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STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

November 29, 2012 - 2:31 p.m.
Concord, New Hampshire

DAY 8
AFTERNOON SESSION ONLY

In re: **SITE EVALUATION COMMITTEE:**
DOCKET NO. 2012-01: Application
of Antrim Wind, LLC, for a
Certificate of Site and Facility
for a 30 MW Wind Powered Renewable
Energy Facility to be Located in
Antrim, Hillsborough County,
New Hampshire.
(Hearing on the merits)

PRESENT:	SITE EVALUATION COMMITTEE:
Kate Bailey, Engineer <i>(Presiding Officer)</i>	Public Utilities Commission
Amy L. Ignatius, Chrmn.	Public Utilities Commission
Johanna Lyons, Designee	Dept. of Resources & Econ. Dev.
Brad Simpkins, Dir.	DRED - Div. of Forests & Lands
Richard Boisvert, Designee	Division of Historic Resources
Brook Dupee, Designee	Dept. of Health & Human Services

COUNSEL FOR THE COMMITTEE: Michael J. Iacopino, Esq.

COUNSEL FOR THE PUBLIC: Peter C. L. Roth, Esq.
Senior Asst. Atty. General
N.H. Attorney General's Office

COURT REPORTER: Steven E. Patnaude, LCR No. 52

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APPEARANCES: **Reptg. Antrim Wind, LLC:**
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Douglas L. Patch, Esq. (Orr & Reno)
Rachel A. Goldwasser, Esq. (Orr & Reno)

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Michael Genest, Selectman, Town of Antrim
John Robertson, Selectman, Town of Antrim

Reptg. the Harris Center for Cons. Edu.:
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Reptg. Antrim Planning Board:
Martha Pinello, Member
Charles Levesque, Member

Reptg. Edwards/Allen Intervenor Group:
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Reptg. Antrim Conservation Commission:
Peter Beblowski

Reptg. the Abutters Intervenor Group:
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Reptg. Industrial Wind Action Group (IWAG):
Lisa Linowes

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EXHIBIT NO.	D E S C R I P T I O N	PAGE NO.
NB-56	Weinberg Foundation website printout - 4 pages (11-27-12)	premarked (11-28-12)
NB-57	Table TS 45A Ambient Background Plus Worst-Case Project Sound Levels (Leq) and Table TS 45B Ambient Background Plus Worst-Case Project Sound Levels (L90)	premarked (11-28-12)
AWE 44	2010 Highest Ranked Wildlife Habitat by Ecological Condition (Color-coded map of New Hampshire)	premarked
SCC-7	Aerial photograph identified as "Lempster Mtn. Wind Tower Sites 1998 Aerial B & W"	premarked
SCC-8	Aerial photograph identified as "Lempster Mtn. Wind Tower Sites 2010 Color Aerial"	premarked
AWE 44A	Enlarged version of Exhibit 44 identified as "2010 Highest Ranked Wildlife Habitat by Ecological Condition" (11x17) (Color-coded map of New Hampshire)	premarked
SCC-9	Compact Disc - nighthawk call from Tuttle Hill traverse (July 15, 2012)	125, 127

[WITNESS: James]

1 suggestion that either Epsilon or Mr. O'Neal would, in
2 some way, overstate existing noise levels and
3 understate predictive levels. Was that your testimony?

4 A. I was -- I was asked if that appeared to be a
5 potential, and I think I agreed with that, yes.

6 Q. And, do you know something particular about Epsilon or
7 about Mr. O'Neal that lead you to suggest that?

8 A. I think I prefaced that was part of a discussion which
9 I said I've reviewed hundreds of reports or several
10 hundred reports, and I find them having similar
11 characteristics. And, I believe it is built into the
12 way the acoustical consultants who work for the
13 developers tend to present the data. I don't have
14 anything in particular against Mr. O'Neal or against
15 Epsilon.

16 Q. So, anybody who works for a developer overstates data?

17 A. I have found, not anybody, but I have found that to be
18 a trend in reports I've reviewed. You have to
19 understand, I don't review all reports. There may be
20 many of them that don't have that problem. But, when
21 I'm asked to review it, I tend to find background sound
22 levels that are much higher than would be commonly
23 believed or commonly found in rural communities, and
24 emphasis on Leq, rather than an L90, and emphasis on

[WITNESS: James]

1 average background sound levels, rather than on the
2 minimums. And, I have yet to find a single report in
3 which the predictive values were presented with
4 acknowledgement that they are a mean or an average and
5 do not represent the extremes that will occur on any
6 given day.

7 Q. If they were in some way overstating or understating
8 data, wouldn't they risk severe damage to their
9 credibility and their professional reputation?

10 A. Yes, they would. And, that's, in the Iberdrola project
11 in Hardscrabble -- the Hardscrabble project in New York
12 of Herkimer County. A lawsuit filed there has been
13 filed against both the developer and the consultant who
14 did the reports for them.

15 Q. And, so, you're suggesting that that's what's happened
16 here?

17 A. I am suggesting that, if the project was built, and the
18 community found that the levels were under predictions,
19 that that could be a possible consequence.

20 Q. I mean, as I understand it, all of the work you've done
21 in this area has been for people who are opposed to
22 wind power projects, is that correct?

23 A. I'm normally called if there's a complaint, but I do a
24 lot of work with the local townships, local counties,

[WITNESS: James]

1 filing testimony with state agencies, *etcetera*, in
2 trying to establish proper criteria before a project's
3 built.

4 Q. But, oftentimes you're representing, as you are in this
5 case, people who don't want a project built, is that
6 fair to say?

7 A. I'm representing people who have concerns about a
8 project, yes.

9 Q. And, so, wouldn't it be just as easy for somebody to
10 suggest that maybe what you're doing is overstating
11 sound impacts?

12 A. If I -- if I was to be making up numbers, I guess so.
13 But what I'm reporting is information that I have
14 observed through my own experience, or in other
15 reports, some of which, like the Hesslers, work almost
16 exclusively for the developers.

17 Q. But isn't that what Mr. O'Neal did here? Didn't Mr.
18 O'Neal just represent the information that he
19 accumulated? Isn't that what he did? You're
20 suggesting he did something other than that?

21 A. Yes. But the process of where he took his data, which
22 data he chose to highlight, which data he chose to
23 focus on was his. I mean, that's -- those were his
24 decisions. And, I disagree with the emphasis and I

[WITNESS: James]

1 disagree in many cases with the focus of what he was
2 saying.

3 Q. Most of the --

4 A. See, I don't want you to think that I'm against wind
5 turbine development. I've spent my whole career
6 working for companies trying to put large industrial
7 applications or complexes in the areas, some of them as
8 high as in Antrim. In that work, I always try to
9 advise my clients of the worst-case situations. I
10 don't see that in Mr. O'Neal's reports.

11 Q. I mean, you don't know what he advised the client of,
12 do you?

13 A. I have the report. The report is his representation of
14 what he is advising the Committee.

15 Q. And, --

16 A. I don't know what he may have told the client
17 privately, but this is the information that he's
18 presenting for public review.

19 Q. Most of the projects you've worked on are in the
20 Midwest, is that fair to say?

21 A. I have worked on -- I have worked on projects in
22 islands off the coast of Maine, out to Washington,
23 California, down by San Diego, Iowa, also have been in
24 the Midwest, because it's more convenient for me to get

[WITNESS: James]

1 there. But I have worked on a wide variety of
2 projects.

3 Q. And, this is the first one in New England, other than
4 you mentioned off the coast of Maine, is this the first
5 one other than that?

6 A. Oh, no. Not by any means.

7 Q. What are the other ones in New England you've worked
8 on?

9 A. Deerfield, in lower Vermont; Lowell Mountain, in
10 Vermont, which is another good example of a ridge
11 mounted situation; Mars Hill; Vinalhaven; Spruce
12 Mountain, in Maine; Saddleback Ridge, in Maine; in New
13 York, there's been projects all over New York;
14 Pennsylvania; West Virginia.

15 Q. Let's talk about the Mars Hill project for a minute,
16 because you have testified with regard to that project.
17 Aren't the closest residences there approximately a
18 thousand feet away?

19 A. About 1,500 feet, 1,750, if I remember correctly.

20 Q. Well, it's my understanding, and there's some testimony
21 in this docket that they're a thousand feet away, could
22 you dispute that?

23 A. I think that, in Maine, the focus is on property lines,
24 and that may be where the property line was located.

[WITNESS: James]

1 Q. And, the topography at Mars Hill, can you tell us about
2 the topography there as that compares to Antrim?

3 A. It's a ridge, roughly the same size, same heighth. On
4 one side of the ridge we have the Canadian border, and
5 a strip of land about 4,500 feet wide, with 30, maybe
6 32 homes in it. There's absolutely no noise on that
7 side of the ridge from human activity, other than a
8 periodic car, because the Canadian border pretty much
9 limits what can be done with that area. The top of the
10 ridge is where the turbines are located, strung from
11 one end of the ridge to the other. And, on the west
12 side of the ridge, we have the Town of Mars Hill, about
13 I think it's three kilometers away. And, that was --
14 and it was people in the town side that were used in a
15 control group.

16 Q. I think you testified this morning that the turbines at
17 Mars Hill double -- the Antrim ones are "double the
18 size." I guess what you meant was one and a half
19 megawatts versus three megawatts, is that correct?

20 A. Double the energy production, yes.

21 Q. But not double the noise levels, right?

22 A. No.

23 Q. You also, this morning, talked about how the worst
24 insect noise is really sort of mid July through August,

[WITNESS: James]

1 if I understood you correctly?

2 A. Yes. Up through the first frost.

3 Q. Are you familiar with when Mr. Tocci did his study?

4 A. He did his a little -- well, I know that he did it
5 between the first hearing -- or, between submitting the
6 prefiled testimony and the testimony here in October.
7 So, yes, I'm aware of when he did it, roughly.

8 Q. So, would it surprise you to know he did it in August?

9 A. No, that -- I think that was the only time he had
10 available.

11 Q. And, do you know the dates that Mr. O'Neal did his
12 study?

13 A. I can look it up, if you'd like?

14 Q. Well, if I told you it was basically September 16th to
15 October 4th, would that surprise you?

16 A. No. No.

17 Q. And, so, in terms of insect noise, actually, it would
18 have been more of an issue with Mr. Tocci's study than
19 with Mr. O'Neal's, in terms of the figures that he
20 actually got from it?

21 A. I don't know why you would say "more of an issue". If
22 the insects are present, the insects are present.

23 Q. Well, I thought you testified this morning that insects
24 are worse in July and August?

[WITNESS: James]

1 A. That is -- those are the months when you begin to get
2 insect noise at night. Those could get -- it continues
3 until you get a good frost or a cold streak that causes
4 them to die off. And, that varies every year from one
5 odd time to another. The characterization of insect
6 noise was in Mr. O'Neal's report.

7 Q. I heard you say this morning, "if the models are right,
8 we wouldn't have complaints." Is that a fair
9 characterization of what you said?

10 A. If the models, in the reports describing the models
11 appropriately characterize what people -- what the
12 impact would be on people, and the decisions of the
13 provisioning group, whether a township or a statewide
14 agency or a county, or whoever, followed the report's
15 advice as to whether it would have an impact or not,
16 then it would be much less likely we would see the
17 adverse impacts or hear the complaints afterwards.

18 Q. How familiar are you with the other projects here in
19 New Hampshire that this Committee has approved? Are
20 you familiar with the Lempster Project?

21 A. No, I'm not.

22 Q. Would it surprise you then to learn that the Lempster
23 Project came on line in 2008, and that this Committee
24 imposed noise limits there. And that, since that time,

[WITNESS: James]

1 there is testimony in this docket, as there was in the
2 Groton docket, that noise is not an issue there? That
3 there have only been two complaints, and that one of
4 those involved a default -- a faulty hearing aid.

5 Would that surprise you?

6 MR. ROTH: I want to object to the use
7 of "noise is not an issue there". I think the rest of the
8 question is acceptable. But "not an issue" I don't think
9 is a proper characterization of the testimony.

10 MR. PATCH: Well, I think it is a proper
11 characterization of the testimony in the Groton docket,
12 and I can cite the page in the transcript, if need be. If
13 you want to take the Committee's time to do that, I can
14 find that?

15 MS. BAILEY: I don't think we need to
16 take the Committee's time. It's cross-examination. The
17 objection is overruled.

18 BY MR. PATCH:

19 Q. Would that surprise you, if there have been virtually
20 no complaints in Lempster since it came on operation in
21 2008?

22 A. I have no understanding of that project such that I
23 would be surprised or unsurprised.

24 Q. Well, then, based on the statement you made this

[WITNESS: James]

1 morning, the models there apparently are right, because
2 there aren't any complaints. And, do you know how far
3 the nearest non-participating resident lives from a
4 turbine in Lempster?

5 A. As I said, I'm not familiar with that project.

6 Q. Would it surprise you to learn that it's about
7 1,500 feet?

8 A. No, it wouldn't surprise me.

9 Q. And, do you know how close the nearest residence would
10 be here, in Antrim?

11 A. About 2,200 feet.

12 Q. Would it surprise you to learn that it's actually
13 2,800 feet?

14 A. Or 2,800 feet, that's -- no, it wouldn't surprise me.

15 Q. You had some questions this morning about an exhibit
16 that IWAG provided, I think it was N4, and it was a
17 Leventhall "Low Frequency Noise and Annoyance"
18 abstract. Do you remember those questions?

19 A. I believe you're referring to the -- let me pull this
20 up, if I can get it again. It was the Noise & Health
21 paper by Geoff Leventhall, in about 2004, in which he
22 summarized responses to issues related to low frequency
23 noise and complaints about low frequency noise.

24 Q. The copy I have says --

[WITNESS: James]

1 A. That was NB -- that was NB what?

2 Q. N4, IWAG-N4. And, it does appear to be 2004, like you
3 said. And, it doesn't have page numbers in it. But
4 I'm looking at, basically, the top of the eleventh
5 page, it's under a section that's called "The Hum".
6 And, then, there are two subsections under there. It's
7 the second one, "Hum Character". I don't know if you
8 can find that?

9 A. "The Hum", yes.

10 Q. And, then, the second subsection, "Hum Character",
11 about midway down there's a sentence that begins
12 "Unsympathetic handling of the complaint leads to a
13 build-up of stress, which exacerbates the problems."
14 And, then, I'm skipping a sentence -- actually, a
15 couple of sentences. But it says "The knowledge that
16 complaints are being taken seriously by the authorities
17 helps to reduce personal tensions." Do you see that?

18 A. Yes.

19 Q. So, that seems to me to be critical. If the developer
20 is seriously committed to dealing with complaints, or,
21 if the regulatory body, in this case, the Site
22 Evaluation Committee, establishes a process for dealing
23 with complaints, that would seem to eliminate a fair
24 amount of the stress involved with this. Is that fair

[WITNESS: James]

1 to say?

2 A. Well, I think you're -- first of all, "The Hum", that
3 whole section, refers to a series of problems, probably
4 here in the United States, because that's known as
5 "Kokomo Hum", Kokomo, Indiana. Where people around the
6 town report a hum, a low frequency sound, and had that
7 --

8 (Court reporter interruption.)

9 WITNESS JAMES: Yes.

10 MS. BAILEY: Your sound keeps going in
11 and out for some reason.

12 WITNESS JAMES: In and out? That's --
13 how about now?

14 MS. BAILEY: That's better. So, do you
15 want to --

16 MR. PATNAUDE: After Koko -- Kokomo --

17 MS. BAILEY: After Kokomo.

18 WITNESS JAMES: After Kokomo,
19 K-o-k-o-m-o.

20 MR. PATNAUDE: Yes. That's okay.

21 **CONTINUED BY THE WITNESS:**

22 A. These are particularly complex situations, because they
23 have been studied for years, and no one has ever been
24 able to identify the cause of the hum. So, when we now

[WITNESS: James]

1 talk later on about the way people react to it, this is
2 not a situation where there is an identifiable source.
3 It is one in which the problem has never been
4 identified. We've ruled out everything from the nearby
5 Air Force bases, to the local plants, and some people
6 still respond to it. So, I'm sure there's a lot of
7 frustration with that. We're not talking about a
8 problem where we can point to a particular machine and
9 say "that is the cause of the problem" or "that is the
10 cause of the sound or the symptoms that disturb
11 people."

12 BY MR. PATCH:

13 Q. You answered at least a question or two, I think it was
14 from Mr. Roth, this morning, about the appropriateness
15 of putting a background sound monitor near a brook.
16 But, if there's a residence near a brook, isn't it
17 appropriate to do a sound monitor near there?

18 A. If you are characterizing only the area near the
19 residence, and the residence was near the brook, then
20 that's appropriate. If you're trying to use five data
21 sites to represent a community that covers thousands of
22 acres, then it's not appropriate, unless everyone has a
23 brook near their home.

24 Q. You also answered a question from Mr. Roth this morning

[WITNESS: James]

1 about the potential for people basically, I'm going to
2 get this word wrong, I guess I'll say it differently,
3 so I don't. But, for people, you know, sort of
4 ultimately accepting the sound, adjusting to it, you
5 know, getting used to it, acclimating to it, I guess is
6 the right word.

7 A. Yes.

8 Q. And, I think, in response to that question, you talked
9 about "well, for noise sources that are not present all
10 the time, that's the case." But you suggested that --
11 that the noise from wind turbines is present all the
12 time. And, isn't it true that that depends very much
13 on your location? In other words, some people who may
14 be at a certain distance from the wind turbines
15 wouldn't be hearing constant noises. I think there was
16 some testimony that was presented by Mr. Tocci with
17 regard to Willard Pond, and about the possibility of,
18 you know, audibility. But it certainly wasn't a
19 constant, it was an occasional, is that fair to say?
20 And, so, I guess I'm trying to understand that
21 distinction.

22 A. Yes. That's fair to say. That's fair to say. The
23 closer you are to the noise source, if you're going to
24 operate 24 hours a day, but let's assume that the

[WITNESS: James]

1 intent is to operate it 24 hours a day, then it's more
2 -- the closer you get to that noise source, the more
3 likely it will become something that stands out and,
4 therefore, has the potential to annoy people.

5 Q. And, so, if you're in a location where you don't hear
6 it all the time, then becoming acclimated to it, it
7 seems to me, to be a much more likely scenario?

8 A. That is -- that is very true. That's at distances of a
9 mile or more, where the complaints are more sporadic,
10 we have fewer complaints filed. What I was saying with
11 respect to that, however, is the studies being done in
12 Australia, where we're doing cortisol testing, show
13 that, even when people aren't hearing it and
14 complaining about it, it's having a physiological
15 effect on them at distances out to well over a mile.

16 Q. I want to understand your testimony about, to me, it
17 looks as though you just sort of arbitrarily add
18 somewhere between 5 and 20 decibels to some of the
19 numbers Epsilon provided. And, I just don't understand
20 where you come up with that 5 to 20, which is a huge
21 range?

22 A. Well, the 5 -- as I said this morning, there's a way to
23 explain it by going over how the standards were
24 written, what they constitute, *etcetera*, and how the

[WITNESS: James]

1 model works. The easy way, however, is to look at
2 studies by, in this case, four different acoustical
3 firms. One of them was Hessler Associates, who I've
4 said before, like Epsilon, do most of their work with
5 the wind industry. When Dave Hessler, the younger of
6 two Hesslers, was asked to write guidelines for the
7 Minnesota Department of Public -- Minnesota Public
8 Utility Commission, and this was a DOE-funded paper, he
9 said in that document that, when he's compared his
10 model results to the measurements he makes in following
11 up on complaints, he finds that there is a difference
12 of plus or minus 5 decibels that is routine, and, under
13 some conditions, as much as 15 to 20 decibels, for
14 periods of 20 minutes or more.

15 In Ontario, where the construction of
16 the model was very tightly controlled, there is a set
17 of how you do a model for an Ontario wind project,
18 guidelines from the Ministry of Environment.
19 Therefore, models are standardized, very, very much so.
20 Three different consulting firms, Brian Howe of HGC,
21 Rich, I don't remember his name, anyway, Valcoustics,
22 Aircoustics, and HGC have all worked for the Ministry
23 of Environment following up on complaints. They all
24 have reported that they find higher levels during the

[WITNESS: James]

1 complaints than the model predicted.

2 Therefore, my short answer to "how do
3 you account for differences between the model and the
4 measurements that would be likely taken during a
5 complaint?", is to just add 5 decibels to the model
6 results, and it will give you a good estimate of what
7 is likely to be occurring should the project be built
8 and a complaint be filed.

9 Q. This seems to me to sort of harken back to your
10 suggestion that any sound expert that works for a
11 developer is going to understate predictive levels and
12 overstate existing levels. Isn't that what that comes
13 down to?

14 A. As long as you leave out -- as long as you leave out
15 the aspect of intent, because I have no idea what their
16 intent is, that seems to be a general rule.

17 Q. Well, I thought you said "their intent was to get a
18 permit", and, so, therefore, they were skewing the
19 results?

20 A. I said "it could be." I said that "it would be
21 possible to interpret it that way." Because that is
22 what -- doing that type of report is more likely to get
23 a permit than one that says to the siting committee,
24 "at the nearest home, the sound levels would be 40

[WITNESS: James]

1 decibels on the average, but they could be 45 on, say,
2 50 percent of the time could be over that, and could be
3 as high as 20 decibels more." So, by ignoring the
4 upside, and only reporting the mean, it gives a false
5 sense that 40 will be the number at that home. Not
6 that 40 is the median for a wide range of sound levels.
7 It could vary from inaudible, to dominating the entire
8 environment.

9 Q. In response to a question this morning, I thought you
10 were suggesting that, in terms of the guarantee that is
11 provided by the manufacturer of a wind turbine, that
12 basically a manufacturer wouldn't stand by the sound
13 levels that the turbine was, basically, the turbine
14 manufacturer was guaranteeing. Is that what you were
15 trying to say?

16 A. I said that the guarantees that I have read are
17 guarantees that, if you put any particular turbine from
18 their Vestas V11 -- or, not Vestas, Acciona --

19 (Court reporter interruption.)

20 MS. BAILEY: Mr. James, you're dropping
21 out again.

22 MR. PATNAUDE: After Vestas.

23 WITNESS JAMES: After Vestas?

24 MR. PATNAUDE: Yes.

[WITNESS: James]

1 MS. BAILEY: Yes.

2 WITNESS JAMES: I was correcting it to
3 be "Acciona". I get confused between Acciona and Vestas,
4 because they both have the large 3-megawatt turbines.

5 MS. BAILEY: Off the record.

6 (Brief off-the-record discussion
7 ensued.)

8 MS. BAILEY: Okay. Let's proceed.

9 WITNESS JAMES: Okay. Can you read the
10 question again, because now I've forgotten what the
11 question was?

12 (Short pause.)

13 BY MR. PATCH:

14 Q. I wanted to understand the testimony that you gave this
15 morning about the viability of the guarantee from the
16 turbine manufacturer, because you seemed to suggest --

17 A. Okay.

18 Q. -- that the guarantee was worthless?

19 A. Actually, it's not worthless. What it says is, the
20 test procedure, IEC 61400 Part 11, specifies the
21 topography, the weather conditions, and many other
22 aspects that can alter the sound from a wind turbine.
23 The guarantee that the wind turbine sound power levels
24 are within plus or minus 2 decibels of what they report

[WITNESS: James]

1 is only for that topography, that weather condition,
2 and the other factors that are specified in the IEC
3 61400 Part 11 standard. That standard does not say
4 that, if you take a turbine, pass it on flat ground,
5 with no structures, no trees, under conditions of
6 smooth laminar inflow air into the blades, and you
7 locate that turbine now on top of a ridge, with
8 completely different turbulence, completely different
9 air stream coming into it, that the sound will be the
10 same.

11 This is -- this is now a recognized
12 issue with the IEC Committee, because they just
13 reported this summer, in the New York conference, that
14 they're going to begin testing wind turbines under
15 these other conditions to find out how the noise is
16 altered by varying weather, by varying topography, and
17 by varying other factors. Up until this point, all of
18 the tests had followed the IEC requirements.

19 Q. So, am I correct then, you're suggesting that, in this
20 case, if Acciona -- if the Project is approved, and the
21 Acciona turbines are installed on the top of the ridge,
22 that they will not be guaranteeing the sound levels at
23 the turbine? Is that what you're suggesting? All
24 they're guaranteeing is what? The sound levels at some

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1 other location that doesn't reflect where that turbine
2 is installed? Is that you're suggesting?

3 A. That's right. Let me give you -- yes. Let me give you
4 an example. We have the EPA gas mileage stickers on
5 our cars. The EPA sets up a set of conditions that all
6 manufacturers use to define the gas mileage for city
7 and highway. It is entirely standardized; Toyota uses
8 the same test, General Motors uses the same test,
9 *etcetera*. And, therefore, they can put a sticker on a
10 car that says "And, you'll get 27 miles per gallon in
11 the city and 32 miles per gallon on the highway." But
12 they disclose at the bottom that "Your individual
13 driving habits will cause those to change."

14 What I'm saying is, if the wind turbine
15 passed the IEC 61400 test, is like the EPA's mileage
16 test. It's standardized. And that, once you take that
17 turbine and put it out into the real world, it's like
18 the little sticker on the bottom, which says
19 "Individual drivers will get different results."

20 Q. It's the sound power level at the turbine that we're
21 talking about, isn't it?

22 A. Yes.

23 Q. And, it seems to me that, I mean, my understanding, and
24 I think the Applicant would dispute what you're saying

[WITNESS: James]

1 vociferously, is that the guarantee is the sound level
2 at the turbine. It doesn't matter if it's on a ridge
3 or wherever it's installed. And that, if it doesn't
4 perform up -- if it doesn't perform as guaranteed at
5 that particular sound level, then the manufacturer
6 would have to compensate the developer for the
7 difference between what was guaranteed and what was
8 shown to be different. So, that seems very different
9 than what you're suggesting. Do you have a response to
10 that?

11 A. My response is that, if you read the IEC standard, the
12 IEC 61400 Part 11, it says that "all turbines will be
13 tested according to the conditions of that standard."
14 If there is a guarantee in that standard that said "the
15 data is plus or minus two", then you can, if, let's
16 say, the developer sues Acciona, you can betcha that
17 Acciona is going to say "well, let's take it off of the
18 ridge and put it on our test stand and we will test
19 it", because they want to have that control.

