posing a
12 risk during construction.

13 So one thing to keep in mind with the
14 turtles is that the risk to the turtles is
15 during construction. It's while the equipment
16 is driving back and forth, you know, the
17 trucks -- essentially trucks running over the
18 turbines. The turbines -- the turtles are not
19 at risk to the spinning turbines, to the
20 operating turbines. So it's only during
21 construction.

22 When we did the original work a couple
23 years ago for this, there were turbines -- there
24 were new foundations that were going to be

1 installed at the time. Some of the turbines
2 were going to move. That's no longer happening.
3 And so the risk for the turtles is actually less
4 now than it was before because those turbines
5 are no longer going to be moving, and, as a
6 result, there's fewer trucks on the road. So,
7 again, remember, the trucks driving back and
8 forth are really the concern for the turtles.

9 Next slide, please.

10 This is kind of hard to see on the screen,
11 but you have it in your handouts. These are
12 those 14 turbines that we, you know, considered
13 to be the riskiest. This also shows the Ryan
14 Wetland and Sand Prairie as well.

15 Next slide, please.

16 So because we knew that there were --
17 there was risk to the turtles, the project is
18 going to be taking some measures to, again,
19 either avoid or minimize that risk. And so
20 during the repowering activities, activities
21 around those 14 turbines that we determined were
22 going to be the most risky, exclusion fence will
23 be put up. This is really just silt fence
24 that's put up around the parameter of the

1 construction area. That prevents turtles from
2 getting in. So if there are turtles in the
3 area, they can't get into the project.

4 If there are turtles on the inside, then
5 there's a bio monitor that will pick those up
6 and move them back to the outside. So one of
7 the other conservation measures is, there will
8 be a bio monitor on site at the time.

9 So they'll put the fence in, and while
10 they are installing that fence, the bio monitor
11 will walk ahead of the equipment to make sure
12 there's no turtles in the way so they're not run
13 over by the equipment as they're installing the
14 exclusion fence.

15 The exclusion fence will have turn-back
16 wings at the end. So what happens is, turtles
17 are on the outside of the fence, they walk
18 along -- they hit that fence, they walk along
19 the fence. Well, at the end, the ends will be
20 turned back around to turn the turtle back
21 around and keep them out.

22 And then, again, the bio monitor will be
23 there to visually search the fence, make sure it
24 stays upright and make sure there's no turtles

1 on the inside. The fence will also be buried so
2 the turtles don't dig under it, as well.

3 For -- you know, for construction, there
4 will also need to be the crane paths. If those
5 crane paths have to cross suitable habitat, the
6 bio monitor will be there as well.

7 So really the measures are: exclusion
8 fence to keep the turtles out; a bio monitor, a
9 person who is physically there, looking for the
10 turtles, making sure that they are not in harm's
11 way during construction.

12 Q. One question, Terry. Can the bio monitors
13 actually pick up and move the turtles --

14 A. Yes, sir, they can.

15 Q. Let me repeat my question. Can the bio
16 monitors pick up and move the turtles if they
17 see one that's in harm's way?

18 A. Yes, they can. There are permits that are
19 required from the Illinois DNR for that, but the
20 bio monitor will get those permits.

21 I mentioned the incidental take
22 authorization. That's actually one of the
23 conservation measures, is picking them up and
24 moving them and then getting the permits that

1 are required.

2 Moving on to bats. As I mentioned before,
3 birds are a concern at wind farms and so are
4 bats. There are two federally and State listed
5 bat species whose ranges include Lee County, and
6 that is the Indiana bat, federally endangered,
7 State endangered, and then the northern
8 long-eared bat, federally threatened and State
9 threatened.

10 We did do a habitat assessment.

11 Essentially the habitat assessment for the bats
12 is looking at the woodlands. So these bats are
13 here during the summertime. The females are up
14 here, and the families will form their maternity
15 colonies under the barks of dead and dying
16 trees. So females crawl up under loose bark,
17 and that's where they have their pups. And a
18 bunch of females all congregate under the
19 same -- or on the same tree under the bark, and
20 they all will have their babies there.

