

1 **STATE OF NEW HAMPSHIRE**

2 **SITE EVALUATION COMMITTEE**

3
 4 **October 20, 2016** - 9:02 a.m.
 49 Donovan Street
 Concord, New Hampshire

DAY 11
Morning Session
ONLY

7 **IN RE: SEC DOCKET NO. 2015-02**
 ANTRIM WIND ENERGY, LLC:
 8 **Application of Antrim Wind**
 Energy, LLC for a Certificate
 9 **of Site and Facility.**
 (Hearing on the merits)

11 **PRESENT FOR**
 12 **SUBCOMMITTEE:**

SITE EVALUATION COMMITTEE:

13 Cmsr. Robert R. Scott Public Utilities Commission
 (*Presiding as Presiding Officer*)

14 Cmsr. Jeffrey Rose Dept. of Resources &
 Economic Development
 15 Dr. Richard Boisvert Dept. of Cultural Resources/
 (Designee) Div. of Historical Resources
 16 John S. Clifford Public Utilities Commission/
 (Designee) Legal Division
 17 Dir. Eugene Forbes Dept. of Environ. Services/
 (Designee) Water Division
 18 Patricia Weathersby Public Member

19
 20 **Also Present for the SEC:**

21 Iryna Dore, Esq. (Brennan Caron Lenehan & Iacopino)
 Pamela G. Monroe, SEC Administrator
 22 Marissa Schuetz, SEC Program Specialist

23 COURT REPORTER: Steven E. Patnaude, LCR No. 052

24

1
2 **APPEARANCES: Reptg. Antrim Wind Energy (Applicant):**

3 Barry Needleman, Esq. (McLane...)
4 Rebecca S. Walkley, Esq. (McLane...)
5 Ashley Scott, Esq. (McLane Middleton)
6 Henry Weitzner (Antrim Wind Energy)
7 Jack Kenworthy (Antrim Wind Energy)

8 **Reptg. Counsel for the Public:**

9 Mary E. Maloney, Esq.
10 Asst. Atty. General
11 N.H. Attorney General's Office

12 **Reptg. the Town of Antrim:**

13 Justin C. Richardson, Esq. (Upton...)
14 John Robertson, Chairman
15 Robert Edwards, Selectman

16 **Reptg. Harris Center for Conservation
17 Education:**

18 James Newsom, Esq.

19 **Reptg. Audubon Society:**

20 Francie Von Mertens

21 **Reptg. Abutting Landowners Group:**

22 Barbara Berwick, *pro se*

23 **Reptg. Allen/Levesque Group:**

24 Mary Allen, *pro se*

Reptg. Meteorologists Group:

Dr. Fred Ward

Reptg. the Wind Action Group:

Lisa Linowes

Reptg. Non-Abutting Landowners Group:

Richard Block, *pro se*
Annie Law, *pro se*
Robert Cleland, *pro se*
Elsa Voelcker, *pro se*

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TRANSCRIPT READER'S NOTE:

*Due to teleconference audio quality
you will find the following herein:*
[inaudible] = garbled or unclear audio
[?] = not sure if it is the correct word

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CHRISTOPHER WELLS**

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P R O C E E D I N G

1
2 PRESIDING OFCR. SCOTT: Good morning,
3 everyone. We're at Day 11 for the Antrim
4 hearings. I'll start with an administrative
5 detail. Our intention, for those who would
6 like to book their calendars, would be to
7 schedule another day for November 7th. Pam's
8 hopeful we'll find a place, hopefully here. So
9 if you could do that.

10 So, here's my intentions. We're
11 about to start again with Mr. James. He's on
12 by telephone. It sounds like we have a much
13 better audio, at least from my position with
14 that. So, hopefully, that will be helpful.

15 Once we're done with Mr. James, I see
16 Mr. Wells in the audience. So, is -- Ms.
17 Allen, are you going to be on the panel also?

18 MS. ALLEN: Yes.

19 PRESIDING OFCR. SCOTT: Okay. But
20 Mr. Levesque will not, correct?

21 MS. ALLEN: He is not available until
22 after 3:00 today.

23 PRESIDING OFCR. SCOTT: Okay. So,
24 we'll do that next. And, then, I have Mr. Ward

1 and Ms. Linowes. So, we'll try to accomplish
2 all that today -- or, we will accomplish all
3 that today. And, then, my intention is, on the
4 7th, that we would have Ms. Connelly for the
5 7th, and that would finish us up for the
6 hearings.

7 Again, we talked about briefs, and
8 we'll have to have a timeframe for that. And,
9 then, we'll have to schedule deliberations
10 also, obviously, so, after we get the briefs
11 and have a chance to digest them for the
12 Committee.