20 The sound emitted from a wind turbine
21 varies with weather condition, wind speed, the amount
22 of turbulence coming into the blades. When you put it
23 on a ridge, you have updrafts, downdrafts,
24 cross-drafts, that don't occur when you have a wind

[WITNESS: James]

1 turbine on a flat test bed. You have a lot of
2 different factors that can alter it. Acciona isn't
3 going to take responsibility for that. And, that's why
4 the guarantee in the standard is that the test will be
5 done according to IEC 61400.

6 Q. I just don't see how you can --

7 A. Maybe -- I think the developer needs to go back and
8 read the guarantee.

9 Q. Well, I don't know why you think you have greater
10 knowledge than the developer does about the guarantee
11 that Acciona's providing to the developer. That seems
12 sort of beyond credibility to me.

13 MR. ROTH: I have to object to that. I
14 don't think --

15 MR. PATCH: I'll withdraw that comment.

16 MR. ROTH: -- their witness has made any
17 testimony about what's in the guarantee. We have
18 Mr. O'Neal talk about a guarantee, but he didn't --

19 MR. IACOPINO: He's withdrawn the
20 question.

21 MS. BAILEY: He's withdrawn the comment.

22 BY MR. PATCH:

23 Q. In response to a question this morning, you suggested
24 to the Committee that property value guarantees were

[WITNESS: James]

1 something that ought to be considered in this case. Am
2 I correct?
3 A. That's correct.
4 Q. And, presumably, that's something you've said in a
5 number of other proceedings that you've been involved
6 in.
7 A. Yes.
8 Q. But are you familiar with the fact that this Committee
9 has rejected that in the past, in connection with the
10 Groton Wind Project? Did you know that?
11 A. I honestly don't see how that would have any bearing on
12 what my recommendation would be. I followed that
13 recommendation, Ben Hoen, who did the study for the
14 Department of Energy and NREL, on property values, has
15 made that statement himself. That, in all cases, the
16 developer will have to offer a property value guarantee
17 to handle those particular situations, those
18 properties, those people, who, after the project is
19 built, find they just are not compatible with the new
20 conditions in their community.
21 Q. So, I guess the answer is you're not familiar with the
22 fact that that issue was fully vetted before this
23 Committee in the Groton Wind proceeding, and the
24 Committee chose not to go that way? You're not

[WITNESS: James]

1 familiar with that?

2 A. No. And, I assume that this Committee -- or, I mean
3 this project is being evaluated on its own merits.

4 Can we go back -- can we go back to a
5 apparent sound level guarantee? I pulled up the
6 Acciona guarantee. And, it typically says, in the
7 apparent sound level guarantee that "guarantee defined
8 by IEC 61400-11, 2002, Edition 2." So, that's what
9 they're guaranteeing. This is Part Number 2 of the
10 Acciona sound data that was submitted under
11 restrictions.

12 MS. GEIGER: Yes, this is confidential
13 information. We have to go in a confidential record if
14 we're going to talk about this.

15 MS. BAILEY: Okay. Before you say
16 anything else, I think this may be confidential
17 information.

18 WITNESS JAMES: Yes.

19 MS. GEIGER: It is. And, some folks
20 have signed --

21 MS. BAILEY: Use the microphone please.

22 MS. GEIGER: I'm sorry. This is for
23 you, actually.

24 MS. BAILEY: Okay. But I'll listen, but

[WITNESS: James]

1 you can take the microphone.

2 MS. GEIGER: Some folks have signed a
3 confidentiality agreement, is that correct? Have you
4 signed one?

5 WITNESS JAMES: Yes.

6 MS. GEIGER: Okay.

7 WITNESS JAMES: Yes.

8 MS. GEIGER: And, I believe Ms. Manzelli
9 signed one, too. I don't know who else has signed one.

10 MS. BAILEY: Everybody needs to use the
11 microphone please.

12 MS. GEIGER: I guess this comment really
13 is for the presiding officer. And, it's just basically to
14 make you aware that it is confidential information, and
15 that some folks have signed a confidentiality agreement.
16 And, therefore, if we're going to discuss it on the
17 record, we need to go on a protected record, and folks who
18 have not signed the agreement need to leave the room.

19 MS. BAILEY: Okay.

20 MS. GEIGER: And, I'll leave it up to
21 you folks to figure out that part.

22 MS. BAILEY: Mr. Patch, do you have more
23 questions about this?

24 MR. IACOPINO: Doug?

[WITNESS: James]

1 MR. PATCH: Can I have a minute?

2 MR. IACOPINO: Oh. I'm sorry.

3 (Short pause.)

4 MR. PATCH: I have one more question. I
5 don't think it will get into any confidential information.

6 MS. BAILEY: Okay. Mr. James, let me
7 remind you that you're not allowed to say any confidential
8 information on the record without giving us all kinds of
9 red flags. And, if you do, then we have to clear the
10 whole courtroom except for the people who have signed a
11 confidentiality agreement. So, please don't discuss
12 confidential information until after you know for sure
13 that we know that that's what you're going to talk about,
14 okay?

15 WITNESS JAMES: Okay.

16 MS. BAILEY: Thank you.

17 WITNESS JAMES: Let's see what the
18 question is.

19 BY MR. PATCH:

20 Q. Mr. James, what you've been citing to I think is a
21 published document. But is it fair to say that you
22 don't know what might be in an agreement between a
23 manufacturer or supplier and a developer? You don't
24 know what sort of guarantees might actually be in

[WITNESS: James]

1 there, is that fair to say?

2 A. No. And, you're correct. What I'm doing, this is the
3 document that was marked "confidential", and I was
4 quoting the statement that gave the guidance for the
5 apparent sound level guarantee.

6 Q. Okay. Well, I want to move on to a couple of other
7 subjects. One of the them is the -- your familiarity
8 or not with the noise restrictions that have been
9 imposed in prior orders of this Committee. And, in
10 particular, I'm thinking of the Lempster order and the
11 Groton order. Are you familiar with those?

12 A. As I said earlier, I'm not familiar with either of
13 those two projects.

14 Q. Okay. And, you're not familiar with the noise
15 restrictions that were imposed?

16 A. No.

17 Q. Although, I think you heard some testimony or some
18 questions with regard to this of Mr. Tocci yesterday,
19 although I think you said you didn't hear all of
20 Mr. Tocci's testimony. But do you remember questions
21 pertaining to the noise limits in Lempster?

22 A. I remember some questions. You faded out there a
23 little bit from the microphone, but I think I heard you
24 correctly. Like I said, I heard his testimony. But I

[WITNESS: James]

1 was not focused on that issue, because I was looking at
2 this project as a stand-alone project, for my purposes
3 of review.

4 Q. Okay. So, then, if I told you that, in the case of --
5 well, why don't we start with this case. I think there
6 -- it's been made clear that there are noise
7 restrictions in the agreement with the Town. Are you
8 familiar with those?

9 A. I've briefly reviewed them.

10 Q. And, that's Appendix 17A to I think it's AWE 3. And,
11 that those --

12 A. Let's take -- Let me take a look at them. AWE 3,
13 "Appendix 17" you said?

14 Q. 17A.

15 A. "17A". Okay, here's 17A.

16 Q. And, then, it's Page 10 of 15. And, then, there's a
17 Section 11, "Noise Restrictions".

18 A. And, you said "Page 10"?

19 Q. Page 10 of 15.

20 A. Okay. I see -- okay. I see "Waiver of Noise
21 Restrictions", is that the part you're looking at?

22 Q. Well, I'm looking at --

23 A. What is the section number? 13? 12?

24 Q. Eleven.

[WITNESS: James]

1 A. Eleven. Okay, we'll go back.

2 MR. IACOPINO: And, let me just
3 interrupt for a moment. For the Committee members in the
4 room, they're actually talking about "AWE 4", which is the
5 -- I think the signed agreement.

6 MR. PATCH: Okay. I apologize if I
7 miscited it. AWE 4.

8 BY MR. PATCH:

9 Q. Sounds like you have the document in front of you,
10 though?

11 A. Yes, I do.

12 Q. And, these restrictions, which the Town and the
13 developer have agreed to, essentially, in 11.1, say
14 that the "Sound from the Wind Farm during Operations at
15 the exterior facades of homes shall not exceed 50 dBA
16 or 5 dBA above ambient, whichever is greater, during
17 daytime and 45 dBA or 5 dBA above ambient, whichever is
18 greater, at night." Do you see that?

19 A. Yes, I do.

20 Q. And, would it surprise you to know that that is fairly
21 consistent with prior decisions of this Committee, in
22 the case of Lempster and Groton?

23 MR. ROTH: I object. The witness has
24 already testified he's not familiar with Groton or

[WITNESS: James]

1 Lempster. And, Attorney Patch is introducing consistent
2 with in a way that I think is perhaps too much of an
3 editorial.

4 MR. PATCH: Okay. I'll withdraw that
5 question.

6 BY MR. PATCH:

7 Q. In terms of what you are recommending to this
8 Committee, I think I heard something different this
9 morning, but, based on the documents that you had
10 filed, it appeared that you were recommending that the
11 Committee take a very different approach than it has
12 taken in the past. You seem to recommend that no wind
13 power project be built in any location where there is a
14 residence within 1.25 miles. Do I have that correct?

15 A. The 1.25 miles -- the 1.25 miles is a calculated
16 distance. If the wind turbines had different
17 characteristics, that distance might change.

18 Q. Okay. Well, I guess I'm looking at a response you
19 provided to a data request, and it's been marked as AWE
20 9, Tab 10, which is actually Mr. O'Neal's prefiled
21 testimony, and an attachment to that, RDO-B.

22 A. AWE 9?

23 Q. That's right.

24 A. Okay. I'm looking at AWE -- I don't see a 9 -- okay,

[WITNESS: James]

1 Attachments, Fourth Supplement, I see it, the folder.

2 Okay. Which document within there?

3 Q. Tab 10. And, then, there's an attachment to

4 Mr. O'Neal's testimony, it's marked "RDO-B", as in

5 "boy".

6 A. Okay. Pulling it up now.

7 Q. And, in that data request, you were asked "Please

8 provide the sound level limits you feel are necessary

9 to ensure a compatible project in the community, the

10 metrics, measurement duration, *etcetera*, that would be

11 needed to evaluate compliance, and include any models

12 and techniques needed to evaluate future compliance

13 with this limit prior to construction." And, your

14 answer refers to a "published set of criteria in 2008",

15 and then it goes on to say "the specific criteria

16 calling for a setback distance of 1.25 miles has been

17 adopted by the State of Victoria in Australia." So,

18 given the question that was asked, I took that to mean

19 that you were suggesting that no wind farm ought to be

20 built unless there was at least a setback of 1.25 miles

21 to the nearest residence. Am I correct or am I

22 incorrect?

23 A. You're correct in one sense. The State of Victoria,

24 based upon its experience with wind turbines, and

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1 reviewing papers, such as Drs. Shepherd, Thorne and
2 Hanning, of which I reference above, concluded that
3 they needed a 1.25 mile setback for new projects. They
4 chose to set an arbitrary setback distance, rather than
5 going through the noise studies, *etcetera*, to vary that
6 distance based upon the characteristics of the
7 turbines.

8 Q. Well, then, I'm confused about why you answered this
9 specific question that you were asked here in the way
10 that you did?

11 A. In 2008, that -- the document we put together, Dr.
12 Pierpont, George Kamperman and myself were working on
13 different aspects. She was working on the
14 health-related issues, and we were working on the
15 sound-related issues. She provided George and myself
16 with all of the noise studies done for the homes of her
17 test subjects. When we had finished reviewing that
18 data, we had a conference call. And, Dr. Pierpont
19 wanted to know what would be the appropriate setback
20 distance for her to quote in her book. George and I
21 argued that that distance will vary with the different
22 type of turbine and different arrangements of turbines,
23 also with the background sound level in a community.
24 But we agreed that, for the purposes of providing

[WITNESS: James]

1 guidance for people who wish to only use a setback
2 distance, that 1.25 miles appeared to be the point at
3 which wind turbines were no longer a dominant part of
4 the nighttime background sound level, and, from her
5 point of view, most of the adverse health effects that
6 she was addressing occurred within 1.25 miles. And,
7 so, we agreed on 1.25 miles as a matter of convenience,
8 but not necessarily an engineering -- I mean, I would
9 have preferred the engineering approach of evaluating
10 each project separately, if we want to leave room for
11 the situation of quieter wind turbines. If wind
12 turbines were quieter, then a setback distance of 1.25
13 miles is unnecessarily punitive.

14 Q. I'm going to refer to your July report. It was
15 attached to your -- I think it was one-page testimony,
16 and I'm not sure of the exhibit number. I don't have
17 it handy. It's NB --

18 A. Is this my July 30th, 2012 report?

19 Q. That's right.

20 A. Okay.

21 Q. Page 8, you recommend an alternate model for predicting
22 the sound from wind turbines. And, then, you responded
23 to a data request that's been marked as one of our
24 exhibits, AWE 31. It's a response to 1-37. Where you

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1 had basically been asked by us to "provide the name of
2 the alternate model you would recommend for modeling
3 sound from wind turbines, including how many wind
4 energy projects have used this model and the names and
5 locations of these modeling studies." And, your
6 response to that was a reference to the -- I think you
7 even referred to that this morning, as the model being
8 "exSound" --

9 A. Nord2000?

10 Q. Yes. Which you said "is based on the Nord2000
11 propagation model". And, then, you went on to say "Mr.
12 James does not keep track of wind energy projects in
13 the Nordic countries that would use this method" -- or
14 "use this model", sorry. And, so, I mean, from your
15 response to that specific question that we asked you, I
16 took that to mean there isn't anywhere in the U.S. that
17 this model has actually been used. Is that fair?

18 A. That's correct. It's very specific to the Nordic
19 countries.

20 Q. Isn't it true that the predicted sound levels that were
21 modeled by Epsilon at Antrim were calculated using the
22 maximum model turbine sound power level, and also
23 assumed no foliage, assumed hard ground, and followed
24 basically the ISO standard with regard to the

[WITNESS: James]

1 assumption about sort of all of the turbines, noise
2 from all of the turbines being accumulated? Isn't that
3 fair to say that all of those I would refer to them as
4 "conservative assumptions" were built into the model
5 that Epsilon prepared?

6 A. Well, let's take them one at a time. Can you give me
7 each of those and I'll address --

8 Q. Sure.

9 A. -- question one?

10 Q. They use the maximum model turbine sound power level
11 from the manufacturer?

12 A. Okay. Yes.

13 Q. Yes.

14 A. They did use the maximum turbine sound power level.
15 But, as I said, the IEC 61400 standard defines the
16 weather conditions, such that, even though those are
17 the maximum levels for that weather condition, they are
18 not the maximum levels that would occur under other
19 weather conditions. Therefore, you could say they are
20 the worst-case sound levels for a day with weather that
21 does not cause wind turbines to be overly noisy. But
22 they're not the worst-case conditions that would occur
23 for a day with more turbulence or other types of
24 weather conditions, high wind shear, that could cause

[WITNESS: James]

1 the sound levels to increase. So, that worst case for
2 the test condition is not worst case for the real
3 world. Next one.

4 Q. Isn't it true that they also assume no foliage, which
5 is not the case in this situation?

6 A. Yes. Yes. But the foliage, I mean, this is a strawman
7 argument. If you put a wind turbine on a ridge, and
8 you are standing in the valley below, there aren't any
9 trees blocking the wind turbines because they're up
10 above the tree length. The foliage calculations assume
11 the noise source is on the ground, and that the sound
12 is traveling between the receiver and the noise source
13 through the trees. So, to claim that we did not
14 include foliage is only admitting that the reality of
15 the situation is there's no foliage that's going to
16 block the sound. It's not a conservative condition,
17 it's just a recognition of, when you put turbines on a
18 mountaintop, there's no trees to absorb any of the
19 sound, because the noise is coming from above. Next
20 one.

21 Q. Isn't it true that sound levels were computed assuming
22 that the receptors are always located directly downwind
23 from all turbines simultaneously?

24 A. That's true also. But, again, we have turbines here on

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1 a ridge. If the wind is coming from the east, then all
2 the people on the west side of the ridge will be
3 downwind of each turbine. If the wind is coming from
4 the east, all the people on the west side will be
5 downwind. So, again, this particular requirement of
6 the ISO standard, as Mr. Tocci said yesterday, the ISO
7 standard has no other way of doing it. So, it isn't
8 that we picked the conservative thing. It's the only
9 way the formulas work, --

10 Q. Okay. But the formula ends up in a conservative --

11 A. -- in Antrim to be a real condition.

12 Q. But the formula --

13 A. When the wind is from one direction, all the people on
14 the other side will be downwind of all turbines
15 simultaneously.

16 Q. Are you familiar with this Project and the orientation
17 of the turbines, the north/south orientation of the
18 turbines? So, are you suggesting --

19 A. I'm familiar with it, yes.

20 Q. If I can finish my question. Are you suggesting then
21 that people who would be to either the east or the west
22 would therefore actually receive the sound levels from
23 all of the turbines simultaneously, if they lived to
24 the east or the west of the Project? Is that what

[WITNESS: James]

1 you're suggesting?

2 A. Assuming the wind was coming from the other direction,
3 yes. So, the ISO model assumes that the noise sources
4 within 45 degrees of the downwind condition. And, if
5 you pick any of the locations along the sides of the
6 ridge, that pretty much spans all the wind turbines.
7 So, I don't see it as a conservative decision. I see
8 it as something that actually represents the type of
9 conditions that occur there.

10 Q. Isn't it fair to say that the distance between the
11 northernmost and southernmost wind turbine will be
12 about two and a half miles?

13 A. Yes.

14 Q. And, so, it's just counterintuitive to me how you could
15 suggest that, and if the orientation is north/south or
16 roughly north/south, that somebody, who is located to
17 the east or the west, you know, would attain the result
18 that you suggested? It just doesn't seem to make
19 sense.

20 A. I don't understand. The sound from the most northern
21 or southern turbine would be fainter than the sounds
22 from, let's say, Turbine 5, in the middle, but that
23 doesn't mean it doesn't exist. And, it's included in
24 the calculations proportionally to its distance.

{SEC 2012-01} [Day 8/AFTERNOON SESSION ONLY] {11-29-12}

[WITNESS: James]

1 Q. So, somebody would always hear all of those turbines,
2 depending on where they're located, on either the east
3 or the west, is that what you're suggesting?

4 A. All of those would contribute to whatever measurement
5 is made with an instrument or whatever ear is hearing
6 it, each of them proportional to their distance.

7 Q. And, which --

8 A. If you were start -- if you were to start with the
9 turbines in the middle, let's say we had a person on
10 the -- on the east side, and the wind's coming from the
11 west. And, we have all the turbines running. And, we
12 turn off the two middle turbines. People would then
13 hear the sounds of the remaining turbines to the north
14 and the south at a lower level, but they would hear it.
15 And, we just kept on turning off turbines until we got
16 to the very north and the very south turbine. Assuming
17 the background level was quiet enough, we might still
18 here that. And, that's the way the model works.

19 Q. But how -- how can that be? Isn't that
20 counterintuitive, I mean, when it comes down to what
21 actually --

22 A. No.

23 Q. If you can just let me finish by question. Because, if
24 -- doesn't it depend on where somebody is located, how

[WITNESS: James]

1 close they are to the turbines? Doesn't it depend on
2 -- or, how close they are to a particular turbine, as
3 to whether they would hear one or all of them or any of
4 them?

5 A. When all of them are operating, the closest two or
6 three turbines will dominate. But that does not mean
7 that acoustic energy from the other turbines isn't
8 still present.

9 Q. Okay. Well, I'm going to move on. The other portion
10 of my original question was that, when they did the
11 model, they assumed hard ground. And, so, that --

12 A. Yes.

13 Q. -- is one way in which it is a "conservative" estimate.
14 Do you agree with that?

15 A. I agree with that. Yes, I do. And, as I said, in
16 Ontario, where they specify how models are to be
17 constructed, that is one of the requirements for what
18 they call "predictable worst case". So, in that case,
19 I agree. That was a conservative estimate.

20 Q. In your testimony you expressed concern about the noise
21 impacts this Project would have on wildlife. And, you
22 were asked a question in a data request about the basis
23 for your statements related to this. And, that's AWE
24 31. It's the response to 1-27. And, that response

[WITNESS: James]

1 cites to a Barber, Crooks, and Fristrup report that
2 you, I think, also submitted. Is that correct? Do you
3 remember that?

4 A. Yes. Yes. Can I pull that one up?

5 Q. Sure.

6 A. What was the -- AWE, what number?

7 Q. It's AWE 31, and it's the response to 1-27.

8 A. Okay. AW -- okay, I've got Data Request S 2-12. You
9 said "AWE 31"?

10 Q. AWE 31. And, it's a Data Request 1-27.

11 MS. BAILEY: There are multiple data
12 requests in that exhibit. So, scroll down.

13 WITNESS JAMES: Oh, okay. Okay. I see
14 it. Yes, I see it. Thank you. Yes. The Fristrup paper,
15 okay.

16 MR. PATCH: Yes.

17 BY MR. PATCH:

18 Q. On Page 181 of that report, it refers to "anthropogenic
19 disturbance", which was a word I guess I should have
20 known, but I had to look up in the dictionary, which
21 essentially means it's the "scientific study of the
22 development of the human race." Do I have that
23 correct?

24 A. No. "Anthropogenic", in this context, means "noises

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1 produced by human activity".

2 Q. Okay. You said it better than I did. That report
3 refers to "anthropogenic disturbance as altering animal
4 behavioral patterns". And, it goes on to talk about,
5 basically, transportation networks as being a
6 "pervasive source of noise". It says that "83 percent
7 of the land area of the continental U.S. is within
8 1,061 meters of a road". Do you recall that or do you
9 have that in front of you, by any chance?

10 A. I'm looking at it. But I would agree with what they're
11 saying, yes.

12 Q. So, it seems to me that a much larger noise threat to
13 wildlife, you know, significantly larger, would dwarf
14 any threat that a wind power -- an individual wind
15 power project would produce is the transportation
16 network in the United States. Is that fair to say?

17 A. Yes. And, I think that's what is driving the concern.
18 We have very few areas left that are wilderness not
19 contaminated by anthropogenic noise. And, in order to
20 not disturb those environments, we need to have a
21 priority on keeping them quiet.

22 Q. And, so, as a society, we've accepted the fact that
23 roads and the noise that they cause is something that
24 we essentially have to put up with, or that the

[WITNESS: James]

1 wildlife has to put up with, because roads and
2 transportation networks are just critical to our
3 society. Is that fair to say?

4 A. It's fair to say that "roads and traffic-related noise
5 are critical."

6 Q. And, is it also --

7 A. But the point that the Fristrup paper is making is
8 that, where they have not contaminated the wilderness,
9 we need to protect it.

10 Q. But isn't the production of electricity also critical
11 to our society?

12 A. Yes.

13 Q. And, isn't the condition of our atmosphere, given
14 global warming and given climate change, also critical
15 to our society?

16 A. I think that's a different issue.

17 Q. Well, I mean, is it really a different issue?

18 A. It's a -- yes. Because there are many places we can
19 put wind turbines, this is just one of them. We're
20 arguing whether "is this an appropriate place?" And,
21 not arguing whether maybe the proper place to put wind
22 turbines is along Interstate 80, where we already have
23 noise. Maybe it's in brownfields around industrial
24 zones that have decayed. We haven't looked at other

[WITNESS: James]

1 options. What we're doing here, though, is we're
2 taking a relatively pristine community, one that has
3 very quiet levels, and trying to argue that it should
4 be an industrial zone.

5 Q. But isn't it true, Mr. James, that the longer that we
6 take debating these issues and building wind power
7 projects, given the state of climate change right now,
8 that the more critical then they become?

9 MR. ROTH: I object to this line of
10 questioning.

11 **BY THE WITNESS:**

12 A. I don't think that's a proven statement.

13 MR. ROTH: There's an objection pending
14 right now.

15 **BY THE WITNESS:**

16 A. I don't think that's a proven statement.

17 MR. ROTH: Mr. Patch seems to be arguing
18 against the whole purpose of the proceeding, which is to
19 determine whether the Project has an undo adverse impact
20 on the natural environment. And, he's suggesting that,
21 basically, the witness should agree with him that "it
22 doesn't matter, because electricity and global warming are
23 important." So, I just think that that's sort of an
24 unnecessary and inappropriate line of questioning.

[WITNESS: James]

1 MR. PATCH: I think he answered he
2 didn't agree with me, so --

3 MS. BAILEY: I think the question
4 demonstrates bias on the part of the witness, and,
5 therefore, it's proper cross-examination. So, I'm going
6 to allow it. And, I think he's already answered it.

7 MR. IACOPINO: It explores bias.

8 MS. BAILEY: Explores it, not
9 "demonstrates" it. Yes, explores bias on the part of the
10 witness.

11 BY MR. PATCH:

12 Q. On Page 12 of your July report, you referred to -- it
13 was basically a conclusion that wildlife that come
14 close to this Project will be a "endangered species".
15 Do you recall that portion of your testimony?

16 A. I recall. I'm looking to see if I can find the exact
17 wording. Let's see. It's in the section on wildlife?

18 Q. Yes. It's in the section on wildlife. I think it's
19 down toward the bottom of --

20 A. Okay. I've found it.

21 Q. Yes, it's at the very bottom of the page.

22 A. Yes. In the context of what I was talking about was
23 "listening radius".

24 Q. Did you mean --

[WITNESS: James]

1 A. And, I was talking about -- yes, go ahead.

2 Q. Did you mean "endangered species" in the legal -- in
3 terms of the legal meaning of that word, under federal
4 and state law?

5 A. No. I meant -- that's why I do quotes. I said, if the
6 listening radius is dramatically reduced, such that
7 predator/prey relationships are altered or mating
8 relationships are altered, we may find that wildlife
9 that was never endangered before become endangered, on
10 the local level. And, that's why it's in quotes.

11 Q. I don't know if you have access to this, I hope you do,
12 but there's an Exhibit AWE 15 that is some pictures of
13 wildlife that are near the wind turbines at the Kibby
14 Mountain Project, in Maine. Do you have access to
15 that? And, I think it shows moose --

16 A. AWE what?

17 Q. Fifteen.

18 A. I have it now.

19 Q. You see the pictures of the moose, and there's a bear
20 there, I think, and there may be other wildlife, too.
21 But, obviously, made the choice to go near the wind
22 turbines there. Are you suggesting that they're
23 "endangered species" for going close to the wind
24 turbines?