21 So what we can do then is -- to assess for
22 summer habitat, is to see where the woodland is.
23 So you can see that we did a habitat assessment,
24 and this essentially mirrors that woodlands

1 that, you know, the National Land-Covered
2 Database has as well. But you can see that
3 there is -- there is suitable summer habitat
4 within the project area.

5 So, again, because the project recognized
6 that there is risk to bats, the project is
7 taking some measures to reduce risks to bats as
8 well. And so one of those, and probably one of
9 the most important, is that the cut-in speed of
10 the turbines, at least in some of the turbines,
11 is going to be raised.

12 So the cut-in speed is the wind speed at
13 which the turbines begin spinning and generating
14 power. What we know is that there's this
15 inverse relationship between bat activity and
16 wind speed. As wind speed goes up, bat activity
17 goes down. And that makes sense, because these
18 bats are very small animals and when the wind is
19 blowing really strong, they can't fly in that
20 strong wind. They are just not able to do that.
21 In addition, the bats feed on insects, and those
22 insects can't fly when the wind speeds are
23 strong either.

24 So one of the ways, and currently the most

1 effective of reducing bat mortality -- overall
2 bat mortality is reduce the cut-in speed. So
3 the turbines are not spinning on those low-wind-
4 speed nights.

5 So the conservation measure here is that
6 from April 1 through July 31 -- so that's the
7 spring and at least the first part of the --
8 well, spring and summer, as far as the bats are
9 concerned -- from sunset to sunrise the turbine
10 cut-in speeds can be raised to -- or raised to
11 5 meters per second. So be raised from the
12 manufacturer's rated cut-in speed up to 5 meters
13 per second at all turbines that are within a
14 thousand feet of suitable bat habitat.

15 So the important thing -- an important
16 point there is that thousand feet. These bats,
17 the Indiana bats and the northern long-eared
18 bats, they are woodland bats. They tend not to
19 stray out from the woodlands probably more than
20 a thousand feet.

21 So the U.S. Fish and Wildlife Service has
22 a guideline request -- or a guideline
23 recommending that turbines within a thousand
24 feet have the cut-in speed raised. If the

1 turbines are more than a thousand feet, then
2 there's not a need to raise that cut-in speed
3 because the bats are not there.

4 So in this case, the turbines that are
5 within a thousand feet of suitable habitat, the
6 cut-in speed will be raised during the spring
7 and summer to 5 meters per second. Turbines
8 that are more than a thousand feet, the cut-in
9 speed will remain at the manufacturer's cut-in
10 speed of 3 meters per second.

11 And then during the fall migration period,
12 August 1 through October 15th, this is typically
13 the period when there's the most risk to bats.
14 During that period, August 1 through October 15,
15 the cut-in speed will be raised to 5 meters per
16 second at all turbines because, again, we
17 recognize that is the riskier season.

18 So the hub is not going to be locked. The
19 turbine blades won't be locked in place. They
20 will be turning very lowly, but the -- or very
21 slowly, but the blades will be pitched into the
22 wind so that they turn very slowly.

23 That 5 meters per second is the
24 conservation measure that's recommended by the

1 Illinois DNR. In fact, Illinois DNR considers
2 that to be avoidance of impact for Indiana bats
3 and northern long-eared bats. They consider
4 that if you raise cut-in speeds to 5 meters per
5 second, you would not need an incidental take
6 permit for the bats.

7 And as it says on the slides, what we know
8 is that feathering the blades to 5 meters per
9 second can reduce overall bat mortality by 47 to
10 87 percent, generally we say around an average
11 of 50 percent. So overall bat mortality drops
12 by about 50 percent just by raising the cut-in
13 speed to 5.

14 Q. Terry, let me ask you a quick question with
15 regard to this slide. You have listed up here,
16 Bat Conservation Measures, correct?

17 A. Correct.

18 Q. Would you consider these all to be best
19 practices -- or current best practices for
20 minimizing bat mortality in the area?

21 A. Yes. These are either recommended by U.S. Fish
22 and Wildlife Service, the Illinois DNR, and in
23 most cases also by the American Wind Energy
24 Association.

1 Q. And the project will be following all the
2 minimization measures you have laid out here,
3 correct?

4 A. That's correct.

5 Q. Okay. Thank you.

6 A. All right. For the -- as I mentioned, we did
7 the EcoCAT consultation, and the result of the
8 EcoCAT consultation then is that the Illinois
9 DNR does provide a consultation letter to the
10 County with a number of recommendations, and so
11 we want to just kind of quickly go through
12 these.

13 This is the letter that -- Illinois DNR
14 letter that was dated March 1st, 2019. And so
15 the first of those recommendations is that the
16 Department recommended the County, you know,
17 consider requiring three years of post-
18 construction mortality monitoring. So this is
19 where you go out after the turbines are
20 constructed and we look for those dead birds and
21 bats under the turbines. And so the DNR
22 recommended three years of study in a way to
23 statistically quantify bird and bat mortality,
24 and then the Department requested -- or

1 recommended a proposal, a plan, to do that study
2 as well.

3 So in this case, you know, Big Sky agrees
4 to comply with this recommendation. They
5 will -- the project will conduct three fall
6 seasons of post-construction monitoring. Again,
7 fall is the period of most risk to the bats. So
8 the project will conduct three fall seasons.
9 Standardized searches will be conducted, and
10 these standardized searches are conducted in a
11 way that provides the statistical results or the
12 statistical power that the Illinois DNR is
13 looking for in their recommendation.

14 These are all pretty standard studies.
15 Lots of projects are doing these, and the
16 methods are typically pretty much the same in
17 all projects.

18 The findings then -- well, we will
19 prepare -- or the project will, at some point,
20 prepare a post-construction monitoring plan that
21 will be submitted to the Department and I
22 believe the County as well.

23 And then the project will maintain records
24 of all the wildlife fatalities that are found at

1 the site and it will estimate bird and bat
2 mortality as recommended by the DNR.

3 And then the annual report will also be
4 provided to the County and to the DNR.
5 Actually, Lee County. Sorry, I see the slide
6 still says Bureau County, but Lee County as
7 well.

8 As of right now, again, the Illinois DNR
9 considers that 5 meters per second to be
10 avoidance. So they're not recommending an
11 incidental take permit for the bats; however, if
12 at some point the bird and bat mortality study
13 does indicate that the project poses a risk to
14 either Indiana or northern long-eared bats, the
15 project will consider pursuing an incidental
16 take permit at that time.

17 Q. And, Terry, if you could, just briefly describe
18 for the Board what an incidental take permit is.
19 If I am correct, it's where you describe to the
20 Illinois DNR what best practices are, and if
21 they agree and you comply with those best
22 practices, at that point if you accidentally,
23 perhaps, harm one of these animals, the permit
24 allows you do that? Could you describe that in

1 a better way or perhaps confirm that's the case?

2 A. Sure. Yeah, so threatened and endangered
3 species are protected under the Illinois
4 Endangered Species Act or species law. So it is
5 against -- you know, it's against the law to
6 undertake an action that harms those, either
7 kills or injures those animals.

8 Now, it is illegal for this intentional
9 take. So if you were to go out, for instance,
10 and you wanted to shoot, you know, an Indiana
11 bat, let's say, or you wanted to pick up or kill
12 a Blanding's turtle, right, that would be
13 illegal, where you have gone out with the intent
14 of doing that.

15 However, there are activities that are --
16 where there's incidental takes. So an
17 incidental take is a take that is incidental to,
18 but not the purpose of, an otherwise lawful
19 activity, like an operating wind farm. So the
20 State and U.S. Fish and Wildlife Service as
21 well, recognizes that this incidental take may
22 occur at times. And so, you know, operating a
23 wind turbine may result in death of an Indiana
24 bat or northern long-eared bat, let 's say.