[WITNESS: James]

1 A. I see three pictures showing a moose crossing the path
2 of a wind turbine. I don't know how long the moose was
3 there. I don't know whether -- in the last one, it
4 looks like he's trotting. I mean, I could imply a lot
5 from this. The point of the argument -- we're not
6 going to -- I'm not going to say that "animals never
7 come near wind turbines." I've seen deer graze through
8 wind turbine areas myself. What I'm saying is that,
9 for animals that rely on mating calls, predator/prey
10 relationships, *etcetera*, being in the vicinity of a
11 wind turbine increases the likelihood they become prey
12 or decreases the likelihood that they will mate. And,
13 that's not my opinion. That was the opinion expressed
14 in the Fristrup paper and in other papers from forestry
15 and wildlife.

16 Q. One of the areas of concern that you spend a
17 significant amount of time addressing in your July
18 testimony is "wind shear", is that correct?

19 A. Yes. Yes.

20 Q. And, in that July testimony, Page 3, you say that "the
21 Epsilon models represent the predicted sound level from
22 wind turbines operating under weather conditions of a
23 neutral atmosphere and low wind shear." Correct?

24 A. Yes.

[WITNESS: James]

1 Q. But, then, in your testimony at Page 6, you provide
2 some further definition to this, and you say "such
3 conditions are normally defined as "neutral" atmosphere
4 where the wind shear will generally be in the range of
5 0.15 or less and in general under 0.20." Do I have
6 that correct?

7 A. That's correct.

8 Q. And, then, you also say in your testimony, "if the
9 conditions for operation differ from the test
10 conditions the results will also be different."
11 Correct?

12 A. Yes. That's my argument about the IEC 61400 test.
13 That, because they specify wind shear conditions
14 generally under 0.2, and very low surface roughness
15 leading to low turbulence, that they provide a set of
16 data that does not represent the maximum noise the wind
17 turbine would make under higher wind shear or more
18 turbulence.

19 Q. In your testimony, on Page 7, you say "the problematic
20 situation is when there is high-level wind shear, such
21 as 0.44, without a stable boundary layer." Do I have
22 that correct?

23 A. Above a stable boundary layer? Let me see. Where are
24 you on that?

1 Q. Page 7.

2 A. Okay. And, I'm looking for "0.44" on that. Where are
3 we? Page -- oh, I'm on Page 6, I'm sorry. This is
4 with the Figure 2, "Examples of wind shear in neutral
5 and stable atmospheres", yes.

6 Q. And, what I asked you was, did you say that "the
7 problematic situation is when there is high-level wind
8 shear, such as 0.44, without a stable boundary layer"?

9 A. With a stable -- I should have said "with a stable
10 boundary layer". That's because the Figure -- Figure 2
11 is showing the stable boundary layer as the dash line,
12 and the two curves, the blue pluses on the left side
13 and the blue -- or, red Cs show the wind shear stopping
14 at the stable boundary layer, which implies that below,
15 in this case, 40 meters, we'll have calm air at the
16 ground and high-speed air at the height of the
17 turbines.

18 Q. I don't know if you've had an opportunity to review
19 Exhibit AWE 8, and that's a V-Bar report that's
20 included in the Third Supplement to the Application,
21 AWE 8?

22 A. Was that one of the data requests that were -- no, that
23 wasn't one of the confidential ones.

24 Q. No.

[WITNESS: James]

1 A. It's AWE what?

2 Q. AWE 8. It's called a "V-Bar report".

3 A. Okay. Yes, I took a look at that.

4 Q. And, I'm looking, unfortunately, there are no --
5 actually, maybe there are page numbers on this one
6 here. Yes. On Page 3, "Characteristics of the Antrim
7 Wind Project Wind Resources", there's a description of
8 "shear" there. Where it says "The long-term mean
9 average shear exponent at the AWE meteorological tower
10 is 0.13 which is in the low and normal range for wind
11 farm sites." Did I read that correctly?

12 A. Yes. And, the operative terms there are "long-term
13 mean average". What I'm talking about is the
14 short-term exceedances of the long-term mean average,
15 which will be much above 0.13. And, those will be the
16 situations causing the higher noise.

17 Q. How can you say that with certainty?

18 A. Because I've looked at wind shear at several other
19 projects, including ridge mounted projects. And, I've
20 been able to, what you call it, see the
21 moment-to-moment, ten-minute in increments, wind shear
22 at the height of the wind turbines.

23 Q. Well, it appeared to --

24 A. Whereas the long-term average may be reasonable, the

[WITNESS: James]

1 extremes vary from as high as one, down to as low as
2 0.1 or lower.

3 Q. It seemed to me that the wind shear numbers that are
4 contained in the V-Bar report confirm, based on what
5 you said in your testimony, that the atmospheric
6 structure in Antrim is representative of a neutral
7 atmosphere. Would you disagree with that?

8 A. Yes. Because this is talking about the "long-term mean
9 average shear", which is talking about years' worth of
10 data. What causes noise is not the long-term average,
11 it's the instantaneous "what's happening tonight or
12 this afternoon" wind shear, and that is not addressed
13 in the V-Bar report.

14 Q. I assume you've had a chance to review Mr. O'Neal's
15 supplemental prefiled testimony, it was the October
16 testimony that he filed. Is that fair to say?

17 A. Yes, I did look at it. And, I will pull it up here, so
18 I have it again.

19 Q. And, attached to that testimony --

20 A. No, I don't have it. I'm looking here for it at the
21 moment. Okay. Yes, supplemental testimony. I now
22 have it.

23 Q. Attached to the testimony is a Massachusetts Department
24 of Environmental Protection, in collaboration with the

[WITNESS: James]

1 Massachusetts Department of Public Health, it says they
2 "convened a panel of independent experts to identify
3 any documented or potential health impacts of risks."
4 Are you familiar with that particular impact study?

5 MR. ROTH: Excuse me. I'm sorry, Doug.
6 Where is that?

7 MR. PATCH: It's RDO-G. It's an
8 attachment to Mr. O'Neal's October 11th.

9 MR. ROTH: So, it's the Executive
10 Summary of the Wind Turbine Health Impact Study, one-page
11 document?

12 MR. PATCH: Yes. It is a one-page
13 document.

14 MR. ROTH: Okay. Thank you.

15 BY MR. PATCH:

16 Q. Are you familiar with that particular impact study?

17 A. Yes, I am.

18 Q. And, you're familiar with Mr. O'Neal's description of
19 that study in his testimony?

20 A. I'm going to look at it right now.

21 Q. It's on Page 13 of his testimony. And, he describes
22 there the findings of that, the first one of which is
23 "there is insufficient evidence that the noise from
24 wind turbines is directly", and, then, in parentheses

[WITNESS: James]

1 it says "(i.e., independent from an effect on annoyance
2 or sleep) causing health problems or disease." Do you
3 see that?

4 MR. ROTH: That's in the testimony,
5 Doug, not the Executive Summary, right?

6 MR. PATCH: That's Page -- yes,
7 that's --

8 WITNESS JAMES: Yes, I see it.

9 MR. ROTH: Because there's nothing like
10 that in the Executive Summary.

11 MR. PATCH: It's not in the Executive
12 Summary. But it is the findings that Mr. O'Neal basically
13 quotes in his testimony, Page 13.

14 **BY THE WITNESS:**

15 A. I don't see anything here about sleep. What I see is,
16 he said "this study consisted of a literature review of
17 noise, shadow flicker, and ice throw." That's true.
18 It was purely a literature review, and it only looked
19 at literature related to wind turbines. It didn't look
20 at literature related to sick building syndrome, didn't
21 look at literature related to low frequency noise
22 syndrome. And, it did not even ask questions of people
23 who were in Massachusetts who were exhibiting these
24 systems -- or, symptoms. It was purely a literature

[WITNESS: James]

1 review. And, among its findings, it concluded there
2 was insufficient evidence that was causing health
3 problems, but that evidence was only based upon the
4 literature they reviewed. They did conclude, however,
5 that more study was necessary. And, that was the one
6 positive aspect of this. They reviewed Dr. Salt's
7 paper, they reviewed the Rob Rand Falmouth paper,
8 *etcetera*. But they did not do any independent
9 research, and they never talked to anyone who was
10 exhibiting problems of noise, shadow flicker, or any
11 other problems. It was a literature review.

12 BY MR. PATCH:

13 Q. But it was done by an independent organization. You
14 wouldn't suggest, would you, that the Massachusetts
15 Department of Environmental Protection and the
16 Massachusetts Department of Public Health were in some
17 way not independent?

18 MR. ROTH: Doug, I'm sorry. I'm still
19 having trouble finding where you're referring to this.
20 Because I'm on Page 13, and it doesn't say anything about
21 this study.

22 MR. PATCH: I'm sorry.

23 MS. BAILEY: The original.

24 MR. PATCH: Yes, original prefiled. I

[WITNESS: James]

1 guess I said "October 11th", and that's my fault. I
2 apologize for that.

3 MR. ROTH: Okay.

4 MR. PATCH: It's Page 13 of the
5 January 31st testimony, which is actually part of AWE --

6 MR. ROTH: Ah, okay.

7 MR. PATCH: -- 1, I think it is.

8 MR. ROTH: Got it. Yes.

9 MR. PATCH: So, I apologize.

10 WITNESS JAMES: Is everyone on the same
11 page?

12 CHAIRMAN IGNATIUS: I think that's our
13 line.

14 MR. ROTH: Okay. Now I'm there. Thank
15 you. I was thinking I was going -- losing my mind, I've
16 been thinking that for days, but I had almost confirmed
17 it.

18 **BY THE WITNESS:**

19 A. That, I am -- I don't want to go into detail about the
20 members of the panel. Dr. Dora Mills, however, was one
21 of the members. And, Dora Mills was a head of the
22 Maine CDC, when Dr. Nissenbaum first raised the issue
23 of adverse health effects around Mars Hill. At which
24 point she declared that she had no experience, no

[WITNESS: James]

1 understanding of wind turbines or any of the problems,
2 suddenly she's an expert on the panel. Basically, the
3 panel's statement is "there's an absence of proof of
4 impacts." This isn't the same thing as saying "there
5 is a proof of absence of impacts." The study is
6 intentionally ambiguous, it's unclear, and it draws
7 broad conclusions based upon a very limited search of
8 literature, with no new research, even though the
9 research could have been done very easily by asking
10 people who were filing complaints in Massachusetts to
11 appear before the panel to talk about it.

12 So, I take it for what it was. It's a
13 limited literature review, it's a partial literature
14 review. It summarized some of the existing science, it
15 didn't advance it. And, it really did not conclude
16 there were no health problems, it concluded that the
17 literature did not demonstrate any health problems.

18 BY MR. PATCH:

19 Q. And. Obviously, you don't like that conclusion,
20 because that runs contrary to what you've suggested,
21 right? So, it's not --

22 A. We have been -- people involved in the side of the
23 argument for the communities have been asking for
24 independent peer-reviewed research for almost five

[WITNESS: James]

1 years. Not a review of the old literature, but new
2 studies. We now have that going on in Ontario. They
3 have budgeted -- Canadian government has budgeted
4 \$1.8 million to investigate why people near wind
5 turbines in Ontario, and other regions of Canada, are
6 filing complaints or leaving their homes. We have a
7 similar study that is being done over in Wisconsin by
8 the Public Service Commission, in an area called
9 "Shirley Wind", where an eight-turbine project, these
10 are two and a half megawatt turbines, has resulted in
11 over 50 affidavits being filed with the state Public
12 Service Commission about adverse health effects from
13 the turbines. We have the county in which those
14 turbines are located, in Brown County, filing notices
15 with the state that these people are -- that having
16 been reviewed by the Brown County Board of Health, that
17 the complaints from people in that project are
18 legitimate and have been verified by the Brown County
19 Board of Health. So, we have new stuff coming online,
20 but the old literature never looked at these issues.
21 So, looking at old literature does not in any way
22 advance research. We need the new research. We need
23 new independent, peer-reviewed research, not more
24 panels, where there's no peer review, and no broad

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[WITNESS: James]

1 advancing of the state of our understanding.

2 Q. Well, Mr. James, let's bring this back to New
3 Hampshire. How many people have filed complaints with
4 the Site Evaluation Committee related to noise from
5 wind power projects? Do you remember that number that
6 I gave you before? Two, and one of them was a
7 defective -- involved a defective hearing aid?

8 A. No.

9 Q. No what?

10 A. No. I remember you saying that, but I -- it wasn't
11 what I -- I mean, I didn't remember when you asked the
12 question exactly.

13 Q. Okay. But you don't have any information to suggest
14 that there are any more than those two complaints that
15 have been filed in New Hampshire from wind power
16 projects, do you?

17 A. No. No. And, I have no familiarity with those
18 projects to know whether I would have expected them.
19 If I had gone to those areas and looked at them, I
20 might have a better idea of whether I thought that
21 number was reasonable or not reasonable.

22 Q. But you didn't do that, right?

23 MS. LINOWES: Madam Chair, I would like
24 to object --

[WITNESS: James]

1 **BY THE WITNESS:**

2 A. No.

3 MR. PATCH: I have no further questions.
4 Thank you.

5 MS. BAILEY: Okay. Questions from the
6 -- well, actually, why don't we, before we do questions
7 for the Committee -- from the Committee, Steve, are you
8 ready for a break?

9 (Brief off-the-record discussion ensued
10 regarding the taking of a recess.)

11 MS. BAILEY: All right. Let's take a
12 ten-minute break and resume at 4:00.

13 (Recess taken at 3:54 p.m. and the
14 hearing resumed at 4:10 p.m.)

15 MS. BAILEY: Okay. Let's get back on
16 the record. Okay. We're going to take some questions
17 from the Committee now, and we're going to start with
18 Mr. Simpkins.

19 MR. SIMPKINS: Hi, Mr. James. I just
20 had one kind of general question.

21 BY MR. SIMPKINS:

22 Q. You started to allude to this in an answer to a
23 question posed by Attorney Patch. But, during your
24 testimony, you've been describing several potential

[WITNESS: James]

1 health issues and noise issues with people living
2 within proximity to a turbine. And, you've also made
3 comments about how the noise from wind turbines disturb
4 a rural area, such as Antrim, and are out of character
5 -- the noise is out of character with the environment.
6 You made the comment about "people don't like to hike
7 in an industrial park." So, I guess my question is, if
8 you can't have wind turbines near people, because it
9 impacts them, but you can't have them away from people,
10 because that's disturbing a rural area or it's out of
11 character with that environment, in your opinion, where
12 is a suitable place for a wind turbine?

13 A. I have visited a number of wind projects in Iowa, the
14 Dakotas, where we have large, open farms. Many cases,
15 wind turbines are on the farmland. But, then, when you
16 get close to the farmhouse, they're left out. There
17 are areas where we're not conflicting with either
18 wildlife or people. It's just kind of hard to do that
19 in an area where we have scattered homes, and either
20 wilderness or farmland. Maybe that, for those kind of
21 communities, there is other forms of renewable energy
22 that are more appropriate. But, if we want to protect
23 people, and animals, I guess, then areas with homes may
24 not be the primary locations we should be addressing.

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[WITNESS: James]

1 Q. So, in an area like New Hampshire, or, basically, New
2 England, is fairly heavily forested and has a lot of
3 rural communities and scattered homes, it's not like
4 the Midwest, with flat, large industrial farms. So,
5 are you saying this area is just not conducive to wind
6 farms, northern New England?

7 A. Well, it might be, if there was a way to either have
8 everybody who lives around the project participate,
9 with some kind of safety valve, for those who find they
10 can't live with it. Some of the more successful
11 projects are ones where 95 to 100 percent of the people
12 are participating. And, in those cases, the few
13 people, who just can't live with it or don't wish to
14 participate, have sold their homes and moved on. So,
15 you know, I mean, there are ways to do it, but it
16 requires really working intimately with the community,
17 and recognizing that some people may have an objection
18 that the next neighbor may not.

19 Q. So, when you say "95 to 100 percent of the people are
20 participating", what do you mean by "participating"?
21 You mean "supportive of the project" or participating
22 in some other manner?

23 A. Well, in the Midwest, participation has two levels.
24 One, you can be a farmer who leases land for wind

[WITNESS: James]

1 turbines, and you may get \$5,000 to \$10,000 per year
2 per wind turbine on your property. Or, you can
3 participate by granting a noise easement across your
4 property. And, those people get less per year, but
5 they get a payment to essentially compensate them for
6 the loss of the quiet or what other attributes they
7 felt were valuable. And, for those people who just
8 don't want to be in either of those two categories, a
9 property value -- a property value guarantee that let's
10 them leave the community and find someplace else to
11 live.

12 MR. SIMPKINS: Okay. Thank you, Mr.
13 James. No further questions.

14 WITNESS JAMES: Okay. Okay, thank you.

15 MS. BAILEY: Mr. Dupee.

16 MR. DUPEE: Thank you, madam Chair.

17 Good afternoon, Mr. James.

18 MS. BAILEY: You have to get the mike
19 really close to you.

20 MR. DUPEE: And, probably turning it on
21 will make a significant difference, too. Good afternoon,
22 Mr. James.

23 WITNESS JAMES: Good afternoon.

24 MR. DUPEE: Two questions for you, sir.

[WITNESS: James]

1 BY MR. DUPEE:

2 Q. Earlier in your testimony we talked about methods. You
3 mentioned the "placement of sound monitors should be
4 done on a random basis", did I hear you correctly about
5 that, in terms of following the procedures and
6 protocol?

7 A. Well, that, I was referring to the procedure that's
8 called "long-term monitoring without an observer
9 present", it's S12.9, Part 2. And, that requires a
10 random distribution of the monitoring equipment, along
11 with very detailed statistical calculations. What
12 Epsilon did was long-term monitored monitoring, but
13 they picked locations, and they did not do any
14 statistical analysis. R2s -- R2 actually will give you
15 a result that has confidence limits. It would say "we
16 tested the background and it was 24 decibels, plus or
17 minus "x" decibels, with a scientific, you know, call
18 it "certainty" that one -- 60 percent or 90 percent of
19 the data will fall into that range.

20 All we know from what Epsilon did was
21 that, at five sites, they got five sets of sound data.
22 Like I said, the data that they represent as their
23 minimum L90 data, which is the nighttime levels, I
24 would find very acceptable. It was the contamination

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1 from cars and creeks and insects and other things
2 during other times of the day that made that data less
3 relevant, and, actually, for the purpose of assessing
4 community response, totally irrelevant to the issue.

5 Q. So, thank you, sir. So, you mentioned about that
6 particular set of survey data that I think you
7 mentioned they should not have put it next to running
8 water, was that what your testimony was earlier?

9 A. Yes. I said, the only reason to put a test site near
10 running water would be if they were trying to assess
11 the background sound level for running water, and all
12 the other homes that they were going to extrapolate
13 that data across had similar running water. So, if we
14 were doing, for example, a test of background sound
15 levels for homes along a highway or homes along a
16 rapidly flowing river, then one test site along the
17 highway may be enough to represent the other 20, 30, 40
18 homes.

19 But, if you're in a community where
20 running water is not common in everyone's yard, then
21 that biased the data towards a specific circumstance
22 that was not representative of the rest of the
23 community.

24 Q. So, would it be your thought, sir, that, in order to be

[WITNESS: James]

1 able to provide a statistical inference, that you would
2 recommend that the samples be randomly placed, such
3 that a variance could be calculated and confidence
4 intervals created, versus --

5 (Court reporter interruption.)

6 MR. DUPEE: I'm sorry.

7 BY MR. DUPEE:

8 Q. -- such that a variance could be calculated?

9 A. That would be the appropriate way to conduct long-term
10 monitored monitoring. My own preference is to use
11 short-term observed monitoring. And, that's where a
12 person, who understands what background sound sounds
13 like, picks a location that is believed to be
14 representative of the community at large, is there to
15 be -- to observe the measurements, and these
16 measurements may only be a half hour to an hour long,
17 and is willing to say "yes, the only sounds present
18 were the sounds that create background conditions."

19 Q. So, you're telling me a two-level sampling plan, one
20 being a random sampling plan for a longer term, and
21 then maybe a more directed sampling, based upon level
22 knowledge of the community, for example?

23 A. Yes. Yes.

24 Q. Okay. Thank you.

[WITNESS: James]

1 A. And, both of them -- both of them will come up with
2 roughly the same answer.

3 MR. DUPEE: Second question, madam
4 Chair?

5 MS. BAILEY: Go ahead.

6 BY MR. DUPEE:

7 Q. Sir, later in your testimony you talked about "cortisol
8 test" and individuals being sampled and I believe it
9 was blood samples taken and cortisone levels
10 determined, and you mentioned that those levels were
11 detectable up to some a mile away from a wind turbine,
12 is that correct?

13 A. Yes. And, actually, I believe the farthest testing she
14 has done is 5-kilometers, about two and a half miles.
15 And, the cortisol test is not invasive, it's a cotton
16 swab of saliva to send in for analysis.

17 Q. Okay. I think we have talked about, maybe we didn't
18 talk about the fact that stress is not a rare condition
19 in society. Would you agree with that?

20 A. I agree with that. I understand it fully, because I
21 have had problems with it myself, --

22 Q. I think the American --

23 A. -- being a business owner.

24 Q. Right. I think the American Psychology Association

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1 does a survey with I think anywhere from 20 percent to
2 maybe up to 30 percent, but those aren't exact numbers.
3 But, at any rate, it's not a rare condition in the
4 population. So, now, the statistical question would
5 be, how are we -- we have a condition that's relatively
6 common. How are you able to ascribe a causality to the
7 wind farm or wind turbine if we find levels of cortisol
8 in individuals? It seems to me that wouldn't there be
9 potentially other resources we'd have to rule out in
10 order to be able to make that statement?

11 A. That's why you need a control group who's had similar
12 life styles, but is not near wind turbines.

13 Q. Right. So, then, we should --

14 A. You might use -- you use a control group with, you
15 know, a town similar to Antrim, in order to find out
16 what the stress levels were over a large group of
17 people.

18 Q. So, you wouldn't recommend that we would take your
19 statement as meaning that "boy, you better be careful
20 of wind turbines, because there is a cortisol level out
21 there some miles away"? There could be some other
22 reason and we should study that more, I think you're
23 telling us?

24 A. Yeah, it could be. But, if you have noticed on the

[WITNESS: James]

1 recent years, one of the first places where we begin to
2 identify noise annoyance and health effects was in
3 people who live near highways that were heavily
4 traveled. Back when I got my start in acoustics, the
5 idea of putting up noise barriers along highways was
6 just considered absurd, because it was so expensive.
7 About ten years ago, we started getting studies back
8 showing that people that live near highways,
9 particularly those that have heavy traffic at night,
10 are showing much higher levels of cardiovascular
11 disease. And, as a result of that, noise barriers are
12 going up all over the place around highways.

13 When I was younger, we used to find
14 airports that ran at night. Because of the problem
15 with stress levels around airports, major airports now
16 do not operate at night. And, if they do, they operate
17 under very tight restrictions. All of these things
18 have huge economic consequences, comparable to many of
19 the other health issues, like smoking, secondhand
20 smoke. Excuse me just a sec.

21 But because -- but because we've begun
22 to identify that those risks are real, we've changed
23 the way we do things. And, I think we're in the
24 learning stage right now with wind turbines, of what

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1 can be done and what can't be done.

2 And, ten years from now, there may be an
3 entirely different set of issues, or these may not be
4 issues at all. But, for right now, the current
5 generation of turbines do pose these risks.

6 MR. DUPEE: Thank you, Mr. James. No
7 further questions.

8 MS. BAILEY: Thank you. Chairman
9 Ignatius.

10 CHAIRMAN IGNATIUS: Thank you. I have
11 just a couple of questions.

12 BY CHAIRMAN IGNATIUS:

13 Q. Mr. James, I'm sure it's in your testimony somewhere or
14 among your many exhibits, but just so that I'm certain
15 we're keeping our terms right, you define "low
16 frequency" as "under 20 hertz", is that correct?

17 A. I would consider that "very low frequency". Infrasound
18 is generally -- we have differing opinions on where the
19 boundaries are. Infrasound is universally agreed to be
20 10 hertz and below. Some people push it up to 20
21 hertz. Low frequency sound is considered to be 200
22 hertz and below. So, there's this region between 10
23 and 20, which some people would call "infrasound", some
24 people would call "very low frequency sound". But

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1 that's the region where most of the acoustic energy
2 from a wind turbine is concentrated. And, so, I have,
3 generally, in my writings, I refer to it as "infra and
4 low frequency sound", to try to cover both of them,
5 without having to get into arguments with people on how
6 we define where that boundary is.

7 Q. All right. And, the concerns here relate to the 10 to
8 20 range for the -- whatever we're calling it, whether
9 it's "infrasound", "very low frequency", it's that 10
10 to 20 hertz range?

11 A. That's -- that's one of it. But, again, Mr. Tocci
12 testified yesterday a little bit about "blade passage
13 frequency". Any time you have a rotating machine, the
14 concentration of acoustic energy is at what they call
15 the "blade passage frequency". Whether it be a fan in
16 a building or anything. But the blade passage
17 frequency is the RPM and the number of blades. Well,
18 for a wind turbine turning at 20 RPM, the blade passage
19 frequency is about 1 hertz. That is -- that is a very
20 hard number to measure. So, a lot of times we will
21 measure the frequencies from, let's say, 6 hertz and
22 higher, knowing that those are surrogates for what's
23 happening lower. But that's where the energy is
24 concentrated. It's in an area where, for the vast

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1 majority of people, it's inaudible. But that doesn't
2 mean that it is not present, any more than, when we go
3 outside and get sunburned on a cloudy day, we didn't
4 see the Sun, that's because the rays that cause the
5 sunburn aren't the visible rays, they're rays that come
6 through clouds, *etcetera*. The old statement used to be
7 "what you can't hear" -- "what you can't hear can't
8 hurt you." That was circa 1940-1950. We've learned
9 since that era, that there are sounds that we can't
10 hear that do have impacts on us. And, with the
11 experiment, which I'll call it, of putting wind
12 turbines in quiet areas, we've now seen that there's a
13 repeatable impact.

14 Wind turbines, you take a community
15 where people have low stress, rural communities are
16 well known to have lower stress than urban communities.
17 It's quiet. It has a different lifestyle. It has an
18 open-door lifestyle, an open-window lifestyle. And,
19 then, you put wind turbines in, and you say "what
20 changed?" Well, suddenly we see people with stress, we
21 see people complaining about sleep disturbance, we see
22 people complaining about balance problems. We see
23 people having to sleep with the windows open and the
24 air conditioners on. All of those changes have given

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1 us an opportunity as acousticians to learn more about
2 how low frequency affects people, in a way that we
3 never would have had before. But, for the people
4 living there, this is a very unfortunate situation,
5 because what they valued as their life is now gone.