1 And so there are permits that allow for
2 that incidental take. And, yeah, in order to
3 get that permit, whether it's a federal permit
4 or a State permit, you do have to prepare a
5 conservation plan. The conservation plan
6 describes the risks to the species, what we
7 think that take will be, how many of these
8 animals do we think, you know, are going to be
9 killed over the life of the project, and then
10 what conservation measures we have taken to
11 avoid or minimize that take.

12 Then presumably, you would avoid or
13 minimize the take, you reduce that take to a
14 small enough number that the State could then
15 issue the incidental take permit, which then
16 allows for the take, you know, the killing of
17 those -- you know, whatever the animal is, but
18 only up to the number that the conservation plan
19 says. So if the conservation plan says, you
20 know, that the project could result in the
21 mortality of ten, you could only take ten over
22 the life of the project.

23 Recommendation 2 then actually is the
24 recommendation where the County is recommended a

1 cut-in speed 5 meters per second at the turbine.

2 And then Recommendation 3 is feathering
3 the blades when turbines are not in operation.

4 As I described earlier, those are two
5 measures that the project is going to undertake.
6 So, again, raising cut-in speeds to 5 meters per
7 second at turbines that are within a thousand
8 feet of suitable habitat from April 1st through
9 July 15, and then from April -- well, and then
10 so that's -- so we're going to raise cut-in
11 speeds, yeah, to 5 when the air temperature is
12 above 50.

13 That 50 degrees is important, because the
14 bats and their insect prey typically are not
15 flying around. They're not feeding below 50.
16 So they are going to raise cut-in speeds when
17 wind speeds -- or when the temperature is above
18 50 at those turbines that are within a thousand
19 feet.

20 And then in the fall, that cut-in speed
21 will be raised at all turbines. In the fall,
22 again, the risk is there.

23 Next slide, please.

24 So this recommendation was that, in this

1 case, the County -- or the DNR recommended that
2 the County considered the Applicant pursue an
3 incidental take permit; however, this project,
4 again, because they're going to raise it to 5
5 and the State no longer considers cut-in speeds
6 above -- well, if you raise your cut-in speed,
7 you don't consider that -- cut-in speed of 5,
8 they don't consider that to be take anymore.

9 So because of the measures that are going
10 to be implemented in Recommendations 1, 2, and
11 3, the -- you know, this one is not going to be
12 adopted. So that's really what this
13 recommendation is saying, is, if you adopt the
14 measures in Recommendations 1, 2, and 3, you
15 don't need an incidental take permit for the
16 bats.

17 Recommendation 5 then is to -- the
18 Department recommends the avoidance of
19 minimization measures for turtles that were
20 discussed in the technical memorandum. This is
21 Stantec's document in February of 2019.

22 Then if you under -- if we implement
23 these, then the project -- or the DNR is
24 recommending you pursue an incidental take

1 permit. So these are the measures we discussed
2 before the exclusion: fencing around the
3 construction areas, the bio monitor, those types
4 of things.

5 Recommendation 6 then was -- is
6 essentially just recommending that the project
7 get an incidental take permit for the two
8 turtles, the ornate turtles and Blanding's
9 turtle. And as I mentioned, Big Sky is pursuing
10 that. As I said before, it already went through
11 basically the whole process and we're just
12 updating the -- updating the conservation plan
13 to state that turbines are not going to be
14 moved, there won't be any new locations, and
15 that's really the only change.

16 DNR has indicated that it should not have
17 to go back out on public notice. Because we
18 essentially already evaluated the worst case
19 scenario, the impacts will actually be less now
20 than we stated in the conservation plan.

21 And then lastly, Recommendation 7,
22 although there was another species, the plains
23 hog-nosed snake, that did not come up in the
24 EcoCAT search, but Illinois DNR had some

1 concerns for that species because they have some
2 records that are within six miles of the project
3 area; however -- and so the DNR recommended that
4 you get an incidental take permit.