6 Q. All right. You had said that we need "not only an
7 absolute limit set at a dBA level, but we also need a
8 limit on low frequency sound." But I didn't recall you
9 actually giving a proposed limit. And, if you did, I
10 apologize. Can you tell me what that would be?

11 A. No. Yes, the limit that Mr. Kamperman and I came up
12 with was that low frequency sound should be limited to
13 no more than 50 dBC. And, again, we're using dBC as a
14 surrogate for the frequencies that are much lower than
15 that. But, if we said "35 dBA", we then protect the
16 people against nighttime sleep disturbance from audible
17 sound. And, if we said "50 dBC", we protect the
18 residents from the inaudible component, which is more
19 of a disturbance through vestibular than auditory
20 processes.

21 Q. And, "dBC", the "C" is a measurement or you're pulling
22 out the -- eh, you tell me what "C" is, I'll mess it
23 up.

24 A. Yes. The dBA literally removes all of the impact of

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1 low frequency and infrasound. DBC leaves in the impact
2 of some of the low frequency. And, it's enough to give
3 us a way to have a simple measurement, at something
4 that's calculatable from the model data, if they use
5 the octave band level of detail, the developers and
6 their acousticians could calculate both the dBA and the
7 dBC values. And, we would know whether or not that
8 project was likely to be a audible noise problem by
9 measuring it, comparing it to 35 dBA, or an inaudible
10 low frequency problem by comparing it to the 50 dBC.

11 Q. Do we have data that you've seen in this docket that
12 identifies a dBC level for Antrim?

13 A. No. They didn't do a model. They only did a very
14 simple A-weighted model. Although there was a octave
15 band data that would have allowed them to have done a
16 detailed frequency analysis model, they only did the
17 model with the assumption of using the 107 dBA, and did
18 not use the octave band data. So, we have no idea of
19 how the low frequencies would spread through the
20 community.

21 Q. Did you make a recommendation that there be a
22 C-weighted study done?

23 A. No, I did not.

24 Q. Do you know of any wind projects that have been

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1 permitted with a dBC level imposed?

2 A. Yes.

3 Q. Can you give me an example?

4 A. Germany has a limit of 35 dBC in quiet rural areas, and
5 there's projects all over Germany. In Europe -- in the
6 United States, we don't really look at anything other
7 than dBA. Because the EPA disbanded its Office of
8 Noise Abatement & Control in 1980, and we've had no
9 real progress. In Europe, partly because of density of
10 population, there's been a lot of advances in the last
11 40 years, and much of those have been focusing on how
12 low frequency noise affects people. And, in places
13 like Germany and a lot of the -- France, *etcetera*, we
14 see dBC criteria. There are also dBC criteria that
15 have been imposed by some townships and counties. And,
16 we see the models then showing, for example, in
17 Pennsylvania, there is a ridge mounted project, of
18 where the dBA levels look very compatible. But the dBC
19 contour maps show that the sound spread out over the
20 whole community. And, so, we know that it's been done,
21 but it's done less frequently here in the United States
22 than over in Europe.

23 Q. Do you know if the U.S. -- is it EPA, I'm not sure who
24 set them, the U.S. guidelines on -- or the WHO

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1 guidelines on wind facilities include a dBC level?

2 A. Unfortunately, neither the U.S. EPA or WHO have
3 specifically issued guidelines for wind turbines. They
4 have issued guidelines that are broad, and they have
5 statements in them that said "if the dBC level is more
6 than 10 decibels higher than the dBA level, then
7 there's a reason to be concerned about low frequency
8 noise and health impacts." But they have never become
9 specific to wind turbine noise.

10 In the U.S., the EPA, unfortunately, has
11 no one left in it that has any noise experience. That
12 when the Office of Noise Abatement & Control was
13 disbanded in 1980, we basically -- the federal
14 government basically stepped away from noise and made
15 it a state issue. So, we have some states, Oregon, for
16 example, has statewide standards; New York has
17 statewide standards; Maine has statewide standards;
18 Massachusetts does. But, for the majority of states in
19 this country, every township and county is on its own.

20 Q. Thank you.

21 A. Yes. Thank you.

22 Q. Can you describe one other matter? You said that the
23 focus should not be on the Leq levels. Why not?

24 A. Because, well, Leq is, in a quiet environment -- well,

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1 let me say it this way. If I take one hour and do a
2 measurement there, and during that one hour the sound
3 level is 25 decibels throughout the -- from the
4 background sound. And, a single car comes down the
5 highway, raising the sound level to 60 dBA, for only
6 one minute out of that one hour. The logical thing to
7 conclude is that the average over that hour would be
8 somewhere down near 25. But, because of the way
9 decibels work and logarithmic math works, the Leq, or
10 the average, would actually be somewhere in the high
11 40s, if not the low 50s, depending upon what percentage
12 of the time that car was present, from one minute to a
13 minute and a half or so, whereas the L90 will always be
14 25. So, when you're in a quiet environment, a few
15 noisy things happening can move -- can shift that Leq
16 value into a very high range, that is not
17 representative of 59 minutes out of the hour. And, so,
18 this is why, even George Hessler, who is very much a
19 pro-wind acoustician, has recommended that, when you're
20 doing testing in quiet rural environments, the
21 appropriate criteria is L90, because of the sensitivity
22 of Leq to short duration high-noise events.

23 Q. It's funny, it seems to me, in other proceedings, we've
24 heard the opposite. That, in a facility that processes

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1 natural gas or something, I've forgotten now what it
2 was, people said "we don't care what the average is, we
3 don't care what the long-term levels are, we care
4 about, when there's a high-pitch noise, that ought to
5 be measured, and that's more important to us than the
6 average numbers might be." Does that -- how do you
7 square those two thoughts?

8 A. Actually, it's a good example, and it's because we're
9 looking at two different types of noise sources. The
10 background sound level, which is the base against which
11 we judge the noisiness of some second noise, in other
12 words, when a -- let's say, at that gas power station,
13 there's a blow-off event. And, suddenly, the noise
14 goes from 25 decibels up to 100 dB. That's going to
15 cause a complaint. But we need to know that the
16 background was 25.

17 With wind turbines, because the noise is
18 relatively constant, the Leq predicted by the model,
19 with adjustments for the difference between modeling
20 and measurements, is a good way to represent the
21 potential noise that will come into the community, but
22 you want to compare that not to the Leq background, but
23 to the L90 background. Our ears, our auditory system
24 uses the tiny brief moments between words when we're

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1 speaking. I mean, it can detect those tiny -- the
2 little intervals between the syllables in my voice.
3 The auditory system can pick those out, and that's how
4 we define or process words into things that we
5 understand. And, that's the same way we represent
6 loudness or noisiness. We don't compare the noisiness
7 of a wind turbine to the barking dog that our neighbor
8 had. We compare it to the quiet when the barking dog
9 wasn't there. So, the background noise needs to be the
10 L90, which represents the quiet times between sounds.
11 And, the model needs to represent the average, plus
12 some adjustment for how the model may underestimate, as
13 the way to assess its potential for being compatible.

14 Q. All right. Let me ask you, just to be sure I follow
15 it, what your recommendation is in this case. Because
16 you've got a lot of testimony, a lot of studies, but I
17 didn't find very clear recommendations. So, what is
18 your -- what is your ultimate recommendation to the
19 Site Evaluation Committee for this Project?

20 A. If I was to put it in a nutshell, I would say the level
21 -- the A-weighted level should be 35 dBA, and the
22 C-weighted level should be 50 dBC. However, there's a
23 paper that I submitted that was done by two of my
24 colleagues in Australia. And, let me see if I can pick

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1 that up here. Oh, goodness. I've got to go back to
2 New Hampshire, Antrim, exhibits. I believe it was an
3 NB Exhibit, by Thorne, and just let me check this out.

4 MR. BLOCK: Might it be NB-54?

5 WITNESS JAMES: It might be. It might
6 also be NB-22, and that's why I'm checking here to see if
7 that's the one that gives -- they basically took the work
8 that George and I had done, and they updated it for what
9 is now known. Yes, it's, I believe, on -- NB-22 would be
10 a good reference for you to use. And, that gives you a
11 review of noise criteria in Australia, the Netherlands,
12 United Kingdom, here in the United States, France,
13 Denmark, to balance your assessment. And, then, what was
14 the other suggestion? NB?

15 MR. BLOCK: Fifty-four.

16 WITNESS JAMES: That's another good
17 reference by Bob Thorne. Bob is an expert in low
18 frequency noise, and has done a lot of work both in New
19 Zealand and Australia. This is an excellent reference.
20 It's a little bit longer. But it's an excellent reference
21 into the kind of things that I was talking about. Wind --
22 like he points out, "wind farms are unique sound sources
23 and exhibit special audible and inaudible
24 characteristics", and then he goes on to describe why you

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1 have to have certain types of measurements to address
2 those issues.

3 BY CHAIRMAN IGNATIUS:

4 Q. Did your testimony, I may have asked you this already,
5 and I apologize, did your testimony make a
6 recommendation, in any of the prefiled testimony, make
7 a recommendation of a dBC level?

8 A. I don't -- I don't believe I did.

9 CHAIRMAN IGNATIUS: All right. Thank
10 you. I appreciate your time today. And, I'm sure it's
11 kind of hard to be talking into a black box. So, thanks
12 for sticking with us.

13 WITNESS JAMES: I've been talking to my
14 computer screen all afternoon, and my wife understands
15 that because I do it all the time, but I'm talking to
16 myself.

17 CHAIRMAN IGNATIUS: And, it sounds like
18 you're -- yes. It's one step away from being a little bit
19 nuts. But thanks a lot.

20 WITNESS JAMES: That's right. Well, I
21 want to thank everyone for accommodating this
22 arrangement --

23 MS. BAILEY: We're not finished yet.

24 WITNESS JAMES: Oh. Okay.

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1 CHAIRMAN IGNATIUS: Yes. Nice try.

2 MS. BAILEY: Nice try. Mr. Block will
3 be the last person --

4 WITNESS JAMES: I was running. I was
5 running.

6 MS. BAILEY: Mr. Block will be the last
7 person to ask you questions. He gets to ask the last
8 round.

9 WITNESS JAMES: Okay.

10 MS. BAILEY: But I have a couple, and I
11 think the Committee attorney has a couple questions.
12 Okay. Oh. And, Dr. Boisvert has a question or some
13 questions for you.

14 MR. BOISVERT: Very briefly.

15 BY MR. BOISVERT:

16 Q. You mentioned some recommended A-weighted levels, and a
17 low hertz and so forth. That's like speed limits on
18 the highway. When they're violated, what do you
19 recommend the consequences be? Setting a recommended
20 level is one thing, and relatively easy to do. How
21 would you operationalize consequences?

22 A. I'm going to use -- I'm going to use the highway
23 example, and it's because it's got a lot of things. We
24 set a speed limit on a highway based upon our

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1 understanding of what is safe. We enforce it not with
2 an average level, but with an exceedance that the
3 police officer, with a radar gun, catches you over the
4 limit, you're over the limit. There's no argument
5 about long-term averages.

6 Compliance needs to be looked at the
7 same I way with wind turbines. If your limit is
8 exceeded, then they're out of compliance. Different
9 communities have approached this differently. I have
10 one community here in Michigan where there's a fight
11 between the township that will have the wind turbines
12 and the county. The county wants the wind turbines;
13 the township doesn't. So, the township has passed a --
14 what's called a "police power ordinance" that license
15 each turbine individually, with a provision that, if
16 the turbine exceeds the noise limits, that it is shut
17 down until it can be corrected. This is probably the
18 tightest penalty that I've seen.

19 I also have clients who are in
20 communities where we know, even the developer admits
21 that the criteria are being exceeded, but no one is
22 willing to take the step of saying "the turbines need
23 to be shut down", or mitigated. Because, I mean --
24 and, in Hardscrabble, the one I was referring to

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1 earlier where the lawsuit is against the consultants,
2 as well as the developers, Iberdrola has been trying
3 things like new quiet blade designs, modifying the
4 sound levels of -- to design changes. At Vinalhaven,
5 where we had three wind turbines, the State of Maine
6 required that two of the three turbines be operating at
7 what's called "noise-reduced mode" at night. And, this
8 an option for the turbines in Antrim. If it was found
9 that the turbines were only, let's say, two to
10 three decibels over the limit, there are operational
11 changes that basically feather the blades, which
12 reduces a little bit of the electricity extracted from
13 the wind, but it also has a significant impact on the
14 noise. So, there are some mitigation methods.

15 But the real thing comes down to, that's
16 punitive to the developer, and it's also, you know,
17 call it "hard" for the political situation. Who's
18 going to sue the developer? It's a hard thing to do.
19 So, the best thing is to avoid those problems by making
20 careful decisions at the time we're getting permits.
21 If the project looks like it's got enough leeway, that
22 it's in line, then it should be a go. If it looks like
23 it's going to be questionable, it's probably better to
24 tell them "no" and have them find another place which

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1 is better suited for it.

2 MR. BOISVERT: Okay.

3 MS. BAILEY: Okay. Mr. James, it's me,
4 Kate Bailey. You might recognize my voice by now.

5 WITNESS JAMES: Okay. Yes.

6 MS. BAILEY: I don't have too many
7 questions, but I have a couple of follow-up questions
8 mostly.

9 BY MS. BAILEY:

10 Q. Can you tell what sounds a busy interstate highway
11 makes? What level of sound a busy interstate highway
12 makes, if you're maybe a block away?

13 A. About 70 decibels.

14 Q. So, that's louder than these turbines, if the threshold
15 is 50?

16 A. If it's got a lot of truck noise on it, yes.

17 Q. Okay.

18 A. And, that's why we see noise barriers going up in those
19 areas.

20 Q. Uh-huh. And, are the noise barriers generally built in
21 more highly populated areas? Well, I guess that's
22 where the interstates are built, right?

23 A. Yeah. But I have actually seen them when you have
24 subdivisions. In fact, there's two ways of doing it.

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1 One is, if the subdivision comes in after the highway,
2 then Housing, was it HUD, requires that a berm be built
3 to protect the houses. If the highway is coming in
4 afterwards, then oftentimes a noise barrier is
5 installed. We're seeing them more and more in areas
6 that are urban.

7 Q. Okay. Thank you. When you were talking about
8 measuring background noise, you said the most
9 problematic of the three things that you would exclude
10 is the wind that moves over the microphone diagram, do
11 you remember that?

12 A. Yes.

13 Q. Well, yesterday Mr. Tocci testified on that point, and
14 he said that "we really didn't need to worry about that
15 at all, because, when you're measuring background
16 noise, you're trying to measure the very least amount
17 of noise. And, so, that would happen when there was no
18 wind."

19 A. To a certain extent, he's correct. However, there's
20 been recent data, and I believe that Mr. O'Neal is on
21 this Committee. All of this commotion about low
22 frequency noise and how to measure it, has generated
23 the interest on the part of the Acoustical Society of
24 America, they have a new standard on how to measure low

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1 frequency noise. One of the first tasks they gave
2 themselves was to find out how much pseudo-noise, how
3 much of the self-generated noise is produced from the
4 different types of wind that we would get and the
5 different types of wind screens available. And, the
6 results were very shocking.

7 What that -- what those tests
8 demonstrated is that, if there is any movement of air
9 above about one meter per second, which is only about a
10 -- I mean, it's a light enough breeze that it isn't
11 going to chase the flies off you if you're sunbathing.
12 That if we begin to get contamination of the low
13 frequencies, and, by two meters per second, which again
14 is a very mild breeze, under five miles an hour, it's
15 actually becoming the same level as what we would
16 expect to get for a background sound level reading in a
17 quiet area.

18 When Mr. Kamperman and I prepared our
19 paper, we put in an appendix on how to measure
20 background sound. And, what we said in there is that
21 background sounds need to be measured with a wind
22 measuring instrument near the microphone, about 20 feet
23 away. We don't want it so close that the microphone
24 picks up the noise of the spinning cups, but close

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1 enough that we can verify that the wind speed never
2 goes over two meters per second during our test. And,
3 it's the only way to be sure that what you're measuring
4 is the real sound in the environment, and not
5 contamination from air moving across a diaphragm.

6 Q. In this -- in all the discussions we've had so far, my
7 understanding was that we were measuring the background
8 noise, so that we knew how much the total noise should
9 be with the wind -- the total audible noise should be
10 when the wind turbines were operating. So, I didn't
11 understand we were talking about background noise with
12 respect to low frequency, which is inaudible, correct?

13 A. Well, it is. But, if there's enough low frequency
14 noise, but when -- since the measurement, the
15 background noise measurement, being A-weighted, it is
16 less sensitive to that artifact. But, when you begin
17 to measure dBC, if you're going to measure the dBC
18 background, then that becomes more of a problem.

19 Q. Okay. I get that.

20 A. But, in general, what we have found is that quiet rural
21 environments are so quiet that it is almost -- it takes
22 a very carefully controlled test to be sure that what
23 you're measuring is those quiet levels, and not an
24 artifact of instrumentation noise, microphone failure,

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1 wind screen failure, or some other technical -- we're
2 right down at the bottom of where instruments can work.

3 Q. Okay. All right. Thanks. One point that you were
4 making, when you were describing Mars Hill, you said
5 there was a noisy side of the ridge and there was a
6 quiet side of the ridge, and I think you said the quiet
7 side was near the Canadian border, because there wasn't
8 a lot of activity there?

9 A. Yes.

10 Q. Is that what you meant by "noisy side"? Is it human
11 activity or --

12 A. Yes.

13 Q. -- or does it have to do with the sound that propagates
14 from the project?

15 A. It has to do with where the sound -- basically, on what
16 I call the "quiet side", homes aren't right up against
17 the base of the ridge, because there's more distance
18 for them to scatter. They actually are farther away
19 from the ridge on that side. And, so, the people on
20 that side have less wind turbine noise than the people
21 who are crammed into the little 4,500-foot space
22 between the ridge and the Canadian border. So, it's
23 not necessarily that the wind turbines are noisier on
24 one side or the other. It's where the homes are on one

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1 side versus the other side.

2 Q. Okay. Can we look at AWE -- I think it's AWE Exhibit
3 3. It's the sound report by Mr. O'Neal. And, I'm
4 thinking about the diagram that shows the ridge, with
5 the turbines and all the houses, and the dB --
6 predicted dB measurements. Do you know which it is?

7 A. Yes. I've got AW 3, Application, Volume 3. But which
8 specific --

9 Q. All right. Let me find it. Yes.

10 A. Twenty-five? Okay.

11 Q. You mean "Appendix 25"?

12 A. Yes. There's one there that says "Noise Report".

13 CHAIRMAN IGNATIUS: Let's go off the
14 record for all this muttering.

15 (Brief off-the-record discussion
16 ensued.)

17 BY MS. BAILEY:

18 Q. It's AWE 3, Appendix 13A. It's Mr. O'Neal's Noise
19 Report.

20 A. Okay. I'm looking at a contour map. Is that it?

21 Q. Yes. And, let me get to it.

22 A. See if there's a figure number on it that I can
23 confirm. It's "Figure 7-1 Model Worst-Case Sound
24 Levels".

[WITNESS: James]

1 MS. GEIGER: Yes.

2 BY MS. BAILEY:

3 Q. I'm sorry. Just give me a second. Oh, I've got it.
4 I've got it. It's Page 28 in mine. So, electronically
5 it's Page 28. Let me see what the figure number is.
6 Figure 7-1.

7 A. Okay. I have it.

8 Q. Okay. Is there a noisy side of this ridge?

9 A. Not in the sense of "one side's more noisy". But there
10 is a side where, you look at the north side of the
11 ridge, northwest, north-northwest, north-northeast,
12 where we see the bulk of the homes. And, that would be
13 the area where the noise would have the greatest
14 impact, which is what I was referring to in Mars Hill.

15 Q. Oh. So, "noisy side" means where it has the most
16 impact? Where the noise has the most impact?

17 A. Where the people are. Yeah, where the people are.

18 Q. Oh. Okay. All right. Noise perception?

19 A. Yes.

20 Q. Okay. Okay. The point you made about "sound traveling
21 on water". Do you remember that?

22 A. Yes.

23 Q. You said, you know, "sometimes you're on one side of
24 the lake, and you can hear people on the other side."

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1 How far away from the turbines would the sound not be
2 heard when it first hits the water?

3 A. I don't know if I could -- I don't know if I could tell
4 you that from here. I know that there's been studies
5 done of offshore wind turbines, where the initial
6 assumption was that two miles would be enough to make
7 them inaudible on land. But, then, they received
8 complaints from people living along the coast. The way
9 sound behaves over water, particularly in very quiet
10 areas, isn't modeled very well with current models. In
11 fact, the ISO 9613 model specifically states that it
12 cannot be used for propagation of sound over water.
13 The same may be true if it was ice, for example, or
14 concrete probably would be the same.

15 Q. Okay. Can we look --

16 A. It's just too reflective.

17 Q. Can we look back at Figure 7-2?

18 A. 7-2?

19 Q. The one that we were just on. I'm sorry, 7-1?

20 A. Yes. Figure 7-1?

21 Q. 7-1, yes.

22 A. Yes.

23 Q. And, do you see Gregg Lake in the bottom right-hand
24 corner, so that would be the southeast area?

[WITNESS: James]

1 A. Yes. Yes, I do.

2 Q. And, it begins at the 35 dBA mark. So, part of it is
3 in the 35 range and part of it is beyond the 30 dBA
4 range?

5 A. Yes. Yes.

6 Q. So, do you think that people will hear the wind, the
7 sound?

8 A. Yes, I would -- I mean, if I used my simple adjustment
9 of plus five, the purple line that's just west of the
10 lake would be adjusted to be 40.

11 Q. Oh. Okay.

12 A. So, and the light pink line would be adjusted, so it
13 would be 35. And, with an ambient or with a background
14 sound level of 25, that's ten decibels above it, you
15 would hear it. It would not -- it would not be
16 dominating the environment. Dominating the environment
17 would be much closer to like around the blue line.

18 Q. Okay.

19 A. Where the sound there would -- it would stand out as
20 the dominant sound. I mean, for the people that live
21 along the -- the homes there to the northwest and
22 northeast, the turbines on the top of that ridge would
23 sound like a busy highway. I mean, when I have been in
24 ridge mounted turbine areas and listened to them at

[WITNESS: James]

1 night, it just sounds like a very busy highway on top
2 of the ridge.

3 Q. On top of the ridge?

4 A. Uh-huh.

5 Q. You're standing on top of the ridge?

6 A. No, no. I'd be down where the homes are, around the
7 little blue squares, --

8 Q. Oh. Okay.

9 A. -- to the northwest. Instead of -- instead of the
10 ridge being an area that's silent, it would sound like
11 there would be a highway up there, or maybe "an airport
12 in the distance" might be another way to describe it.

13 MS. BAILEY: Okay. Thank you. I think
14 that's all I have. Thank you very much. I really
15 appreciate it. Mr. --

16 WITNESS JAMES: Well, thank you.

17 MS. BAILEY: Mr. Iacopino.

18 MR. IACOPINO: Thank you. Good evening,
19 Mr. James. My name is Mike Iacopino. I'm Counsel to the
20 Committee.

21 BY MR. IACOPINO:

22 Q. First question I have for you, you cited to Chairman
23 Ignatius two of your exhibits to consider when
24 considering what type of limits to place on sound,

[WITNESS: James]

1 should a certificate be granted in this case. The
2 first one was NB-22, which is an article by Shepherd,
3 Hanning, and Thorne. Where was this article published?

4 A. I'm pulling it up now. That was published in --

5 Q. I couldn't tell from the exhibit.

6 A. Yes, it's kind of hard. It's a journal in Australia.

7 It's a peer-reviewed journal in Australia.

8 Q. Do you know the name of the journal?

9 A. No, but I could get that if you'd like.

10 Q. That would be good, if you could. Just let Mr. Block
11 know when you can get it, okay?

12 A. Okay.

13 Q. The second one was NB-54 -- I'm sorry. The second
14 reference you gave to her was your Exhibit NB-54, which
15 is from the Bulletin of Science, Technology & -- is
16 that "Sound"?

17 A. "Society", "& Society".

18 Q. Okay.

19 A. And, that's a peer-reviewed paper, too.

20 Q. Thank you. That was my question. You also, during the
21 cross-examination by Mr. Patch, mentioned, during the
22 discussion of "acclimation", you mentioned or you told
23 him about a German study?

24 A. It was a British study.

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[WITNESS: James]

1 Q. A British study. Do you have a citation for that?

2 A. I would have to look that up. It's been a while since
3 I referenced it.

4 Q. Could you do that and provide that information to Mr.
5 Block please.

6 A. Okay. "Acclimation". Okay, that's B-e-r-r -- I will
7 do that. So, it would be the NB-27 and the acclimation
8 study.

9 Q. No, I think it's NB-22 -- I'm sorry, NB-22 you answered
10 me. NB-54.

11 A. Okay.

12 MR. BLOCK: No, other way around.

13 MR. IACOPINO: Yes, I'm sorry. Now, I'm
14 going batty.

15 WITNESS JAMES: Yeah, 54 was the
16 Bulletin of Society, yes, Technology, Science & Society,
17 whatever.

18 MR. IACOPINO: Okay.

19 BY MR. IACOPINO:

20 Q. The next question I have, and I don't know if you or
21 even anybody in the room knows this, do you know how
22 many utility scale wind projects have been permitted --
23 permitted in the United States?

24 A. Oh, it's published on the AWEA site. I haven't looked

[WITNESS: James]

1 at it recently.

2 Q. Okay.

3 A. But, literally, in the past two years, it's exploded.

4 So, --

5 Q. Okay.

6 A. But several years ago I think we had like 7,000 to

7 13,000 wind turbines in the country.

8 Q. All right. Do you --

9 A. Now, I would say it's probably triple that.

10 Q. Okay. Do you know if any wind project in the United
11 States has been permitted with a sound limit of 35 dBA,
12 as you recommend?

13 A. I don't know if those were the criteria. But, in some
14 of my studies in Iowa, and other large open area
15 farming communities, those criteria would be met.

16 Q. Now, I didn't ask if they would be met. I asked if any
17 had been permitted with that limit?

18 A. Yes, I wouldn't know that. I would not know that, no.

19 Q. Okay. And, you --

20 A. I would like to. I would like to, but I don't.

21 Q. Okay. And, Chairman Ignatius asked you pretty much
22 that same question about your dBC limit, the low
23 frequency limits. She asked if you were aware of any
24 wind farm -- well, any permitting that's done. And,

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[WITNESS: James]

1 you told her about some in Europe, where dBC level
2 limits were placed on projects. And, I got confused
3 about what you said about in the United States. You
4 mentioned something in Pennsylvania?