5 We did a habitat assessment for this snake
6 in the project area, and in those -- it uses
7 much of the same habitat as the ornate box
8 turtle. They both use really sandy soils. So
9 it's the same 14 turbines that were at risk --
10 where the box turtles were at risk, it's those
11 same turbines that are risky to the snake.
12 Those same conservation measures that are out
13 there for the turtles work for the snakes as
14 well.

15 So given that there are no records in
16 close proximity to the project area, there's
17 even more limited habitat for the snake, and the
18 conservation measures that will already be
19 employed also protect the snake, the project has
20 chosen not to pursue an incidental take permit
21 for this species at this time.

22 Q. Terry, to wrap this up, I'm going to present
23 you with what's been marked Petitioner's Exhibit
24 Number 6. If you could take a moment to review

1 that document.

2 Have you seen this before?

3 A. Yes.

4 Q. And if you could describe for the Board members
5 what this is.

6 A. So this is the letter that I prepared in
7 response to the Illinois DNR consultation
8 letter.

9 Q. Okay. And that covers all the topics that you
10 just went through in your presentation?

11 A. That's correct.

12 Q. And this was originally how the County was
13 informed of the findings?

14 A. Correct.

15 MR. STREICKER: Judge, that completes Mr.
16 VanDeWalle's direct testimony.

17 JUDGE SLAVIN: All right. Mr. Boonstra,
18 any questions of Mr. VanDeWalle?

19 MR. BOONSTRA: No questions. Thank you.

20 JUDGE SLAVIN: Ms. Duffy?

21 MS. DUFFY: No, thank you.

22 JUDGE SLAVIN: How about Board members.
23 Mr. Forster?

24 MR. FORSTER: No questions.

1 JUDGE SLAVIN: Mr. Buhrow?

2 MR. BUHROW: No. Very good presentation.

3 JUDGE SLAVIN: Mr. Bothe?

4 MR. BOTHE: No questions.

5 JUDGE SLAVIN: Mr. Hughes?

6 MR. BUHROW: No questions.

7 JUDGE SLAVIN: Mr. Pratt?

8 MR. PRATT: No questions.

9 JUDGE SLAVIN: Okay. How about other
10 Interested Parties.

11 Mr. Lawson, any questions?

12 MR. LAWSON: No questions. Thank you.

13 JUDGE SLAVIN: Thank you.

14 How about Marty Montavon?

15 MR. MONTAVON: Yes, I have a question.

16 Did I understand the witness correctly
17 that he said the size of the Ryan Wetland --

18 JUDGE SLAVIN: You're asking me. Just ask
19 him.

20 EXAMINATION

21 BY MR. MONTAVON:

22 Q. Has the size of the Ryan Wetland increased
23 since this project first started in 2010? Is
24 that what you said?

1 A. That's my understanding, that there has been
2 additional area added to it, yeah.

3 Q. I wasn't aware of that.

4 I'm Turbine Number 86, in case you're
5 wondering, is one of mine.

6 JUDGE SLAVIN: You're just making
7 statements now, Mr. Montavon. Now is just the
8 time for questions.

9 MR. MONTAVON: I just asked if that was
10 any larger, and I didn't think --

11 JUDGE SLAVIN: Yeah, and he answered it.
12 So any other questions?

13 MR. MONTAVON: That's all.

14 JUDGE SLAVIN: Okay. Great.

15 That's all the Zoom -- well, without
16 killing my neck, is that all the Zoomers, Alice?

17 MS. HENKEL: (Nods head.)

18 JUDGE SLAVIN: Okay. Great.

19 All right. Very good. We will recess
20 from tonight until tomorrow night, Tuesday,
21 January 5th, also 6 o'clock, here in the Third
22 Floor Courtroom of the Old Lee County
23 Courthouse. Everybody be safe and be healthy.

24 MR. STREICKER: Thanks, everyone.

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(The hearing was recessed at
8:30 p.m.)

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On this 4th day of January, A.D., 2021, I do
signify that the foregoing testimony was given
before the Lee County Zoning Board of Appeals.

Bruce Forster, Chairman

Dee Duffy,
Zoning Enforcement Officer

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