5 A. There are some communities that have established dBC
6 limits. One in Pennsylvania did.

7 Q. Do you know which county that is in Pennsylvania?

8 A. I would have to look it up.

9 Q. Could you do that and provide that information to Mr.
10 Block please?

11 A. Okay.

12 Q. Other than that county in Pennsylvania, is there any
13 other wind facility that you're aware that was
14 permitted with a dBC level limit in the United States?

15 A. I would have to -- I would have to check. I don't
16 remember any offhand. I know that that's more of a
17 European issue. That Denmark just recently instituted
18 low frequency criteria.

19 Q. I know. You told us that.

20 A. And, Germany, etcetera. But here in the States we
21 haven't done that yet.

22 Q. Thank you. Exhibit NB-10 is your paper with a
23 Mr. Bray?

24 A. Yes.

[WITNESS: James]

1 Q. And, it's my understanding that that paper was
2 presented at NOISE-CON 2011?

3 A. Yes.

4 Q. And, was that paper peer-reviewed?

5 A. This is a professional conference. The paper was an
6 invited paper and peer-reviewed only by the Session
7 Chair.

8 Q. Okay. Have you attempted to publish it in a
9 peer-reviewed journal?

10 A. We have not attempted to publish it, no. Mr. Bray has
11 referenced this paper and some of the data from it in
12 the Kansas City Acoustical Society meeting this year.
13 But we actually are looking for a chance to get back to
14 this and take more data, so we can round out what we
15 found. And, at that point -- at that point, it would
16 be something we'd want to publish.

17 Q. But, as an academic matter, that would not be
18 considered to be a peer-reviewed paper at this point,
19 correct?

20 A. It's peer-reviewed only in the sense that it's a
21 professional conference, and the Session Chair, and
22 sometimes someone assigned to the Session Chair, would
23 have read it and peer-reviewed it prior to
24 presentation.

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[WITNESS: James]

1 Q. Bear with me for one minute. Oh, by the way, have you
2 ever conducted -- well, from your testimony, I assume
3 you have conducted post-construction sound studies,
4 correct?

5 A. Yes. Usually as follow-up to complaints.

6 Q. Okay. Now, have you --

7 A. In other words, it's not for the community, the entire
8 community. It's for those people in the community who
9 have a complaint.

10 Q. Okay. Now, has your work in that regard ever been
11 presented to a board such as this for the purposes of
12 determining compliance with a permit or an ordinance or
13 anything like that?

14 A. No. And, it's because a lot of times this data is
15 taken for lawsuits, which are still in progress, or is
16 settled, with the requirement that all the documents be
17 sealed.

18 Q. Okay. So, I guess my point is, it's not -- it's not
19 the type of matter that's readily available to review
20 then?

21 A. No, it isn't, unfortunately.

22 Q. Okay. Thank you. What I would like to do is review
23 with you, you testified in cross-examination that,
24 basically, your practice or your business has, I think,

[WITNESS: James]

1 three different aspects you told us. One is that you
2 get calls when there's complaints. Number two, you
3 sometimes do work with respect to municipalities and
4 government. And, number three, you sometimes provide
5 testimony to government agencies. Am I correct in that
6 understanding?

7 A. Yes.

8 Q. And, you attached to your NB-1, which is your
9 July 30th, 2012 testimony, a "Biographical Sketch",
10 correct?

11 A. Yes.

12 Q. And, can you pull that up in front of you?

13 A. Yes.

14 Q. And, I'm particularly interested in talking about the
15 "Summary of Court and Administrative Agency Cases".

16 A. Yes. I'm looking for that here. It's --

17 Q. It's Page 19 electronically. And, for the record, this
18 is NB-1.

19 A. Okay. Page 19.

20 Q. In the electronic version.

21 A. Okay.

22 Q. Okay. Now, I note you tried to give -- actually, you
23 give a pretty good description of what you did on the
24 topic for each of these court cases or administrative

[WITNESS: James]

1 agency cases that you've been involved with. And, the
2 majority of them appear to contain language indicating
3 that you essentially provided a rebuttal of -- oral
4 testimony that was involved in rebutting reports
5 prepared by a developer, correct?

6 A. That is correct.

7 Q. Okay. And, it's fair to say that the majority of what
8 you've reported here is that type of work, correct?

9 A. That is correct.

10 Q. Okay. Some of these aren't as clear, though. For
11 instance, if we look at the Huron County, Michigan
12 Zoning Board, in April of 2007, it says you gave "Oral
13 testimony at a hearing on a Permit Application." Was
14 that in opposition to a wind facility that was
15 attempting to be permitted?

16 A. Yes, it was. It was in opposition to what was --
17 what's called "Michigan Wind I".

18 Q. Okay.

19 A. And, I applied a procedure that is used not just for
20 wind turbines, but for any type of noise source. That
21 basically comes -- you come to a conclusion as to
22 whether it's likely to generate complaints or lawsuits.
23 And, my presentation to the Zoning Board was that, if
24 they permitted the project, it would result in

[WITNESS: James]

1 complaints and lawsuits. And, since that time, the
2 county has focused on this project because of
3 complaints and lawsuits.

4 Q. Okay. But my focus is -- I'm just trying to understand
5 what -- where you came down on the issue on these ones
6 that it's not real clear. The second, the "Calumet
7 County Board of Supervisors", in Wisconsin, was this
8 also testimony relating to the granting of a license or
9 is it more like legislative testimony about what should
10 be set as standards or something?

11 A. This was about setting the standard for what is
12 required in a license.

13 Q. Okay.

14 A. And, that was then adopted by, I think, six other
15 counties in Wisconsin.

16 Q. Okay. Further down the page, in Ontario, Canada, in
17 2009, July 24th, you indicate that you provided
18 "Comments on behalf of the Association to Protect
19 Prince Edward County." Again, was this -- I break
20 these things down this way. There are individual
21 projects that seek to be permitted, where you might be
22 testifying on one side of the issue or the other, and
23 then there are legislative types of hearings, where you
24 might be testifying about what a proper standard or a

[WITNESS: James]

1 proper law might be. And, that's what I'm just getting
2 at with these. This one in Ontario, in July 2009,
3 where does that fall?

4 A. This is -- at that time, Ontario was looking at how to
5 implement the Green Energy Act.

6 Q. Okay. So, it was a legislative thing?

7 A. Yes.

8 Q. Okay.

9 A. And, what the report was, was a study of four different
10 wind projects where people had left their homes. Where
11 I took data in their homes to demonstrate that the
12 sound levels would -- that what was being proposed for
13 the Green Energy Act would not have prevented the
14 problems in those homes.

15 Q. Okay. And, the three entries underneath that, "Urbana,
16 Ohio", "Glacier Hills, Wisconsin", "Roxbury Pond", I
17 take it those were oppositions to individual permits,
18 is that correct?

19 A. Yes, they were. Yes, they were.

20 Q. Okay. The "Georgia Mountain Wind", "Hearing before
21 Public Services Commission", I take it that was a
22 permit as well?

23 A. Yes. Yes.

24 Q. And, I notice, on some of these, you just put

[WITNESS: James]

1 "hearing", you don't put that you testified. Did you
2 testify at these proceedings?

3 A. Yes.

4 Q. Okay.

5 A. Yes. I just, you know.

6 Q. Well, it just -- it seems like you changed your --

7 A. Yes.

8 Q. -- methodology. Okay. And, in my review of this, I
9 didn't see anything that indicated anywhere that you
10 had been on any -- that you ever testified on anything
11 except to oppose a wind power facility, at least in the
12 ones that you've listed here, correct?

13 A. That's correct.

14 Q. Okay.

15 A. I am traditionally -- I am not what the wind industry
16 wants as a consultant.

17 Q. Okay.

18 A. I'd love to have them call me, but they don't.

19 Q. In your cross-examination, you made the statement that,
20 if I got it correctly, "even Ben Hoen says that every
21 development should have a property value guarantee"?

22 A. That's right.

23 Q. And, when you said that, you're talking about Ben Hoen
24 from the Berkeley National Laboratory?

[WITNESS: James]

1 A. Yes. Yes.

2 Q. Okay.

3 A. Yes.

4 Q. And, where did Ben Hoen publish that?

5 A. I will get you that reference. Okay.

6 Q. Sir, I'm sorry, I was waiting for an answer. I don't
7 know --

8 A. Oh. I said I will get you that information.

9 Q. Okay. Do you understand that to be something that was
10 published by Ben Hoen?

11 A. It was either a statement he made in a hearing or
12 something that he has published. I don't -- I'm not
13 into the property value aspects of this. But I
14 normally find myself working with people who are
15 realtors and appraisers. And, I know that's one of
16 their common statements in hearings. So, I'll get it
17 for you.

18 Q. You also testified about the Massachusetts Department
19 of Public Health study, which I believe was marked as
20 "AWE 9". It's in Mr. O'Neal's supplemental testimony,
21 as "Appendix RDO-6". And, you say that the -- the
22 study that that abstract is attached to was just a
23 "literature review", correct?

24 A. Yes.

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[WITNESS: James]

1 Q. Okay.

2 A. It was -- it was purely a literature review.

3 Q. Okay. You don't -- I take it you don't dispute the
4 conclusion of the literature review, based upon the
5 literature that existed at the time?

6 A. No. But what I do dispute is, by narrowly focusing it
7 on wind turbine, adverse health effects from wind
8 turbines, they ignored the numerous other references
9 for sick building syndrome and other forms of low
10 frequency noise syndrome.

11 Q. Okay. And, you also stated with respect to that that,
12 I think, is it Dr. Mills?

13 A. Yes. Dr. Dora Mills, yes.

14 Q. Okay. "Dr. Mills said that Dr. Pierpont didn't know
15 what she was talking about" or something to that
16 effect?

17 A. Oh, no. Dr. Mills -- when Dr. Nissenbaum and the Maine
18 Medical Association adopted their resolution asking for
19 a moratorium on wind turbine development in Maine, that
20 next morning Dr. Dora Mills was asked by the Governor
21 of Maine to prepare a rebuttal. Through the Freedom of
22 Information Act from my client's request, they received
23 e-mails from her indicating that her response to the
24 request was that she knew nothing about wind turbine

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1 noise. By that afternoon, however, she issued a
2 detailed and extensive rebuttal to the Maine Medical
3 Association's resolution.

4 Q. Okay. I misunderstood you then. You were saying that
5 "Dr. Mills said that she herself knew nothing about
6 wind power"?

7 A. That's right.

8 Q. Okay. I took it --

9 A. And, so, she basically --

10 Q. Okay.

11 A. Yes. Okay.

12 Q. You also referenced that there was new studies coming,
13 basically, and you've mentioned an Ontario study. Do
14 you have some kind of citation or way that we could
15 reference what that is?

16 A. Yes, I do. There was a -- I can present a paper on it,
17 and also a rebuttal or a public statement on how to --
18 how to make that process work better issued by Dr.
19 Carmen Krogh, who is one of the medical experts in
20 Ontario that was pushing for that study.

21 Q. Okay. Is the study completed?

22 A. No. It's going to be a four year study.

23 Q. Okay. So -- and, of course, you don't know what the
24 results of that study will be, correct?

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[WITNESS: James]

1 A. Well, I don't know what the study will ultimately
2 conclude, no. What we do know is that the reason this
3 study was initiated is that they -- in Ontario's
4 Ministry of Health and Health Canada are inundated with
5 complaints from people living near wind turbines. And,
6 they finally decided they were going to dedicate the
7 money to find out what the basis for these complaints
8 is.

9 Q. And, is that -- that suggestion that they're "inundated
10 with complaints", is that documented somewhere or is
11 there something from the Canadian --

12 A. Yes. Yes, I will send you that information.

13 Q. So, is there something from the Canadian government
14 that suggests that they are "inundated with
15 complaints"?

16 A. Well, the government was reluctant, but a Freedom of
17 Information Act request to Ontario identified that, of
18 the 2,700 turbines operating in Ontario, there were
19 over 1,000 complaints filed with the Ministry of
20 Environment, that the Ministry of Environment had not
21 followed up on.

22 Q. Okay. But it's not the Canadian government that has
23 said "they're inundated with complaints". That's your
24 interpretation. Am I correct in that?

[WITNESS: James]

1 A. Over a thousand -- yes. They have a thousand
2 complaints for 2,700 wind turbines.

3 MR. IACOPINO: Okay. I have no further
4 questions.

5 MS. BAILEY: Okay. Thanks. Mr. Block,
6 how much redirect do you think you have?

7 MR. BLOCK: Four or five questions.
8 Four or five questions only.

9 MS. BAILEY: Okay. All right. Steve,
10 you okay?

11 MR. PATNAUDE: Yes.

12 MS. BAILEY: All right. Let's go.
13 Thanks.

14 MR. ROTH: Hold on one second.
15 Typically, the proponent of the witness gets a moment to
16 confer with the witness, if he wants. And, I just don't
17 want you to miss that, if you wish for it.

18 MR. BLOCK: Mr. James, do you feel you
19 need a private conference? It would be up to you. I'm
20 okay.

21 WITNESS JAMES: I don't think so.

22 MR. BLOCK: All right.

23 WITNESS JAMES: I'm okay.

24 MR. ROTH: Okay.

[WITNESS: James]

1 MR. BLOCK: I just have a few questions.

2 **REDIRECT EXAMINATION**

3 BY MR. BLOCK:

4 Q. Are you aware of good neighbor agreements?

5 A. Yes, I am.

6 Q. Do good neighbor agreements require the parties to stay
7 quiet about noise issues?

8 A. Yes, they do.

9 Q. Is it possible there have been limited complaints in
10 Lempster, for instance, because of good neighbor
11 agreements?

12 A. If good neighbor agreements include the clause, yes,
13 then that would be a tremendous incentive for people
14 not to file complaints.

15 MR. PATCH: I just -- I don't remember
16 this coming up in cross or questions from the Committee.
17 So, I don't know that this is an appropriate line of
18 inquiry on redirect.

19 MS. LINOWES: Madam Chair, I believe
20 there are questions -- comments or questions specifically
21 from Mr. Patch having to do with Lempster having "no noise
22 complaints".

23 MR. PATCH: That's true. But there
24 wasn't any testimony about good neighbor agreements in

[WITNESS: James]

1 Lempster.

2 MS. BAILEY: I think it still goes to
3 the same subject. I'm sorry, I'm going to overrule the
4 objection. Go ahead.

5 BY MR. BLOCK:

6 Q. Next question. You were just commenting on the
7 Massachusetts wind turbine health study. In general,
8 do you have any comment on the fact that a study like
9 this was undertaken at all?

10 A. It was motivated by all of the complaints in
11 Massachusetts, from Falmouth and Fairfield, and other
12 communities with wind turbines. I believe the Board of
13 Health had requested that, Board of Health for one of
14 the counties had also requested such a study.

15 Q. All right. Are you familiar with Mr. Tocci's
16 recommendation of a level that is five dBA above
17 background?

18 A. Yes. I would agree with that.

19 Q. And, --

20 A. If background is defined as the L90 during the quietest
21 period when the turbines would be operating.

22 Q. All right. And, final question. Isn't it true that
23 several communities in Wisconsin or Maine, Caratunk
24 comes to mind, have adopted ordinances that impose dBC

[WITNESS: James]

1 limits on projects?

2 A. Yes, they have. I have worked with -- I have worked
3 with several of the communities.

4 Q. Do you know what any of those levels were offhand?

5 A. Typically, it would have been 50 dBC, or it might have
6 been scaled as the pre-existing dBC level, L90 plus 20,
7 or plus 15, depending on how the community -- how
8 restrictive the community wanted to be on low
9 frequency.

10 Q. Can you just explain something to me, one last question
11 here. The World Health Organization levels,
12 recommended levels for day and night to protect against
13 sleep problems. Can you explain that a little, just to
14 clarify?

15 A. Well, in the 1990s, the World Health Organization
16 issued a document called "Guidelines for Community
17 Noise", based upon -- and these were developed based
18 upon the current set of medical research on how people
19 respond to noise. In 2004, I believe, they received a
20 large grant from the European Union, which allowed them
21 to redo all the medical research. And, based upon the
22 medical research that was done for that purpose, they
23 issued a new set of guidelines in 2009. Dropping the
24 recommended outside level from 45 decibels to 40 dB or

[WITNESS: James]

1 lower, and retained the original 1990 requirement that,
2 if the dBC value exceeded the dBA value by more than
3 10 decibels, that more stringent requirements may be
4 necessary than 40 dBA outside the home at night.

5 Q. And, is this relevant to our situation here in Antrim?

6 A. It's one of the justifications for why a 35 dBA limit
7 outside a home is reasonable and in line with public
8 health documents.

9 MR. BLOCK: No further questions. I
10 thank you very much.

11 WITNESS JAMES: Okay.

12 MS. BAILEY: Okay, Mr. James. I thank
13 you very much for your testimony. This has been an
14 unusual use of technology, at least in this hearing room,
15 from my experience. And, I think it went very well. And,
16 I really appreciate how patient everyone in the room was
17 to make this work. Thank you.

18 WITNESS JAMES: I thank you. And, I
19 think it's a good way to save some foreign oil. So, thank
20 you.

21 MS. BAILEY: Great. Okay. We're going
22 to disconnect the conference call. Thank you.

23 WITNESS JAMES: I agree.

24 MS. BAILEY: Okay.

[WITNESS: James]

1 WITNESS JAMES: Have a good night.

2 MS. BAILEY: You, too. Okay. Why don't
3 we take -- okay. All right. Let's take a 15-minute
4 break.

5 (Recess taken at 5:25 p.m. and the
6 hearing resumed at 5:44 p.m.)

7 MS. BAILEY: Okay. We're back on the
8 record. And, we are going to take the testimony of Mr.
9 Jones. And, would the court reporter please swear him in.

10 (Whereupon **Geoffrey T. Jones** was duly
11 sworn by the Court Reporter.)

12 MS. BAILEY: And, Mr. Iacopino is going
13 to help get you started.

14 MR. IACOPINO: Do you have your
15 testimony there with you?

16 WITNESS JONES: Parts of it. I mean,
17 I've got it all on the computer.

18 MR. IACOPINO: Okay. All right.

19 WITNESS JONES: Which one? The original
20 petition?

21 MR. IACOPINO: Okay.

22 **GEOFFREY T. JONES, SWORN**

23 **DIRECT EXAMINATION**

24 BY MR. IACOPINO:

[WITNESS: Jones]

- 1 Q. So, Mr. Jones, please identify yourself for the record.
- 2 A. My name is Geoffrey Jones. I live in Stoddard, New
3 Hampshire.
- 4 Q. And, do you hold a public position in Stoddard?
- 5 A. Yes. I'm Chairman of the Stoddard Conservation
6 Commission.
- 7 Q. And, are you here today on behalf of the Stoddard
8 Conservation Commission?
- 9 A. Yes, I am.
- 10 Q. And, did you file prefiled testimony in this case on
11 July 30th, 2012, which has been marked as "SCC-2"?
- 12 A. Yes.
- 13 Q. Okay. And, is that testimony true and correct to the
14 best of your knowledge and belief?
- 15 A. Yes, it is.
- 16 Q. And, if you were asked the same questions today, as
17 contained in that testimony, would you answer them the
18 same way?
- 19 A. Yes.
- 20 Q. Okay. Did you file any supplemental testimony?
- 21 A. I did.
- 22 Q. Okay. And, do you know what date that was filed on?
- 23 A. There was, I think, some information submitted on
24 10/25/12. And, the original one was 04/28/12. And,

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[WITNESS: Jones]

1 then, the one I think you just referred to was
2 07/30/12.

3 Q. Okay. But let me back up. When you say "4" -- did you
4 say "04/28/12"?

5 A. Right.

6 Q. Okay, that was your Commission's motion to intervene,
7 correct?

8 A. Yes. Right. Yes.

9 Q. I'm talking about testimony, not anything that was
10 filed with the Committee. Other than the testimony
11 filed on July 30th, did you file any other testimony
12 with the Committee?

13 A. Yes, I did. There was a Selectmen's letter of support
14 on 10/05/12.

15 Q. Yes. But that letter is not your testimony.

16 A. Oh, not my testimony. All right. There was --

17 Q. I know that you filed some exhibits here at the final
18 pre-trial conference, correct?

19 A. I did.

20 Q. Okay. Now, after the filing of your testimony, there
21 has been supplemental testimony filed by other parties.
22 Did you have any testimony that you wanted to give in
23 rebuttal to that testimony?

24 A. Yes, I do.

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[WITNESS: Jones]

1 Q. Okay. Why don't you tell the Committee what it is.
2 What I would ask you to do, though, is specifically
3 identify the testimony that you are seeking to rebut,
4 so that we can all understand what it is.

5 A. Okay. Well, I don't know the exact date, but it has to
6 do with -- the first one has to do with the nighthawk
7 sightings. References made by the biologists, Dana
8 Valleau and Adam Gravel, and their reference to having
9 some sightings that they thought were migratory in
10 nature of the nighthawks they saw. And, myself and
11 some other folks were up on Tuttle Hill in July, I
12 think it was July 10th, 2012, and spent a day-long
13 traverse. And, on our descent from Tuttle Hill, when
14 we got down into the wetlands complex, just to the east
15 of it, we did hear some nighthawks. And, I was able to
16 record those birds in flight, and have a CD of those
17 recordings here that I would like to offer as an
18 exhibit, just for the record.

19 MS. BAILEY: Is there -- are there any
20 objections?

21 MS. GEIGER: I don't object. I just
22 would ask that the Committee give it the weight they deem
23 appropriate, since I'm -- I've been told these are
24 recordings, these are audio recordings. They're not

[WITNESS: Jones]

1 photographs.

2 WITNESS JONES: Right.

3 MS. GEIGER: I don't know what a
4 nighthawk sounds like. So, -- and I don't know if
5 Committee members do either. So, I guess I would just ask
6 that, if it is admitted, that it be given the weight that
7 the Committee believes appropriate.

8 MR. ROTH: And, I have no objection to
9 it. And, in response to Ms. Geiger's comments, I think
10 the witness has just testified that he knows what a
11 nighthawk sounds like, he made that recording, and that
12 those -- and the recording is of nighthawks. So, I'm not
13 sure how you detract from the weight based on Ms. Geiger's
14 lack of knowledge of what a nighthawk sounds like. But it
15 seems like the witness has demonstrated competence and has
16 testified to what it is. It is what it is.

17 MS. BAILEY: So noted.

18 WITNESS JONES: Thank you.

19 MS. BAILEY: Well, wait a second. We
20 have to give it an exhibit number.

21 MR. IACOPINO: Ms. Manzelli, were you
22 going to object?

23 MS. MANZELLI: No, I was not. But I
24 would like to know what the number of the exhibit will be.

[WITNESS: Jones]

1 Thank you.

2 MR. IACOPINO: Well, it's going to be
3 marked as the next Stoddard Conservation Commission
4 exhibit. Do you have it right there, Mr. Jones?

5 WITNESS JONES: The CD? Yes, I do.

6 MR. IACOPINO: And, I guess that would
7 be "SCC-7".

8 (The compact disc, as described, was
9 herewith marked as **Exhibit SCC-7**, but
10 subsequently corrected to be marked as
11 **SCC-9** for identification.)

12 (Witness Jones playing CD.)

13 MS. VON MERTENS: That's a nighthawk.

14 MR. ROTH: Mr. Jones, do you have any
15 way to play the CD?

16 WITNESS JAMES: I do.

17 FROM THE FLOOR: He just did.

18 WITNESS JONES: I just did.

19 MR. ROTH: Oh, I couldn't hear it.

20 MS. GEIGER: Could you swear the
21 nighthawk in please?

22 MR. ROTH: They're really small, aren't
23 they?

24 MR. LEVESQUE: Madam Chair?

[WITNESS: Jones]

1 MS. BAILEY: Who -- yes.

2 MR. LEVESQUE: Charlie Levesque here.

3 If this helps the Committee, I have an app, which is the
4 National Audubon App for Birds, and I just played the
5 common nighthawk, and there's a bunch of them on here. If
6 you want to reference that to what Mr. Jones uses, you're
7 welcome to use my phone.

8 MS. BAILEY: Okay. Thank you. I think
9 I heard it.

10 FROM THE FLOOR: Is that a free app?

11 WITNESS JONES: So, do you want to hear
12 it?

13 MS. BAILEY: Yes, please.

14 (Witness Jones playing the CD,
15 consisting of a bird call sounding like
16 "**peent**", "**peent**", "**peent**".)

17 WITNESS JONES: It's very distinct.

18 MS. MANZELLI: Excuse me. Just for the
19 record, I want us to be clear, I did find on my table
20 earlier --

21 MR. IACOPINO: I know, I got the wrong
22 number.

23 MS. MANZELLI: Okay. Thank you.

24 MR. IACOPINO: It's actually SCC-9, not

1 7.

2 (Compact disc corrected to be
3 **Exhibit SCC-9**, and not SCC-7.)

4 BY MR. IACOPINO:

5 Q. Okay. Did you have other rebuttal testimony?

6 A. Yes, I do. The other rebuttal that I would like to
7 offer has to do with the testimony on October 11th of
8 this year by wildlife biologists Dana Valleau and Adam
9 Gravel. Their remarks and assessment that this Antrim
10 Wind Energy industrial wind farm project will not
11 fragment the habitat of a 12,994 acre unfragmented
12 forest, because the project will occupy "a relatively
13 small slice within a much larger landscape." I'm a
14 Licensed Professional Forester and practiced in the
15 State of New Hampshire for over 30 years. I've
16 participated in hundreds of continuing education
17 workshops. I led the successful effort of the Forest
18 Society being a green certified/FSC certified
19 landowner, have been involved in sustainable forestry
20 issues. I had the privilege of serving on two
21 sustainable forestry guideline steering committees that
22 wrote the *Good Forestry in the Granite State*
23 publication, which is a guide for foresters,
24 landowners, and loggers on how to manage their

[WITNESS: Jones]

1 properties on a sustainable basis. And, from this
2 approximately four years of experience in working on
3 these steering committees, I had access to discussions
4 of a lot of detailed conversations about what
5 sustainable forestry is and what -- how you do it and
6 what some of the biggest threats to forestry are.

7 And, the general consensus, from
8 everything I've read and everything I've talk to with
9 other folks is that forest conversion, when you take
10 unfragmented forest habitats and you convert them to
11 non-forest use, that's the biggest cause of wildlife
12 habitat loss.

13 And, I think one thing that helps put
14 this whole conversation of fragmentation into
15 perspective, if you go to the Stoddard CC Exhibit 6a
16 [6b?], which is this photograph of the Earthlights,
17 United States lit up at night. I mean, you can see in
18 this photograph what fragmentation really is. There's
19 more white spaces than there are dark spaces. And, it
20 raises a whole host of questions about air quality,
21 water quality, bird migration, noise, wasted energy.
22 But the biggest thing that comes to mind for me is
23 forestland conversion, the amount of forestland that's
24 been lost. But the thing that attracts my eye on this

[WITNESS: Jones]

1 map is not so much the lights, as it is those little
2 dark places. And, you can see quite readily where Cape
3 Cod is, and the megalopolis surrounding Boston, and
4 extending into eastern or western Massachusetts and up
5 into Portland. But, as you go northwest of there, you
6 can see some little black spots. Well, these little
7 dark spots, if you look at Exhibit 4, Page 5, is large
8 unfragmented forestlands of southwestern New Hampshire.
9 The town I live in, Stoddard, has 63 percent of the
10 total land area permanently protected from development.
11 And, there's some great night skies in Stoddard. And,
12 in fact, it's one of the things that attracted Fred
13 Ward to come and live in Stoddard, New Hampshire,
14 because he's not only a meteorologist, but he's a
15 stargazer. And, he likes the dark skies of New
16 Hampshire, southwestern New Hampshire, in close
17 proximity to Boston. But it's these large unfragmented
18 forestland areas that are important to not only people,
19 but to wildlife.

20 Stoddard has a very large bear
21 population. And, I have neighbors in the community
22 that feed bears, even though they shouldn't. And, I've
23 had the opportunity to be at one place and witness 12
24 bears in one place at one time. And, while I had

[WITNESS: Jones]

1 reservations at first, I've been going back over the
2 years and have learned an awful lot about bears. But
3 one of the things that I did was to try to understand
4 why we have so many bears in Stoddard, is to bring up
5 this unfragmented forest layer map in and around
6 Stoddard. And, you can very clearly see where these
7 bears move on the greater landscape. And, much of
8 this, these lands that -- or areas that I've identified
9 on this Page 5 map have the acreages of these large
10 unfragmented forestland types. And, many of them are
11 protected. And, in fact, Tuttle Hill abuts
12 40,000 acres of contiguously protected forestland
13 that's under either conservation easement or owned by
14 conservation land trusts. And, it's interesting to
15 note that, of these 40,000 acres of land that have been
16 protected, it's required the activities of six land
17 trusts. Some are regional, like the Harris Center,
18 some are statewide, like the Forest Society, and others
19 are national in scope, like Trust for Public Lands and
20 the Nature Conservancy. And, also, we have New
21 Hampshire Audubon, which is a very active player in
22 this area as well. And, this land protection effort
23 has been going on for 30 plus years.

MS. BAILEY: Mr. Jones?

[WITNESS: Jones]

1 WITNESS JONES: Yes.

2 MS. BAILEY: Your voice carries
3 extremely well. Can you push the microphone back just a
4 little bit?

5 WITNESS JONES: I can. Sorry about
6 that.

7 MS. BAILEY: Well, that's okay. Now,
8 don't get lower, because then you'll have to move the
9 microphone closer.

10 **BY THE WITNESS:**

11 A. There are a whole host of maps that are in this Exhibit
12 4 that I hope the Committee has an opportunity to look
13 at, because it puts the Tuttle Hill area and the
14 unfragmented forest that this proposed wind site is in,
15 which is a 12,994 acre area, puts it in perspective
16 with the other large unfragmented forest types. But,
17 in some of the other maps, you can see, on Page 6,
18 there's a map that shows the conservation lands, which
19 I believe should be in red, superimposed on some of
20 these large unfragmented forest types. So, it helps to
21 put in perspective the conservation lands and these
22 large unfragmented forestland areas.

23 Now, I think something else that helps
24 to put this in perspective is the two photographs that

[WITNESS: Jones]

1 I introduced today, which I'm not sure what the exhibit
2 numbers are.

3 BY MR. IACOPINO:

4 Q. It would be 7 and 8.

5 A. Seven and eight? Well, the first one is a black and
6 white aerial photograph of the Lempster Mountain wind
7 turbine sites. And, you can see the red dots on the
8 map indicate where the existing tower sites are today.
9 But this is a 1998 aerial black and white photograph.
10 And, you can see that, just looking at this image, you
11 see more trees than you do roads and development. And,
12 this is pretty much a large unfragmented forest area,
13 very similar in size and scope and in topography to
14 what Tuttle Hill is.

15 Now, if you look at the second
16 photograph, which is a 2010 color aerial photograph,
17 you not only see the red tower -- the red tower sites,
18 but you also see the fragmentation that's been caused
19 by the roads that have been put in, that vary anywhere
20 between -- these cleared areas vary anywhere between
21 100 feet to 250 feet, from what I can gather in making
22 measurements on the computer, which is a pretty
23 accurate way of getting field measurements.

24 And, I'm going to tell you, I'll be

[WITNESS: Jones]

1 quite honest with you folks, I don't know of too many
2 natural resource professionals in New Hampshire that
3 would look at this industrial wind farm and say that
4 that has not fragmented the forest habitat.

5 Another way of looking at this, and
6 what's really important about the Tuttle Hill area, is
7 that the Wildlife Action Plan has identified the Tuttle
8 Hill surroundings as being core wildlife habitat.

9 Well, to make the analogy, our houses are core habitat
10 for us. And, you can imagine, I mean, we all go there
11 to live, to rest, to eat, to recover, and to start the
12 next day, to end the day. And, our core wildlife --
13 our core houses provide the same function that these
14 core wildlife habitat areas provide to wildlife. Now,
15 stop and think how you would feel if somebody put an
16 electric fence right through the middle of your house,
17 and then had a maintenance man come walking through
18 there unannounced any time he wanted to. It would
19 cause stress. The privacy of your house would be
20 diminished.

21 Well, the same thing is going to happen
22 to wildlife who are using this area. While some people
23 will argue "it's a changed habitat; some species will
24 benefit, others will not." My concern is that it's a

[WITNESS: Jones]

1 diminished habitat. And, we don't know the full extent
2 that the ramifications have on all of the species. But
3 it's core habitat. It's habitat where these animals,
4 both birds and mammals, retreat to when other areas,
5 other buffer lands closer to residences are causing
6 stress. This is where they retreat. And, if you put
7 an industrial wind farm right in the middle of it, with
8 around the clock maintenance activity, that is going to
9 diminish that habitat.

10 We've heard a lot of talk today about
11 the impact of noise. Well, humans do not hear nearly
12 as well as animals do. And, I know that, when I was in
13 the Coast Guard, stationed in Boston, on a Coast Guard
14 cutter, and the Navy would turn on their sonar. It
15 would drive us crazy. And, the noise was unbearable.
16 I can only imagine what that would be like for dolphins
17 or mammals in the water or for fish. I bring this up
18 because it's an example of how noise can affect us, but
19 it also affects wildlife.

20 And, while our sensitivities to the wind
21 mills might not be as sensitive as it is to birds or
22 mammals or even insects, the noise has got to have a
23 huge disruptive effect on them. But the other thing is
24 that, when you put a development like this into core

[WITNESS: Jones]

1 wildlife habitat, you're going to cause stress on
2 animals. And, if it's wintertime stress, when food
3 reserves/fat reserves are low, food is scarce, this
4 puts more stress on the animal and interferes with
5 their survival chances.

6 And, I just don't understand how two
7 wildlife biologists can say, a project of this
8 magnitude, and what you see on this color photograph is
9 about the same scale, it's about four miles in length
10 and has about as many towers as Tuttle Hill is going to
11 have, I don't know how they can say this does not
12 diminish that habitat.

13 Q. Do you have any other rebuttal? Did you have any other
14 rebuttal to testimony, sir?

15 A. Not on this particular subject.

16 Q. Do you have any other rebuttal testimony at all,
17 because I'm going to serve you up for cross-examination
18 in about a minute?

19 A. Right. Okay. That's it.

20 MR. IACOPINO: Okay.

21 WITNESS JONES: Thank you.

22 MR. IACOPINO: The witness is ready for
23 cross-examination.

24 MS. BAILEY: Thank you. Mr. Roth.

[WITNESS: Jones]

1 MR. ROTH: Thank you.

2 **CROSS-EXAMINATION**

3 BY MR. ROTH:

4 Q. Mr. Jones, I thought your -- your choice of words about
5 the way Mr. Valleau described this was perhaps -- well,
6 it was interesting. Because, as you recall from the
7 hearing before, when Mr. Valleau was here, he referred
8 to the road as an "incision". Do you remember that?

9 A. Not specifically.

10 Q. No? Okay.

11 A. But I recall a "thin slice".

12 Q. Yes. He referred to it as "an incision into a large
13 block which is the first step toward fragmentation."
14 That was one reference. "Agricultural uses along an
15 incision" -- well, actually, that was the question.
16 So, he called it an "incision". And, I was going to
17 ask you what you thought about that, that particular
18 use of the word. But, if you don't remember it, I'm
19 not going to pursue that.

20 A. Well, I think it's his characterization that this "thin
21 slice" or this "incision", however you want to describe
22 it, is what compelled me to introduce these two
23 photographs of Lempster Mountain. And, you know, I
24 guess it's a relative term. But this is the kind of

[WITNESS: Jones]

1 incision he's talking about.

2 Q. Well, let me ask you about that, because that is one of
3 the questions I have. And, I look at these, and a
4 pretty dramatic difference. But how long is the road
5 in Lempster? Isn't it something like nine miles long?

6 A. No, I think it's about four miles, if my memory serves
7 me correct.

8 Q. Four miles? Okay. And, how long is the road in this
9 Project?

10 A. I believe it's about four miles in length.

11 Q. Okay. Does it matter how long the road is?

12 A. Well, it helps to put the Project in perspective. In
13 four miles, you know, when you take a four-mile slice
14 out of a 12,000 acre area, that's a pretty big slice.

15 Q. So, four miles versus two miles, would that make a
16 difference?

17 A. Well, it depends, you know, where it is and what's
18 going to take place.

19 Q. Uh-huh.

20 A. But the point is that, when you -- the biggest threat
21 to life as we know it, if you agree with E. O. Wilson
22 and other scientists and other ecologists, the biggest
23 threat to life as we know is habitat loss, and
24 conversion of natural landscapes to man-made

[WITNESS: Jones]

1 landscapes. And, with this loss of habitat, you also
2 introduce invasive species. And, that's a huge problem
3 in this state, in this country, and the globe. And,
4 you have plants, you have parasitic birds, you have
5 insects, that come in and raise ecological and economic
6 havoc when you create disturbances in these deep
7 interior areas.

8 Q. Okay. From these photographs that you provided, SCC-8
9 and 7, is there anything that's visible in these --
10 sort of as a difference between these two that would
11 show that fragmentation has occurred as a result of the
12 Lempster Project? Is fragmentation sort of visible
13 from space, I guess is the question?

14 A. Well, if you understand how UNH Complex Systems maps
15 unfragmented forestlands, they would look at these
16 cleared areas that people have created, and they would
17 delineate lines around them to exclude them in the
18 unfragmented forests. So, what you would wide up
19 having are these fingers that would be extending into
20 a, you know, into a large polygon, and the polygon
21 would represent the unfragmented forest. So, it's
22 these fingers, you know, that extend into the interior,
23 that break up the interior forest, which cause a
24 concern, and particularly for people who are interested

[WITNESS: Jones]

1 in neotropical migrants, birds that require deep
2 interior forests for nesting and for mating. And, you
3 know, the United States leads the world in bird species
4 loss in the last 25 years. And, a big part of it is
5 because of land conversion.

6 Q. Okay. Now, you mentioned in your rebuttal that
7 something about an "electric fence through a person's
8 home". The Project isn't proposing an electric fence
9 anywhere, is it?

10 A. I was just using the electric fence as a "thin slice"
11 going through your house.

12 Q. Okay. Okay.

13 A. That was just a --

14 Q. So, do you believe that a road, like the one in
15 Lempster, or the one that's being proposed here, is
16 going to have the same sort of barrier effect to
17 wildlife that an electric fence would?

18 A. I think what it does is it alters behavior. When you
19 look at the activities associated with it, it
20 introduces noise, it introduces disruption. And, one
21 of the things, when I was with the Forest Society as
22 the Director of Land Management, we had "no wheeled
23 vehicle" policy on all Forest Society properties. And,
24 one of the reasons I was adamant to not have a "wheeled

[WITNESS: Jones]

1 vehicle" policy is, if you ever walk along woods roads,
2 particularly roads that are this wide, once the grasses
3 start to grow back from a disturbance, you're going to
4 have nesting ground birds, you're going to have
5 amphibians, you're going to have reptiles, and they
6 crawl into these openings and they bask in the
7 sunlight, okay? And, you have people coming along in
8 vehicles and you're going to start creating mortality.
9 And, I've gone on enough woods roads and dirt roads to
10 see that mortality. And, when you look at the plight
11 of amphibians and reptiles in this country, I can't
12 help but think that road mortality, even off-road
13 mortality, is contributing to the loss of those
14 numbers.

15 Q. In your introductory remarks, you played the tape or
16 the compact disc of the nighthawk?

17 A. Yes.

18 Q. Can you just -- I think it's probably important for the
19 record for you to identify where you recorded that.
20 And, if you can --

21 MR. ROTH: Is there a map over there,
22 Susan, that he can -- is that the Project map there, the
23 gray one?

24 MS. GEIGER: Yes. Yes.

[WITNESS: Jones]

1 BY MR. ROTH:

2 Q. And, so, you recorded that on Tuttle Mountain
3 somewhere?

4 A. It was on our descent.

5 Q. Okay. Let's hold on one second.

6 A. Yes. And, maybe somebody can help me with the name of
7 the road that we went?

8 FROM THE FLOOR: Hattie Road, Hattie
9 Brown.

10 MR. BLOCK: We were heading down towards
11 Hattie Brown Road.

12 BY MR. ROTH:

13 Q. So, this --

14 A. It would be --

15 Q. -- on the far left side of the map here is Route 9 and
16 the O&M facility.

17 A. It would be up in this area, off the map.

18 Q. Off the map?

19 A. Right.

20 Q. Somewhere sort of north? I guess, this is -- is this
21 north?

22 A. No, that's east.

23 Q. No, that's east. Somewhere east of what looks like
24 "Turbine Pad Number 6" and "Turbine Pad Number 7", is

[WITNESS: Jones]

1 that --

2 A. I mean, I can document it, because I think we had a
3 GPS path of our route.

4 Q. Okay.

5 A. Yes.

6 Q. I'm just trying to get a general idea about where you
7 were.

8 A. Yes.

9 Q. And, what date and time did you make that recording?

10 A. I think it was July 10th, 2012, late in the afternoon.

11 Q. Okay. Thank you.

12 A. Saturday.

13 Q. Now, you are on the Stoddard Conservation Commission,
14 correct?

15 A. Yes, I am.

16 Q. And, have you seen the visual impact material that's
17 been filed in this case, the reports and the maps?

18 A. I have not. I haven't had -- I haven't had time to
19 read many of the e-mails associated with this,
20 unfortunately.

21 Q. Okay. In particular, you spoke about "Robb Reservoir"
22 in your testimony?

23 A. Yes.

24 Q. And, do you expect that there will be views of the

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[WITNESS: Jones]

1 Project from Robb Reservoir?

2 A. It's my understanding that it -- there will be a few
3 sites that will be where some of the towers will be
4 visible. I do have a mapping software program, Terrain
5 Navigator Pro, which enables you to create sightlines.
6 And, you can elevate one end or the other, if you have
7 a tower. So, for example, if I have the tower sites on
8 Tuttle Hill, I can elevate them up to four or five
9 hundred feet and then have a sightline and see where
10 it's visible from. So, --

11 Q. Have you done that?

12 A. I haven't done that on Robb Reservoir. But I could do
13 that.

14 Q. So, are you familiar, have you been to Robb Reservoir
15 and visited that site?

16 A. Yes. I'm very familiar with it.

17 Q. Okay. And, do you think that it has any kind of
18 special scenic quality?

19 MS. GEIGER: Excuse me. I'm going to
20 object to this question. I think it's beyond the scope of
21 what this witness is testifying to. He's really talking,
22 if I'm looking in the correct place, and correct me if I'm
23 wrong, Mr. Roth, on Page 3 of 5 of Mr. Jones's testimony,
24 he's talking about "Robb Reservoir" in the context of

[WITNESS: Jones]

1 "conservation lands of interest and concern to the town".
2 And, I don't believe he's introduced any testimony
3 concerning views, is that correct?

4 WITNESS JONES: Not specific to Robb
5 Reservoir.

6 MS. GEIGER: Okay. Then, I think, given
7 the hour, I think we should probably stick very tightly to
8 the testimony that this witness has filed and
9 cross-examine him on that. I think, if we start getting
10 into areas that other witnesses have already testified
11 about, such as visual impacts, we're going to create an
12 unduly repetitious record here, which is not allowed under
13 541-A.

14 So, I would object to going into this
15 line of questioning for that reason. Thank you.

16 MS. BAILEY: Mr. Roth?

17 MR. ROTH: I have maybe, you know, two
18 more questions about it. I think it's relevant. He
19 claims familiarity with it. And, the testimony does refer
20 to "conservation lands of interest and concern to the Town
21 of Stoddard are the recently protected lands of Robb
22 Reservoir." And, so, I'm trying --

23 MS. BAILEY: How does that have anything
24 to do with visual impacts, though? How does his testimony

[WITNESS: Jones]

1 have anything to do with visual impacts?

2 MR. ROTH: Because, if the town is
3 concerned or if the Town of Stoddard is concerned about
4 recently protected lands of Robb Reservoir, I think that
5 they're probably concerned about a lot of things about it.
6 And, that's what I'm trying to understand. Because this
7 does not say "we're concerned about Robb Reservoir simply
8 because of habitat and the like", he just says
9 "conservation lands of interest and concern to the town".
10 And, really, I mean, we've spent more time talking about
11 this than I would in asking the question.

12 MS. GEIGER: I'm just trying to keep us
13 on track here.

14 MS. BAILEY: Okay. Let's keep it very
15 limited. You may proceed.

16 MR. ROTH: Okay.

17 BY MR. ROTH:

18 Q. And, so, the question was, do you think that Robb
19 Reservoir has any particular scenic quality? And, be
20 brief.

21 A. Yes, it does.

22 Q. Okay.

23 A. It was a Forest Legacy Project in 2006. And, if you
24 understand the Forest Legacy grant funding process,

[WITNESS: Jones]

1 it's very competitive, and this was the number one
2 project in the State of New Hampshire that year. It
3 was a \$3.8 million project, of which I think \$3 million
4 came from the federal government. Town of Stoddard
5 kicked in \$50,000, and an anonymous donor put in
6 another \$25,000. So, the citizens of Stoddard are well
7 vested in this property.

8 Q. Okay. Thank you. That's all I have on Robb Reservoir.
9 "Pitcher Mountain" you mention in your testimony, and
10 let's see if I can find it, and "Bacon Ledge", "views
11 of Bacon Ledge". Are you talking about the "views of
12 Bacon Ledge" as seen from Pitcher Mountain?

13 A. No. The views from Bacon Ledge, as it looks towards
14 Tuttle Hill.

15 Q. Okay. All right, I get it. All right. So, "Pitcher
16 Mountain" you described, says "located in the heart of
17 Stoddard, offers the best 360 degree view for the
18 effort, in southern New Hampshire." Correct?

19 A. Yes.

20 Q. All right. Now, --

21 A. In my opinion.

22 Q. Okay. Now, as you know, one of those views includes
23 Lempster Mountain, correct?

24 A. Yes.

[WITNESS: Jones]

1 Q. When Lempster Mountain -- when the Lempster Project was
2 constructed, did you think that impaired the view from
3 Pitcher Mountain?

4 A. I had reservations at first. But, because it is to the
5 north, and because of the lighting conditions and
6 because of the color of the towers, it doesn't stick
7 out as much of a eyesore as one would think. And,
8 there are several vantage points that you can see
9 Lempster Mountain from in Stoddard. And, I don't find
10 them to be overly offensive.

11 Q. Okay. Is Lempster Mountain further away from Pitcher
12 Mountain than Tuttle Hill?

13 A. I believe it might be a few miles further.

14 Q. Okay. And, do you expect now, with the Antrim Project
15 going up in the other direction, is that going to
16 change your view or your sense about the impact of
17 Lempster Mountain, when combined with the additional
18 view from Pitcher Mountain of the Antrim Project on
19 Tuttle Hill, if you followed that?

20 A. I'm not sure I do.

21 Q. Okay. Since it seems like you were saying that
22 "Lempster Mountain wasn't really that big a deal",
23 correct?

24 A. Yes.

[WITNESS: Jones]

1 Q. Now, --

2 A. I mean, it's -- I've been climbing up on Pitcher
3 Mountain for over 50 years, okay? And, I've seen that
4 view, the natural landscape, get chiseled away.
5 Chiseled away by cell towers, chiseled away by
6 telecommunications towers, ski areas, ski areas with
7 night lights. You can see, on a clear morning, you can
8 see the plume of Vermont Yankee to the west, you can
9 see the Antrim -- I mean, the Lempster Mountain
10 windmills to the north, and you can see the Bow power
11 plant emissions to the east. When you look at Tuttle
12 Hill, you will see ten 500-foot structures --

13 Q. Okay.

14 A. -- that will dominate the mid-ground view towards
15 Crotched Mountain and Mount Monadnock. And, the thing
16 that makes Tuttle Hill much more different than
17 Lempster Mountain, from Pitcher Mountain, is that it
18 will be backlighted by sunlight in the morning. And,
19 those things will stick out like a sore thumb. And, --

20 Q. Do people go up there for purpose of enjoying sunrise?

21 A. Yes, they do. Myself included.

22 Q. Okay. Okay. Now, I'm going to show you -- oh, first,
23 before I do that, you mentioned a person by the name of
24 "Fred Ward". Who's Fred Ward?

[WITNESS: Jones]

1 A. He's a citizen in the Town of Stoddard, who's fairly
2 active. He was known as "Dr. Fred", a meteorologist on
3 Channel 5, down in Boston.

4 Q. Okay.

5 MR. IACOPINO: I believe he's seated in
6 the back of the room.

7 MR. ROTH: And, he's here. Shows where
8 I've been. I just met him today, I didn't know who he
9 was. Welcome, Mr. Ward -- Dr. Ward.

10 BY MR. ROTH:

11 Q. All right. Now, onto this one. I'm going to show you
12 Exhibit AWE 15.

13 (Atty. Roth handing document to the
14 witness.)

15 BY MR. ROTH:

16 Q. Have you seen these pictures, this set of pictures
17 before?

18 A. I have not.

19 Q. Okay. Now, if you turn to page -- the sixth picture in
20 that series.

21 A. The one with the bear?

22 Q. Yes. That's what I was going to ask you. You've said
23 you have some experience with bears, and that appears
24 to me to be a bear. Is that the same to you?

[WITNESS: Jones]

1 A. Yes.

2 Q. Okay. And, that structure on the right appears to be a
3 wind turbine tower?

4 A. Right.

5 Q. Okay. Now, you said you had concern about the wind
6 farm in Antrim driving away wildlife, such as bears,
7 correct?

8 A. I didn't say that they would "drive them away". You
9 know, but wildlife are adaptable. But my concern is,
10 this is core wildlife habitat. Okay? It means it has
11 high value.

12 Q. And, habitat consists of what? Shelter? Food?

13 A. It's shelter, food, --

14 Q. Water?

15 A. -- water.

16 Q. Right?

17 A. A place where they, you know, sleep, mate.

18 Q. Okay.

19 A. Go to, go to to seek refuge, you know, when they're
20 running from other places.

21 Q. And, what does this bear appear to be doing?

22 A. He's grazing on the grass. And, bears are omnivorous.
23 They do eat grass. And, you know, they can live --
24 individuals can live, you know, next to structures or

[WITNESS: Jones]

1 in and around development. But, again, when that
2 development is in core habitat, you've got to ask
3 yourself, "what's happening that we don't know?"

4 Q. Okay. Let me stick with my question here. Have you
5 heard the discussion during this proceeding about
6 "scavenger removal"?

7 A. I have not.

8 Q. Where a wind turbine kills a bird, and a scavenger
9 comes and takes the bird?

10 A. Okay.

11 Q. Okay.

12 A. Yes.

13 Q. Is it possible this bear is conducting scavenger
14 removal?

15 A. Very possible.

16 Q. Okay. Thank you.

17 A. They're opportunistic feeders.

18 Q. All right. And, then, the next page is Page 7. And,
19 that I think we all agree is a fox?

20 A. Yes.

21 Q. And, I think it's been represented to us that this fox
22 was photographed at the Mars Hill wind farm.

23 A. Okay.

24 Q. Okay? And, what would a fox be doing up at a wind

[WITNESS: Jones]

1 farm? What does this fox look like he's up to?

2 A. Well, you have to understand that 90 percent of the
3 wildlife species in New England use permanent openings
4 for some or part of their annual habitat requirements.
5 Now, a fox will come out into a grassy area like this
6 and hunt for voles, mice rodents, *etcetera*.

7 Q. Okay.

8 A. So, he'll come out into these areas.

9 Q. Do foxes also eat carrion?

10 A. Yes.

11 Q. Okay. So, he could be conducting scavenger removal as
12 well?

13 A. Possible.

14 Q. Okay. And, if this -- if this clearing had not been
15 created for Mars Hill, at Mars Hill, for this fox,
16 would this fox have occurred there or is he -- might
17 you say he's an invasive species of some kind?

18 A. No, he'd probably be over in the openings that we
19 created in Stoddard.

20 Q. That's a long walk from Mars Hill.

21 A. Not that far from here. Just has to cross the highway.

22 Q. All right. Now, the last -- the last picture is AWE
23 44A. And, it's not -- it's probably not --

24 (Atty. Roth handing document to the

[WITNESS: Jones]

1 witness.)

2 BY MR. ROTH:

3 Q. Now, I just want to ask you a couple of questions about
4 this. And, are you familiar with this illustration?

5 A. I've seen it before.

6 Q. Okay. And, have you seen it before or are you familiar
7 enough with it where you can tell me what some of this
8 stuff means?

9 A. Well, it's just a map that shows how the Fish & Game
10 rank different habitat, based on, you know, a bunch of
11 factors that they use. And, the various colors
12 represent varying degrees of ranking.

13 Q. Okay. Well, let me ask you these questions. If you
14 look at the little -- the Town of Lempster.

15 A. Yes.

16 Q. You see where the Town of Lempster is?

17 A. I do.

18 Q. Now, the Town of Lempster seems to be -- there seems to
19 be a lot of white there, right?

20 A. Yes.

21 Q. Is that where the Lempster wind farm is, in all that
22 white stuff?

23 A. I would say the Lempster -- Lempster Mountain is in the
24 southeast corner, where you have some of the red area.

[WITNESS: Jones]

1 Q. Some of the red area.

2 A. Yes.

3 Q. Is it possible the Lempster Project is both in the red
4 area and in the white area?

5 A. It's possible.

6 Q. Okay. Now, if you look into the Town of Washington,
7 and down into Stoddard and Sullivan and Nelson, you get
8 that sort of red, fingery ganglia stuff. You know what
9 I'm talking about?

10 A. I do.

11 Q. What is that?

12 A. Well, you have fingers of high ranked wildlife habitat.

13 Q. Okay. And, is this -- does this evidence
14 fragmentation?

15 A. No, it just -- no, because a lot of that --

16 Q. Is there a watershed there?

17 A. No, a lot of it is conservation land. And, I think
18 that's one of the -- I'm not sure, but I think it might
19 be one of the criteria they use for ranking.

20 Q. Okay.

21 A. But I'm not positive. But it's just -- there are a
22 bunch of factors, and I can't recall what all the
23 factors are that they use to assess the various ranks.
24 But it's just, you know, it's based on soils, it's

[WITNESS: Jones]

1 based on forest types, it's based on, you know,
2 topography, based on wetlands.

3 Q. Okay.

4 A. Riparian areas, lakes, *etcetera, etcetera*.

5 Q. All right. So that, in the sort of northwest corner of
6 Stoddard, and into Marlow, you see there's sort of a
7 green and yellow crosshatch. What does that mean?

8 A. I'm not sure on this map.

9 Q. Okay. If you don't know, we'll move on. Now, looking
10 at the Town of Antrim, you see, in West Antrim, there's
11 a big red spot there, right?

12 A. Right.

13 Q. And, that's sort of the western/southern half. How
14 much of that is the Project area, as far as you can
15 tell?

16 A. That's difficult on this scale, but I would say none of
17 it.

18 Q. That all of that is outside the Project area?

19 A. I believe so.

20 Q. So, the prime -- the highest ranked habitat in Antrim
21 is not in the Project area?

22 A. No. If you look up in the northwest corner, you'll see
23 that there's some red up in there.

24 Q. Okay. Is that the Project area up there?

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[WITNESS: Jones]

1 A. Yes.

2 Q. Okay.

3 MS. GEIGER: I don't know if this will
4 help you.

5 (Atty. Geiger putting the posterboard of
6 AWE 40 on the easel.)

7 BY MR. ROTH:

8 Q. So, the Project area is designated by Fish & Game as
9 "highest ranked habitat by condition in New Hampshire"?

10 A. That is correct.

11 Q. Okay. And, let's see if we can find it here. Look up
12 in -- are you familiar with the Groton Project?

13 A. I am not. Except I think that it's on land owned by a
14 logger that I have a long association with, at least
15 portions of it are.

16 Q. Okay.

17 A. That's the extent that I know of it.

18 Q. All right. In your testimony, you talked about "a
19 recent harvest" up on the Project site.

20 A. Yes.

21 Q. Have you learned anything more about that harvest since
22 you made this testimony?

23 A. I have not.

24 Q. Is there any more detail than what's here that you

[WITNESS: Jones]

1 could share?

2 A. I have nothing further to offer.

3 Q. You don't know who's doing it?

4 A. I think it was Hopkinton Land Clearing, I think was the
5 operator.

6 Q. Okay. And, so, you don't know who they're working for?

7 A. I presume the landowner.

8 Q. Okay.

9 A. And, it was -- the cutting that had taken place on the
10 north half of the property very nicely coincided with
11 the wind tower sites and the access roads.

12 Q. Okay. Is that all of the wind tower sites and the
13 access road or just --

14 A. No, there were five or six of them, four or five of
15 them. I forget how many.

16 Q. Okay.

17 A. I don't know. And, you know, there were substantial
18 clear cuts around the radius of where the towers were
19 going to be. So, to me, it looked like it was a
20 preparatory cut to get ready for construction.

21 MR. ROTH: That's all the questions I
22 have for you. Thank you very much, Mr. Jones.

23 MS. BAILEY: Thank you. Mr. Froling?

24 MR. FROLING: No questions.

[WITNESS: Jones]

1 MS. BAILEY: Mr. Beblowski?

2 MR. BEBLOWSKI: No questions.

3 MS. BAILEY: Is Ms. Sullivan here?

4 (No verbal response)

5 MS. BAILEY: Ms. Longgood?

6 MS. LONGGOOD: Yes. Hi. I just have a
7 couple of questions. Hi. I'm Janice Duley Longgood. I
8 live at the very end of Salmon Brook Road, up into the
9 wild area there. I had a couple of questions for you.

10 BY MS. LONGGOOD:

11 Q. Yesterday there was talk regarding the
12 "Quabbin-to-Cardigan Corridor". Can you define any of
13 the partners that are involved in that initiative?

14 A. I believe the Forest Society, the Nature Conservancy,
15 other groups in Massachusetts, and I think Vermont.
16 It's kind of a tri-state regional effort to protect
17 high elevation and lands that extend from the Quabbin
18 to Cardigan. And, it's, you know, I think it goes over
19 to the Connecticut River, and as far east as, you know,
20 western Hillsborough County.

21 Q. Thank you. There was also talk about "Forest Legacy
22 projects". Do you know about any in the general area
23 of the wind project?

24 A. I don't know any that are pending. But I do know that

[WITNESS: Jones]

1 the Robb Reservoir tract --

2 Q. Uh-huh.

3 A. -- was a recipient of a Forest Legacy easement.

4 MS. LONGGOOD: Okay. Thank you. Those
5 are all the questions that I had.

6 MS. BAILEY: Mr. Stearns?

7 MR. STEARNS: No questions.

8 MS. BAILEY: Ms. Pinello?

9 MS. PINELLO: No questions.

10 MS. BAILEY: Ms. Manzelli?

11 MS. MANZELLI: Yes. Thank you. Just a
12 couple, a few. Good evening, Mr. Jones. My name is Amy
13 Manzelli. I am here representing New Hampshire Audubon.

14 BY MS. MANZELLI:

15 Q. With respect to the recent clearing at the Project site
16 that you were just testifying about, can you estimate
17 about how wide that clearing is along the area where
18 the roadway is proposed?

19 A. Well, it was varying, you know. We didn't take any
20 measurements, in terms of the size of the circle areas
21 or any widths of the corridor. But they were certainly
22 more than a couple times the tree heights of the forest
23 canopy.

24 Q. So, not being a forester, what does that mean?

[WITNESS: Jones]

1 A. Well, you know, it's always hard to critique, you know,
2 what somebody's doing in the high elevation.

3 Q. Uh-huh.

4 A. But what it looked like, based on, you know, the GPS
5 information we had for the wind tower sites and for the
6 access road, it looked like it was more of a
7 preparatory cut, in preparation for construction work,
8 rather than silvicultural work. Okay? And, so, that's
9 -- there's a distinct difference.

10 Q. Was the area that was cut wider than the area that's
11 been proposed for the road?

12 A. In places.

13 Q. And, can you quantify, by twice as wide, three times as
14 wide, or are you not able to quantify?

15 A. I don't think I could do that at this point.

16 Q. Now, with all due respect, explain to us how you know
17 what fragmentation is?

18 A. I think the conventional definition of that is, if you
19 have an unbroken forest, and you put a road into it,
20 and you convert an area that is visible from the air,
21 like these aerial photographs, that you've fragmented
22 the interior forest canopy. But it's, you know, it's
23 kind of a relative term. But it's whenever you're
24 converting forestland and bringing in other non-forest

[WITNESS: Jones]

1 types of activities that are creating disturbances, and
2 you're altering, you know, the vegetative conditions.

3 Q. Now, you testified earlier that you're a Licensed
4 Forester, right?

5 A. Yes.

6 Q. Is part of your licensure or any of your previous
7 study, have you looked at the issue of fragmentation?

8 A. It's been in a lot of discussions, a lot of workshops.
9 As I said, when we were developing the guidelines for
10 the *Good Forestry in the Granite State*, it was
11 certainly a topic of discussion. I've read a lot about
12 it, you know. It's still an emerging science. There's
13 still a whole host of what they call "ecosystem
14 services", that different wildlife species offer, in
15 terms of keeping a forest a healthy, viable, productive
16 forest that we don't understand. And, when you lose
17 species, you lose these ecosystem services.

18 Q. Now, I understand you haven't read all of the papers
19 associated with this Application. But, of what you
20 have read, have you seen any discussion of ecosystem
21 services?

22 A. I haven't read a whole lot. So, unfortunately, no. I
23 haven't read it, not because I'm not interested, but
24 I'm, you know, I'm self-employed, and I have to work

[WITNESS: Jones]

1 hard for everything.

2 Q. Understood, Mr. Jones. Now, with respect to the
3 nighthawk recording, which has been marked as "SCC-9",
4 you testified about where you were located when you
5 made that recording. Do you know where the nighthawks
6 were located? And, if you do know, could you answer by
7 pointing to the map? The one that's been taken away.

8 A. Yes. It's not on the map that's taken away. We were
9 down off the slopes of Tuttle Hill, and we were in a
10 wetlands complex. There was a logging access road that
11 we were walking down, in fact, I think it was the
12 access road that the loggers used to get up on top of
13 the ridge. And, we were coming down that road and
14 heading towards Gregg Lake. And, it was in a long,
15 flat area, where there's a big wetlands complex, and it
16 was above this complex that the nighthawks were flying.
17 And, it was, you know, 5:00, 5:30, 6:00 in the
18 afternoon.

19 Q. Uh-huh. So, when you say "above", do you mean "higher
20 along the ridge" or do you mean "directly above you"?

21 A. No, directly above the wetlands complex, and over our
22 heads.

23 Q. Thank you. Now, you're forever -- you're familiar with
24 the concept of "Forever Wild easements", right?

[WITNESS: Jones]

1 A. Yes, I am.

2 Q. And, I'm going to read you some testimony from Mr.
3 Kenworthy from earlier in this proceeding. This was
4 from the first day of the hearing, October 29th, 2012,
5 and this is located on Page 47 of the transcript. And,
6 he says: "The final point I would like to make is, on
7 Page 3 of Mr. Nickerson's testimony, he recommends that
8 the Committee require a "Forever Wild" easement be
9 placed on the ridgeline, if the Project is approved.
10 You know, it's our view that this is an unreasonable
11 requirement. It was noted, in fact, on Page 1 of the
12 prefiled testimony of Geoffrey Jones, from the Stoddard
13 Conservation Committee, that it's highly unusual for a
14 private landowner to place such a designation on their
15 lands. And, to point out additionally, that AWE has
16 already negotiated easements, which the Harris Center
17 has agreed will make a valuable contribution to the
18 conservation interests of stakeholders in the region."
19 Now, his comments do go on for about ten more lines,
20 but they don't regard your -- a characterization of
21 your comments.

22 So, my question for you is, in your
23 testimony, when you used the phrase "highly unusual",
24 did you mean that to discourage the use of "Forever

[WITNESS: Jones]

1 Wild" easements on the ridgeline for this Project?

2 A. I believe that this individual has taken my quote out
3 of context. When I made that remark, it is "highly
4 unusual" for private landowners to do that, because
5 it's usually something a government agency does. And,
6 there are few -- well, "Forever Wild" easements are
7 becoming more fashionable, used by more landowners, as
8 they begin to understand their importance.

9 But I think it's been my experience, and
10 part of our discussion in developing the *Good Forestry*
11 and the guidelines, was the importance of having
12 undisturbed areas within the working forest, so that
13 these undisturbed areas can help recolonize, you know,
14 the areas that get disturbed from logging. From all
15 the things that we have no idea about, and we're
16 talking about soil microorganisms, we're talking about
17 organisms of decay, we're talking about plants and
18 lichens and fungi, and things that we're just -- we're
19 not fully aware of, you know, their numbers or their
20 importance. And, so, these are becoming refuges within
21 the working forest to help keep the ecosystem
22 functioning properly.

23 Q. And, what's your opinion regarding whether there should
24 be "Forever Wild" protections on the Project here?

[WITNESS: Jones]

1 A. Well, I think it's something that, you know, a property
2 has to be critically evaluated, and looked at the pros
3 and cons, and see whether it's suitable or not. It
4 seems to me that, from my limited experience of being
5 up on that ridge, and my broader experience of the area
6 on a whole, that a "Forever Wild" easement would be
7 appropriate on some portions of that. But where and
8 how much would have to be determined.

9 MS. MANZELLI: Thank you. I have no
10 further questions for you.

11 MS. BAILEY: Ms. Allen?

12 MS. ALLEN: No questions.

13 MS. BAILEY: Mr. Block?

14 MR. BLOCK: Yes. Richard Block,
15 representing North Branch.

16 BY MR. BLOCK:

17 Q. Mr. Jones, in your exhibits, I saw you have a letter
18 from the Stoddard selectmen that you've submitted that
19 is in support of the Conservation Commission concerns.
20 Can you explain something about the significance of
21 that letter?

22 A. Well, it's significant, because the selectmen in
23 Stoddard are kind of miserly. They're -- they're not
24 always cooperative, and they don't always get real

[WITNESS: Jones]

1 excited about conservation projects. But I think they
2 recognized, based on, you know, the testimony that I
3 submitted, that there were some issues of concern,
4 particularly to the large seasonal summer home
5 residents that we have in Stoddard, who come from
6 Massachusetts and Connecticut and New York and beyond,
7 and many of them who have summered in Stoddard for
8 decades and generations. And that they come to
9 Stoddard because of the natural beauty, and because of
10 the protected lands, and because they can go up on
11 Pitcher Mountain and get the views of an unmolested
12 landscape that they can't get back in the areas that
13 they come from. And, they also know that, you know,
14 the Stoddard Conservation Commission was pretty
15 involved in a controversial siting, a proposal of a
16 cell tower in Melville Hill, which overlooks Granite
17 Lake, which is a recreational community in Stoddard.
18 And, this was just a unipole, a 200-foot tower, that
19 created tremendous outpouring of public displeasure,
20 and has cost the Town of Stoddard, you know, upwards of
21 \$50,000 in legal fees combating. And, I think it just
22 underscores the importance that people place on
23 maintaining natural landscapes. And, I think that they
24 -- they recognize the merits of what the Stoddard

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[WITNESS: Jones]

1 Conservation Commission was trying to do, and
2 expressing our concerns about what the impact this
3 industrial wind site would have on the conservation and
4 scenic values of Stoddard. Because we're on the front
5 lines. We're going to take the brunt of the visual
6 impact of this project. On Route 9, coming to
7 Stoddard, from the east, and, from the west, portions
8 of 123. But we have so many public access scenic
9 summits that are just going to be staring this thing
10 right in the face. And, it's going to -- it's going to
11 diminish the experience of the people in Stoddard.

12 Q. So, if the scenic vistas will be affected, do you think
13 this will have -- affect your efforts at conservation
14 in Stoddard at all?

15 A. I don't think so, because I think most of what's been
16 protected has been protected. And, while there are a
17 few isolated projects, we're pretty lucky in having 63
18 percent of our town permanently protected.

19 Q. And, you may have said this before, but how long has
20 that conservation effort been going on in Stoddard?

21 A. Since 1978.

22 Q. Besides the selectmen, have you gotten any feedback
23 from other people in Stoddard about this Project? Are
24 they aware of it? How do they feel about it?

[WITNESS: Jones]

1 A. The people that are aware of it are very concerned
2 about it. And, a lot of them have expressed
3 frustration to me about being able to voice their
4 concerns. And, they feel that the process is not
5 really inclusive, or at least, you know, by the time
6 they find out, it's too late, you know, what the
7 process is. Which was part of the reason why I felt it
8 important that the Stoddard Conservation Commission
9 have an intervenor status, so that, you know, we could
10 kind of be a conduit for their concern. And, Mr. Ward
11 has, you know, used our platform to express some of his
12 concerns.

13 Q. I do believe he has submitted a letter or two also, is
14 that correct?

15 A. I believe so.

16 Q. Okay.

17 A. Yes.

18 Q. In one of the earlier tech sessions, I remember you
19 mentioning John Kulish, who I remember hiking with
20 years back in the Loveren Mill Cedar Swamp. And, he
21 wrote a book, I guess, fairly well-known, called
22 "Bobcats Before Breakfast". Is there anything -- can
23 you describe who he is and anything in his writings or
24 teachings that help us learn something about the

[WITNESS: Jones]

1 habitat in their vicinity where the Project is
2 proposed?

3 A. Well, John Kulish was a World War II veteran, had his
4 hearing greatly impaired due to the War. But he was a
5 subsistent trapper/hunter. Raised his two daughters on
6 game that he hunted in the hills of Hancock, Antrim,
7 Stoddard, down on Mount Monadnock, Surry Mountain.
8 And, he chronicles his life in this book "Bobcat Before
9 Breakfast". He offers a tremendous amount of anecdotal
10 storytelling and evidence about animals, particularly
11 bobcat and otter, and how they need these large,
12 unfragmented forest habitats to thrive in. And, he,
13 later in life, became, you know, well, if you read his
14 book, you'll find out that he gave up hunting and
15 trapping, because he felt that it caused emotional
16 stress on the animals of partners that survived. And,
17 he also felt that hunting pressure and loss of habitat
18 was -- it created disadvantage for these animals. And,
19 so, he became an ardent supporter of land conservation
20 and protecting their habitat and educating people about
21 wildlife. And, this area of Tuttle Hill was a core
22 area to where he hunted. And, the important thing is
23 that this area is core habitat for bobcat in the State
24 of New Hampshire. And, I've heard some people say

[WITNESS: Jones]

1 that, as the bobcat population in the Monadnock Region
2 goes, so goes the population in the whole state. So,
3 there's some kind of a connection, I've heard, between
4 this viable population here in the Monadnock Region.

5 And, they're very secretive animals, and
6 they -- you know, I have never seen one. And, I've
7 spent tens of thousands of hours in the woods, and I've
8 yet to see a bobcat. And, John Kulish would tell you
9 that he never saw one, unless it was one that was treed
10 by his dogs. So, people who see them are very lucky.

11 Q. Are you familiar with, have you had a chance to look at
12 Mr. Guariglia's visual impact assessment done by
13 Saratoga Associates for this Application?

14 A. Unfortunately, I have not.

15 Q. Let me -- I guess I'll show you these, in case you
16 haven't seen them. What I'm going to show you here are
17 the two figures from that, Figure 1 and Figure 2, which
18 are the topographic viewshed map and the vegetated
19 viewshed map.

20 (Mr. Block handing documents to the
21 witness.)

22 MS. BAILEY: Mr. Block, this isn't
23 anything to do with the testimony that he proffered. Can
24 you tell me --

[WITNESS: Jones]

1 MR. BLOCK: It is. It is. It has to do
2 with his exhibits.

3 MS. BAILEY: Can you give me an offer of
4 proof please?

5 MR. BLOCK: Pardon me?

6 MS. BAILEY: Tell me what your line of
7 questioning is going to be about.

8 MR. BLOCK: It has to do with the fact
9 that, in some of Mr. Jones's exhibits, he shows maps, and
10 he's used a software to project visibility of the turbines
11 on various locations. And, I'd like his opinion on these
12 maps, as somebody who works with the mapping software and
13 the visualization software.

14 MS. BAILEY: Okay.

15 MS. GEIGER: Excuse me. I don't think
16 this witness has been offered as -- this witness holds
17 himself out to be an expert in that area. So, I would
18 object to this.

19 MR. IACOPINO: Which exhibit of Mr.
20 Jones, is it, that you believe show that?

21 MR. BLOCK: In his original testimony,
22 the ones that there's a bunch of pictures there, they're
23 not numbered. There's a topographic map, "Line of Sight
24 From Ten Tuttle Hill Wind Towers to Willard Pond Beach".

[WITNESS: Jones]

1 And, it has a series of pages, where he shows the line of
2 sight distance lines following that. Actually, some of
3 those are numbered, "Page 2 of 7", "3 of 7", "4 of 7", and
4 "5 of 7". And, he mentioned this -- or, he mentioned
5 earlier the Terrain Navigator software in tonight's
6 testimony.

7 WITNESS JONES: Well, but the one -- the
8 one flaw that I can see on this map that shows the --

9 MR. IACOPINO: Well, wait, wait, wait.

10 MS. BAILEY: Wait.

11 WITNESS JONES: Oh.

12 MR. IACOPINO: We're still dealing with
13 the question of whether it's relevant.

14 MS. GEIGER: Right.

15 MR. BLOCK: I also have a -- part of the
16 issue is that the 40-foot -- as a forester, I want to know
17 what his opinion is of the application of the 40-foot tree
18 canopy throughout.

19 MS. BAILEY: How about if you focus on
20 the forestry issues. Because I don't think he's really
21 offered himself as a --

22 MR. BLOCK: Okay. That's the basic
23 question anyway.

24 BY MR. BLOCK:

[WITNESS: Jones]

1 Q. The first map shows visibility, the second one shows
2 the visibility with a 40-foot tree canopy applied
3 throughout, which affects the visibility. That's the
4 one where it's more white. And, Mr. Guariglia claims
5 that, because of this 40-foot tree canopy, the views of
6 the turbines throughout the region would be limited to
7 only about five percent of the area. And, I just
8 wanted to know, since you've done mapping, since you're
9 in forestry, you know the tree cover, you know things
10 in the area, does this seem realistic to you?

11 A. Doesn't sound -- doesn't sound real accurate. I'd have
12 to understand his methodology better. But, if you
13 understand Terrain Navigator software, a 40-foot tree
14 canopy, especially at the top of Tuttle Hill, is not
15 going to shield anything but the lower, you know,
16 40 feet, 50 feet of the tower. And, these things stick
17 up upwards of 500 feet. So, I would be a little
18 suspicious.

19 The one thing I see on this, the
20 vegetated viewshed map, which has identified
21 recreational areas, I can see some well-known
22 conservation lands, but I find it quite peculiar that
23 Robb Reservoir, which has a Forest Legacy easement on
24 it and guaranteed public access for recreation use

[WITNESS: Jones]

1 hasn't been identified. So, I think that's an
2 important oversight on somebody's part.

3 Q. All right. I think you've said you've done work for
4 New Hampshire Audubon at Willard Pond?

5 A. I have.

6 Q. Can you describe some of the work you've done there?

7 A. Well, Willard Pond is a small pond that's up in the
8 Hancock/Antrim town line areas. It's ringed by Bald
9 Mountain, Tuttle Mountain, and I forget the name of the
10 other hill, I'm going to go on a field trip Saturday on
11 it.

12 FROM THE FLOOR: Goodhue.

13 WITNESS JONES: Goodhue Hill, right.

14 Yes.

15 **BY THE WITNESS:**

16 A. And, it's all protected landscape, undeveloped. And,
17 Willard Pond offers people the opportunity to canoe on
18 an undeveloped shoreline, and to boat and to swim, and
19 to experience something that most people have to drive
20 to northern New Hampshire and northern Maine, or even
21 Canada to experience.

22 MS. GEIGER: I'm going to object to this
23 line of questioning. I think this constitutes unduly
24 repetitious material that's already in evidence. We heard

[WITNESS: Jones]

1 from Ms. Vissering about Willard Pond. I'm sure you're
2 going to hear it from other witnesses about this. This
3 witness hasn't been offered up to talk about the
4 conditions at Willard Pond. I think that we need to move
5 on.

6 MR. BLOCK: Can I restate my question?

7 MS. BAILEY: Well, explain to me why
8 this is relevant. It's very late and --

9 MR. BLOCK: The question was simply "can
10 you describe what work you have done for Audubon at
11 Willard Pond?"

12 WITNESS JONES: Yes.

13 MS. BAILEY: But how is that relevant to
14 the testimony that he's offered up?

15 MR. BLOCK: Because he's a forester,
16 he's a logger, and I know he's worked for Audubon. And,
17 Audubon is one of our -- Audubon Society of New Hampshire
18 is one of our intervenors.

19 MR. ROTH: And, if I may be heard on
20 this. Mr. Jones is a member of the Stoddard Conservation
21 Commission. He's offered testimony on conservation values
22 of land in the area. And, it seems to me that his
23 testimony on the -- what's the point of conserving Willard
24 Pond and other areas around it, what you do there is

[WITNESS: Jones]

1 important. As far as --

2 MS. BAILEY: I'm not --

3 MR. ROTH: As far as there being a
4 question of "unduly repetitious", it may be "somewhat
5 repetitious", but I don't think we're anywhere near
6 "unduly repetitious". This is, you know, this is an
7 important issue. And, he's, I think, a valuable witness
8 on this subject.

9 WITNESS JONES: I can answer it --

10 MS. BAILEY: Wait a minute. Wait a
11 minute please.

12 MS. GEIGER: I'm not -- I'm not
13 objecting, and I apologize for interrupting, I'm not
14 objecting on the basis of relevance. I'm objecting on the
15 basis of the fact that this Committee and the presiding
16 officer can exclude unduly repetitious information from
17 the record. And, it's one of the few things, and the
18 rules of evidence obviously don't apply, but that rule of
19 procedure does apply under 541-A. And, I guess I have no
20 problem spending time tonight talking about Willard Pond,
21 if Ms. Manzelli will agree that we don't need to talk
22 about it tomorrow when her witnesses come and testify.

23 MR. ROTH: That's the kind of suggestion
24 that would only come at 6:30 p.m. And, that's a point I

[WITNESS: Jones]

1 think that I think is worth making. The fact that it's
2 this late is not his fault. And, so, I just think we need
3 to bear in mind that, yeah, we're all tired and we'd like
4 to get out of here. But, you know, it's not his fault.

5 MS. BAILEY: I agree with you -- I agree
6 with you that the hour and the lateness is not his fault.
7 Mr. Block, please try to limit your questions to things
8 that he hasn't talked about, and things that you only
9 think really are very important and still need to be
10 addressed.

11 MR. BLOCK: As far as I know, nobody has
12 talked about work Mr. Jones has done at Willard Pond, and
13 that's the only question I had. I only have one more
14 question after that.

15 MS. BAILEY: All right.

16 WITNESS JONES: Okay. I'll answer that
17 directly, and quickly.

18 **BY THE WITNESS:**

19 A. Okay. It's Exhibit SCC Number 7, there are some
20 photographs in there that show some work that was
21 recently done by myself and some others to remove a
22 cabin that had been on the shores of Willard Pond for
23 -- since the '30s. We removed it and restored the site
24 at a cost of over \$10,000 to New Hampshire Audubon.

[WITNESS: Jones]

1 And, I think what it does is it underscores the
2 importance that this reservation has to New Hampshire
3 Audubon and their quest to keep it a pristine area.
4 And, I just wanted to offer that as something that
5 underscores the importance of Willard Pond to the
6 conservation community.

7 MS. BAILEY: Could you take another look
8 at the exhibit number. You said "SCC-7", which is your --
9 recently this aerial photograph from 1998 of the Lempster
10 Project.

11 MR. IACOPINO: You might be speaking
12 about SCC-6?

13 MR. BLOCK: No.

14 WITNESS JONES: No, I've got it here as
15 "7". And, I've got to find where my -- where my list is.

16 CHAIRMAN IGNATIUS: Mr. Jones, is it a
17 photograph that says "Shack at Willard Pond", and --

18 WITNESS JONES: Yes.

19 CHAIRMAN IGNATIUS: And, then, the photo
20 below it has a chimney and a building falling down?

21 WITNESS JONES: Right.

22 CHAIRMAN IGNATIUS: That's, at least in
23 our materials, is Exhibit 6, --

24 WITNESS JONES: Okay. Yes.

[WITNESS: Jones]

1 CHAIRMAN IGNATIUS: -- dated 10/25/2012,
2 and it's Page 4.

3 WITNESS JONES: Yes. You're right.

4 MS. BAILEY: Okay. Mr. Block, proceed.

5 BY MR. BLOCK:

6 Q. Okay. Final question. In a tech session, you talked
7 about a term called "cumulative effect". Can you
8 please explain what that is and why you think that's --
9 or, why it's significant or important?

10 A. Well, I think that was in reference to the development
11 that's taking place along the Route 9 corridor. Route
12 9, you know, is major east/west highway. And, we've
13 had, you know, improvements done to the Granite Lake
14 bypass. We've had -- cell towers have come up in
15 Roxbury, one proposed for Melville Hill, I believe
16 another one for Tuttle Hill. And, what we're concerned
17 about is that this east/west highway, which is a scenic
18 highway, is being marred by all of these development
19 projects, but they also, you know, kind of conflict
20 with a north/south wildlife corridor, which goes
21 through the Town of -- of the Town of Stoddard. And, I
22 just, on the way in today, the number of blood stains
23 that I've seen on the highway between Stoddard and
24 Henniker boggles the mind. But I think at least 10 to

[WITNESS: Jones]

1 15 deer, bear, or whatever, have been killed on the
2 highways in the last couple weeks. So, this kind of
3 development is a concern. And, it's not so much one
4 project, but it's the cumulative impact that these
5 projects have.

6 And, I think, you know, the big
7 challenge to the SEC and to the State of New Hampshire
8 is, you know, how many of these wind tower sites are we
9 going to allow? And, what's -- you know, they're all
10 being done in a vacuum. They're all being done on a
11 project-by-project basis. And, nobody is looking at
12 what the cumulative impact is to the State of New
13 Hampshire. And, you know, I have a good friend,
14 Richard Whitney, who is a well-renowned landscape
15 artist, and he's really concerned about an aesthetic
16 famine that this state is going to experience, if we
17 aren't more vigilant in protecting our scenery.

18 MR. BLOCK: Thank you. No more
19 questions for me.

20 MS. BAILEY: Thank you. Ms. Linowes?

21 MS. LINOWES: No questions.

22 MS. BAILEY: Ms. Geiger -- well,
23 actually, I'll ask the court reporter, how are you doing?

24 MR. PATNAUDE: I don't know.

[WITNESS: Jones]

1 MS. BAILEY: Okay. Then, we'll keep
2 going for a little while.

3 MS. GEIGER: Thank you. Good evening,
4 Mr. Jones.

5 BY MS. GEIGER:

6 Q. Are you a wildlife biologist?

7 A. I have an undergraduate degree in Biology. I started
8 out as a wildlife biologist at UNH. I was told by a
9 professor that, if I really wanted to help out
10 wildlife, either become a lawyer, a politician, or a
11 forester. And, I chose to be a forester.

12 Q. Okay. So, by your testimony, you mean that lawyers
13 also help wildlife, is that right? Is that what you
14 just said?

15 A. That's what the professor was kind of insinuating.

16 Q. Thank you.

17 MR. ROTH: I'll take that.

18 MS. GEIGER: Okay.

19 BY MS. GEIGER:

20 Q. Mr. Jones, where is Stoddard located in relation to
21 Antrim?

22 A. It's northwest of it.

23 Q. Okay. So, it's an abutting town, is that correct?

24 A. Yes.

[WITNESS: Jones]

1 Q. Okay. Now, you've indicated on Page 1 of your prefiled
2 testimony that over 63 percent of the Town of Stoddard
3 or 21,431 acres have been permanently protected from
4 development. Is that correct?

5 A. That is correct.

6 Q. Okay. And, I believe you've also said that the people
7 in Stoddard, and I'm paraphrasing, I apologize, I don't
8 have the exact quote, but I believe you say that the
9 conservation lands in Stoddard are of great importance
10 to the Stoddard residents, is that correct?

11 A. That's correct.

12 Q. Okay. Now, at the bottom of Page 2, to the top of
13 Page 3 of your testimony, you state that "the protected
14 lands in one town enhance the values of conservation
15 lands they abut in adjacent towns." Is that correct?

16 A. Right.

17 Q. Okay. So, would you agree that -- are you familiar
18 with Antrim Wind's plan to conserve 685 acres on the
19 Tuttle-Willard Mountain?

20 A. I am.

21 Q. Would you believe that that would be beneficial to the
22 citizens of Stoddard in the manner that you've just
23 indicated in your testimony?

24 A. Well, it's my understanding that this conservation

[WITNESS: Jones]

1 easement would allow some development.

2 Q. Okay.

3 A. In which case, you know, it's not the same kind of a
4 conservation easement as we have on the rest of our
5 lands.

6 Q. But isn't it very limited development?

7 A. I don't know the details.

8 Q. But you think -- well, then, what do you know about it?

9 A. Well, I've heard some controversy about it. And, I
10 know that there's some people that are pretty upset
11 about it.

12 Q. But you don't know about --

13 A. I haven't had --

14 Q. Okay.

15 A. Again, you know, I don't have time to delve into a lot
16 of details on these issues.

17 Q. Okay. All right. On Page 3 of your testimony -- okay.
18 On Page 3 of your testimony, at Paragraph 6, you state
19 that the Project's access road will be 50 to 100 feet
20 wide and will fragment important high elevation habitat
21 for certain species of birds. Do you recall that?

22 A. Right.

23 Q. First, the Project roads are not going to be "50 to
24 100 feet wide", will they? Are they?

[WITNESS: Jones]

1 A. If you look at the Lempster Mountain Wind Project, you
2 know, they have been cleared between 100 and 250 feet.
3 And, my understanding of the reason for the great width
4 has to do with the transportation of the wind tower and
5 the blades.

6 Q. Did you go up there to measure those roads?

7 A. I can measure them quite accurately off of the computer
8 software program I have.

9 Q. Okay. And, did you do that?

10 A. Yes, I did.

11 Q. And, so, did you measure the turbine pads as well?

12 A. I measured a bunch of different -- took a bunch of
13 different measurements.

14 Q. But, isn't it true, for this Project, for the Antrim
15 Wind Project, on Page 17 of the Applicant --
16 Application, Antrim Wind has indicated that the Project
17 roads will be 34 feet wide during construction, and
18 then restored to a width of 16 feet post-construction.

19 A. That may be the road, but what about the vegetation on
20 either side of the road?

21 Q. Fair enough. But we're talking -- you made a statement
22 about road width, and I'm trying to get at the heart of
23 that.

24 A. Well, I was -- I think, in the statement that I made on

[WITNESS: Jones]

1 road width had to do with the cleared area.

2 Q. Okay.

3 A. Not the road surface for a vehicle.

4 Q. Okay. Thank you. Thank you for that clarification.

5 Now, second, in the statement that I just read to you
6 about your opinion that the road -- the access road
7 will fragment high elevation habitat for certain
8 species of birds. What species of birds are you
9 referring to?

10 A. I think it was just a -- well, I can't think of the
11 specific species off the top of my head. But it was
12 conversations I've had with people who are birders.

13 Q. Okay. So, you don't have any particular species in
14 mind then?

15 A. Not that come to mind.

16 Q. Okay. And, I believe you used the term "high
17 elevation" -- or, "high elevation habitat". Isn't the
18 highest elevation at this Project site approximately
19 1,800 feet?

20 A. Right.

21 Q. And, do you know that, at other projects, like the
22 Granite Reliable Project, high elevation habitat was
23 considered to be above 2,300 feet?

24 A. Right. And, I think, back during the October

[WITNESS: Jones]

1 testimony, I said that the Tuttle Mountain has the
2 forest types and the vegetations of a high elevation
3 area. So, it has that -- it has the same habitat, even
4 though it might be at a lower elevation. So, while it
5 might not be considered true "high elevation", like up
6 in the North Country, it has those special
7 characteristics of the spruce/fir forest type. And,
8 those are isolated and limited to the summits, like
9 Tuttle Mountain, Bacon Ledge, and they need to be
10 protected.

11 Q. Okay.

12 A. They're unique. They're different in this part of the
13 state.

14 Q. So, it's really the habitat, not the fact that it's
15 high elevation, is that correct?

16 A. Right.

17 Q. Okay.

18 A. But it's often referred to as "high elevation spruce".

19 Q. I just wanted to understand how you were using that
20 term. Now, on Page 3, Paragraph 7, of your testimony,
21 you state "the development of Tuttle Hill...will result
22 in habitat loss", correct?

23 A. Right.

24 Q. Now, isn't it true that the Project will disturb less

[WITNESS: Jones]

1 than 70 acres within the 1,850 acres that comprise the
2 Project's leased area?

3 A. Size isn't as important as the fact that where it is
4 and what's taking place. You're converting interior
5 forestland, in a high elevation, that's -- that's part
6 of a large unfragmented forest block and you're making
7 an incision into it. And, you're introducing human
8 activity. And, there are a lot of species that are
9 sensitive to human activity.

10 Q. Are you saying that the introduction of any human
11 activity on that ridge constitutes habitat
12 fragmentation?

13 A. Sure it does.

14 Q. So, a logging road, for example, that may have existed
15 there for years, you think that's habitat
16 fragmentation?

17 A. It's a disruption, but it's -- what you're not --
18 you've got to understand that there's a difference
19 between logging and between permanent development.
20 Logging is temporary. And, a lot of times, you know,
21 what is done in conjunction with a logging operation is
22 done in concert with other wildlife habitat needs. For
23 example, even though you have a road that's put in
24 that's -- has temporary activity on it, that's once

[WITNESS: Jones]

1 every ten years, once every twenty years. And, what
2 happens in the intervening years is, you use best
3 management practices, put the road to bed and seed it
4 down to a mixture, and maybe the landowner would keep
5 it as early successional habitat. That's an important
6 part of wildlife needs.

7 Putting in a development road, where you
8 have maintenance vehicles and construction vehicles
9 going up and down, and other activities that gets
10 introduced, like cell tower use, you know, that just
11 introduces human activity into an area where you didn't
12 have it.

13 Q. So, any human activity in an area where you didn't have
14 it before constitutes habitat fragmentation?

15 A. On this scale, yes.

16 Q. Okay. Well, what's the smallest scale that you would
17 say --

18 A. Well, even a house. You know, if you built --

19 Q. Okay.

20 A. -- built a house out in the middle of this area, and
21 you had an access road for vehicles. That's
22 fragmentation.

23 Q. Okay. So, even if --

24 A. By the definition of "fragmentation".

[WITNESS: Jones]

1 Q. Okay. So, if, instead of this Project, someone were to
2 build a house somewhere in the vicinity of the Project
3 area, that, in your opinion, would be habitat
4 fragmentation?

5 A. Yes. Right.

6 Q. Thank you. Now, at the top of Page 5, you say that the
7 wind project will bisect unfragmented forest. And, I
8 want to get a sense of what we're talking about here.
9 So, could you please take a look at this large
10 posterboard that I believe we've marked as "AWE 40".
11 All right? Do you see the black line, and I don't know
12 if the Committee members can see this, do you see the
13 black line that I will represent to you shows where the
14 Project road and turbines will be located?

15 A. Yes.

16 Q. You see that? Okay. And, do you understand that the
17 pink and green areas, and we've got these large dark
18 pink areas and these green areas, are, respectively,
19 the pink being "highest ranked habitat in New
20 Hampshire" and the green being the "highest ranked
21 habitat in biological region". Would you agree with
22 that?

23 A. Based on the Wildlife Action Plan habitat ranking, yes.

24 Q. Okay. And, would you agree that this line basically

[WITNESS: Jones]

1 skirts, if you will, it crosses through these two pink
2 areas, but it basically skirts, and does not touch in
3 the lower area and the upper area any of the pink
4 habitat?

5 A. What it does is it bisects those two core habitat
6 areas, and introduces, you know, activity that is a
7 disruption.

8 Q. Okay. And, so, I think you just said earlier that any
9 activity in this area, just building a house with a
10 road, is going to be habitat fragmentation, if I
11 understand you correctly?

12 A. Right.

13 Q. Okay. Now, do you understand where the Project's
14 conservation easements are going to be located with
15 respect to this area?

16 A. Well, I believe they're the hashed marked areas.

17 Q. Right. I'm sorry.

18 A. Yes.

19 Q. They're the hashed marked areas, that's correct. Do
20 you know how much -- how much highest ranked habitat
21 acreage the Project proposes to conserve in these pink
22 areas? And, if I represented to you that it's
23 "approximately 275 acres", would you have any reason to
24 dispute that?

[WITNESS: Jones]

1 A. No.

2 Q. Okay. How about the highest ranked habitat in the
3 biological region? How much is the Project proposing
4 to conserve there in those green areas? If I said it
5 was "148.9 acres", would you agree with that?

6 A. I wouldn't dispute it.

7 Q. Okay. So, do you believe that the Project's proposed
8 conservation efforts in this area of highest ranked
9 habitat is important or significant?

10 A. It's better than not having any at all. But not as
11 good as keeping the area undeveloped.

12 Q. Okay. So, on Page 5 of your testimony, you've said
13 that Stoddard property owners "value the scenic beauty
14 of the hills unmarred by buildings, towers, and other
15 structures". Is that your testimony?

16 A. Right.

17 Q. And, besides yourself, how many of those Stoddard
18 property owners have intervened in this docket?

19 MR. ROTH: I object to that question.

20 That's --

21 MS. BAILEY: Cross-examination?

22 MR. ROTH: What does it mean?

23 MS. GEIGER: The witness has indicated
24 that --

[WITNESS: Jones]

1 MR. ROTH: Why doesn't she just testify
2 that "he's the only one", and then we can move on.

3 MS. BAILEY: We don't know that.

4 MS. GEIGER: Well, I just -- I'm just
5 asking for record. And, I want the record to be clear.

6 BY MS. GEIGER:

7 Q. Are there any -- are there any other property owners
8 that you've talked about in your testimony that have
9 intervened in this docket, besides yourself?

10 A. That wasn't the purpose of the Conservation
11 Commission's intervention. The Conservation Commission
12 is responsible for the conservation lands of the Town
13 of Stoddard. And, we have annual public forums every
14 year to talk about the importance of these conservation
15 lands, and we have quite a following. We've had the
16 Town appropriate \$50,000 for Robb Reservoir. We had
17 the Town accept a 750 acre "Forever Wild" easement
18 property that comes along with an earthen dam that
19 needs to be maintained. And, they kicked in \$10,000
20 for the maintenance of this dam. My point is, the
21 Stoddard Conservation Commission represents the people
22 in the Town of Stoddard.

23 Q. Okay. Thank you.

24 A. Okay?

[WITNESS: Jones]

1 Q. Thanks. Now, could you take a look at what we've
2 marked as "AWE 44A". And, that's the larger map that I
3 -- it should be on the table there in front of you, but
4 I can show it to you, if you need it. Just to make
5 sure the record's clear. The highest ranked habitat in
6 New Hampshire isn't just located in the Town of Antrim,
7 is that correct?

8 A. That's correct.

9 Q. And, isn't it true that, based on this map, that Fish &
10 Game has designated many other areas in the State of
11 New Hampshire as "Highest ranked habitat by condition"?

12 A. When I look at this map, I see a lot of the pink areas
13 in the north, and they coincide with a lot of areas
14 that have been protected by conservation easements.

15 Q. Okay.

16 A. I look at the southwest, and we have a lot of protected
17 lands in the southwest. I see a lot of pink over in
18 the southeast, and know that that coincides with the
19 most rapid development in the State of New Hampshire.
20 So, there's a real concern that there's some
21 conservation values that are being lost in that area.

22 What you have to understand about this
23 map is, it would be nice if you had the conservation
24 layer map overlaying this, so that you could see how

[WITNESS: Jones]

1 many of these high ranked areas have been actually
2 protected. And, what's really important, and what I
3 hope this Committee understands is, that unfragmented
4 forestland that is next to protected lands provides a
5 buffer. It provides a buffer that helps protect the
6 conservation values of Robb Reservoir, okay? And, when
7 you develop Tuttle Hill, and you introduce a four-mile
8 road in this area, it will have some kind of negative
9 impact on the adjacent conservation lands.

10 Q. And, isn't it true that AWE 40 does, in fact, show
11 conservation land in the -- in many areas shown in the
12 pink of the highest ranked habitat in and around the
13 Antrim Wind Project, isn't that true?

14 A. Yes. And, I think my maps that I submitted indicate,
15 and not only indicate where they are, but quantify how
16 much of the unfragmented forest area that Tuttle Hill
17 is in is protected. And, we'd like to see more of it
18 protected.

19 Q. And, isn't it true that the Project will, in fact, do
20 that to the tune of 685 acres?

21 A. It will do it, but with an asterisk beside it. It's
22 allowing limited development, from my understanding.
23 And, that is not as good as having an easement that,
24 you know, doesn't allow any development. Okay? And,

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1 you have to understand that, you know, in the field of
2 conservation, victories are temporary and defeat is
3 permanent. You know, and every time you protect
4 something, and there's something next to it that gets
5 chiseled away, you know, we're losing. And, it's
6 people like me need to step up to the plate and defend
7 these open spaces from this kind of development, which
8 I think is inappropriate.

9 Q. Is it your position that this Project will continue
10 forever?

11 A. It has a 50-year lifespan from what I understand.

12 Q. And, well, --

13 A. Is that true?

14 Q. It's a 20-year lifespan initially, isn't that true?

15 A. I'm not privy to that detail.

16 Q. Isn't it true that this Project will be decommissioned
17 when it's no longer in use?

18 A. That's what I understand.

19 Q. So, therefore, do you still consider it to be
20 permanently impacting this site, even with
21 decommissioning requirements in place?

22 A. Well, let me answer it this way, okay? Growing up in
23 New Hampshire, you know, in the '50s and '60s, there
24 were no bear in this area, very few bobcat. There were

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1 no turkey. There were no coyotes. There were no
2 moose. There were no loons. There were no eagles.
3 There were no osprey. Okay? None of those. I didn't
4 see any of those as a kid growing up. Today, in
5 Stoddard, I see all of those. Okay? And, the reason I
6 see them is, because 100 years, 150 years of
7 agricultural use has been abated, the forests have
8 grown back, they have matured. The Fish & Game
9 Department has had some enlightened management
10 practices. And, we now have these animals part of our
11 New Hampshire way of life. If we want to keep them a
12 viable part of our New Hampshire way of life, we have
13 to keep these large unfragmented forest types intact,
14 free of this kind of development.

15 Q. Is that free of any kind of development?

16 A. And, the Wildlife Action Plan challenges communities to
17 not allow development in these large unfragmented
18 areas. And, you do it by good planning and you do it
19 by finding alternative sites. And, the Stoddard
20 Conservation Commission is asking this Commission to
21 look at an alternative site.

22 Q. I think I have what may be the last question, I hope.
23 In your testimony tonight, you just indicated that, and
24 in your prefiled testimony, you indicated that you've

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1 seen some preparatory cutting on a hike that you took
2 in and around the Project area, is that correct?

3 A. We did a traverse of Tuttle Mountain back in July 10th
4 of 2000 --

5 Q. Just a "yes" or "no" answer please.

6 A. Yes. Right.

7 Q. Okay. Thank you. Could you just take a look at AWE
8 30, and read that to yourself first, and then let the
9 Committee know what that indicates, in terms of the
10 cutting that you observed.

11 A. As I said earlier, when somebody asked me to comment on
12 this, I said it's always hard to figure out what the
13 intent was, okay? I know the forester that stamped
14 this, I know the forester that wrote the plan, okay?
15 It is highly coincidental that they had silvicultural
16 activity that coincided along the route of the proposed
17 roads and the tower sites in this configuration.

18 Q. But isn't it true that that letter from the forester
19 indicates that the -- well, I don't want to misstate
20 anything. So, I'd like to have you read it --

21 A. I don't -- I don't disagree with what he said.

22 MR. ROTH: I'm going to object to this
23 exhibit. I mean, this is clearly hearsay. We've got a
24 letter from a guy, Paul Mulcahey, who is not a witness,

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1 he's not available for cross-examination. It portends to
2 offer testimony about the nature of the forest up there.
3 And, I just think that it's inappropriate for this to be
4 admitted, because it is hearsay.

5 MS. GEIGER: Well, obviously, the rules
6 of evidence don't apply here. I think that this --
7 probably the vast majority of the record that we have here
8 is hearsay. And, so, this witness has said he knows
9 Mr. Mulcahey. Would you have any reason to disagree with
10 Mr. Mulcahey and what he said in this letter about the
11 clearing that occurred on this area that was -- that was
12 done after the request by the Bean family, who owns the
13 property?

14 MR. ROTH: I think there's an objection
15 pending right now. So, before you finished your argument
16 and getting Mr. Jones to agree with it --

17 MS. BAILEY: The rules of evidence --
18 the rules of evidence don't apply.

19 MR. ROTH: Right. But the rules of
20 fundamental fairness do. And, hearsay is a fundamental
21 fairness rule. And, this, I will agree, that a lot of
22 their stuff, and everybody's, you know, newspaper articles
23 and everything would all be constituted "hearsay". This
24 is testimony making a scientific opinion --

[WITNESS: Jones]

1 MS. BAILEY: Okay. Mr. Roth, the
2 objection is overruled.

3 MR. ROTH: I just want to finish -- let
4 me just -- please, just let me finish the objection. This
5 is testimony of a scientific nature. And, I think, if
6 they're going to admit this kind of thing, they should
7 have an actual live witness who can be cross-examined.
8 Thank you.

9 MS. BAILEY: Okay. Objection overruled.
10 Continue please.

11 MS. GEIGER: Thank you.

12 BY MS. GEIGER:

13 Q. So, just to be clear, you said you knew Mr. Mulcahey,
14 who wrote this letter?

15 A. Yes.

16 Q. And, isn't it true, in this letter, Mr. Mulcahey said
17 that "it was his choice", and the Bean family agreed,
18 to target these decadent stands" for cutting "so as to
19 get some regeneration started and to capture any
20 remaining value in these stands." Is that correct?

21 A. That's what he said.

22 MS. GEIGER: Okay. Thank you. I have
23 no further questions.

24 MS. BAILEY: Okay. I'm just going to

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1 see how many questions the Committee thinks it has, just
2 before we decide about a break? Okay. We only have a
3 very few. So, go ahead. Chairman Ignatius.

4 CHAIRMAN IGNATIUS: Thank you.

5 BY CHAIRMAN IGNATIUS:

6 Q. Mr. Jones, remind me, what's the status of the common
7 nighthawk? Is it in a category "endangered",
8 "threatened", "species of concern"? Do you know its
9 status under New Hampshire or federal rules?

10 A. I'd have to look it up.

11 Q. Okay. I think it's been testified to, but I can't
12 remember. And, I know you taped sounds that you
13 identified as common nighthawks. And, you said they
14 were "flying". Did you actually see them flying?

15 A. I think some of us did. I personally did not. But I
16 know the sound of a nighthawk. And, we had some very
17 good birders that were with us that identified it as a
18 nighthawk.

19 Q. Okay. And, this was in July of this year?

20 A. July 10th. And, because of the time of year, it could
21 be presumed that they were nesting.

22 CHAIRMAN IGNATIUS: Well, that's what I
23 was going to get at. Okay. That's all I have. Thank you
24 very much.

[WITNESS: Jones]

1 MS. BAILEY: Okay. Do you have anything
2 to add to your testimony that you haven't had a chance to
3 say?

4 WITNESS JONES: I do not.

5 MS. BAILEY: Okay. Well, then, we thank
6 you very much for your testimony, and you are dismissed.

7 WITNESS JONES: And, the Town of
8 Stoddard thanks you for this opportunity. Thank you.

9 MS. BAILEY: Okay. Can we go off the
10 record to talk about the rest of the night?

11 CHAIRMAN IGNATIUS: Rest of the night?

12 MR. ROTH: You mean, the rest of the
13 night, where we all go home for dinner and go to bed?

14 MS. BAILEY: No.

15 MR. ROTH: Yes, we all go home for
16 dinner and we go to bed.

17 (Brief off-the-record discussion
18 ensued.)

19 MS. BAILEY: All right. Back on the
20 record. We have decided to call it a night, it's almost
21 7:30. And, tomorrow morning we will start at 8:30 with
22 Mr. Beblowski, and then proceed with the Audubon
23 witnesses. And, I believe, if we have time after that,
24 we're going to do the Blocks, finish up the Blocks, the

1 North Branch testimony?

2 MR. IACOPINO: The Blocks,
3 Edwards/Allen, Levesque and Pinello.

4 MS. BAILEY: I've got Edwards/Allen and
5 Levesque and Pinello and part of the North Branch, I don't
6 know --

7 MR. IACOPINO: I'm sorry.

8 MS. BAILEY: All right.

9 CHAIRMAN IGNATIUS: Let's go off the
10 record.

11 MS. BAILEY: Yes, let's go off the
12 record.

13 (Whereupon at 7:30 p.m. a brief
14 off-the-record discussion ensued
15 regarding the scheduling of witnesses,
16 and the **Afternoon Session** of the hearing
17 was subsequently adjourned, and to
18 reconvene on **November 30, 2012**,
19 commencing at **8:30 a.m.**)
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