13 DR. WARD: Are you aware the 8th is
14 Election Day?

15 PRESIDING OFCR. SCOTT: Yes. I said
16 the 7th, though, as the date for --

17 DR. WARD: You're trying to sabotage
18 my --

19 PRESIDING OFCR. SCOTT: I am not.
20 So, any questions before we go on?
21 Ms. Linowes.

22 MS. LINOWES: Thank you, Mr.
23 Chairman. I wanted to follow up on one thing
24 that was said yesterday, and this is in regard

[WITNESS: James]

1 to whether or not Mr. Jones's testimony should
2 be stricken from the record because of a site
3 walk that he had made with the Conservation
4 Commission. I just wanted to say, with regard
5 to that, with the exception of the boulder
6 photographs that he had submitted, and one or
7 two lines within his prefiled testimony, I do
8 not believe anything within his submission
9 related to that trip that he took with the
10 Conservation Commission.

11 So, I'm hoping he'll defend himself,
12 but I wanted to make sure that that was on the
13 record.

14 PRESIDING OFCR. SCOTT: Well, I
15 didn't hear a motion yesterday on those, based
16 on that anyways. So, I don't think it's a live
17 issue anyways.

18 MS. LINOWES: Okay. Thank you very
19 much.

20 PRESIDING OFCR. SCOTT: So, unless
21 there's any other administrative details?

22 *[No verbal response.]*

23 (Whereupon **Richard R. James**
24 resumed on the witness stand

[WITNESS: James]

1 via teleconference, having been
2 previously sworn.)

3 PRESIDING OFCR. SCOTT: Again, Mr.
4 James, can you hear us?

5 ADMINISTRATOR MONROE: That's what
6 I'm saying is, though. When folks -- I think
7 he can only hear from here, Bob.

8 PRESIDING OFCR. SCOTT: Oh. Thank
9 you.

10 ADMINISTRATOR MONROE: So, if you
11 could ask, whoever is going to question -- can
12 you hear me, Mr. James? Mr. James?

13 WITNESS JAMES: I can hear you, but I
14 can't hear anyone else in the room.

15 ADMINISTRATOR MONROE: Right. So, if
16 folks, whoever has questions for Mr. James,
17 please come here, and you can have this mike
18 right beside me.

19 PRESIDING OFCR. SCOTT: So, since,
20 Attorney Monroe, from my end of it, if I do
21 have anything, if you could relay that to him,
22 that would be helpful.

23 ADMINISTRATOR MONROE: Okay.

24 PRESIDING OFCR. SCOTT: Because I'm

[WITNESS: James]

1 going to stay where I am. So, all right. So,
2 I think we left off, we had finished with
3 Mr. Ward's questions. And next --

4 *[Audio interruption -*
5 *disconnection of the*
6 *teleconference.]*

7 ADMINISTRATOR MONROE: Oh, no. No.
8 Sorry.

9 PRESIDING OFCR. SCOTT: Why don't we
10 go off the record while we fix our technical
11 details.

12 (Off the record.)

13 PRESIDING OFCR. SCOTT: All right.
14 Back on the record.

15 Next is the -- Ms. Allen, do you have
16 any questions? If you do, again, you're going
17 to have to go sit next to Ms. Monroe.

18 MS. ALLEN: No. We don't have any
19 questions.

20 PRESIDING OFCR. SCOTT: No questions,
21 okay. I don't see Mr. Jones. Okay. Mr.
22 Block, do you have questions?

23 MR. BLOCK: Just a few.

24 PRESIDING OFCR. SCOTT: Okay. So,

[WITNESS: James]

1 again, you'll have to sit next to Ms. Monroe.

2 MR. BLOCK: That's okay.

3 ADMINISTRATOR MONROE: So, Mr. Block
4 is coming up, Mr. James. He's going to ask you
5 some questions.

6 WITNESS JAMES: Okay. Thank you.

7 PRESIDING OFCR. SCOTT:

8 MR. BLOCK: Good morning. Can you
9 hear me okay?

10 WITNESS JAMES: Good morning. Yes.
11 Yes, I can.

12 MR. BLOCK: Great. I just have a few
13 questions for you.

14 **RICHARD R. JAMES, PREVIOUSLY SWORN**
15 **CROSS-EXAMINATION (resumed)**

16 BY MR. BLOCK:

17 Q. We live up on a hill, on a dead-end road across
18 from Tuttle Ridge. My son is a musician and
19 recording engineer. He brought a sound meter
20 to our home a couple years ago and registered
21 an ambient sound level of 19 decibels on a
22 quiet evening. Does this sound reasonable to
23 you?

24 A. That sounds reasonable for an area like you're

[WITNESS: James]

1 located in, yes.

2 Q. Antrim Wind has stated that we can expect a
3 modeled sound of 31.8 dBA at our house. Can
4 you tell me if "dBA" is a different measurement
5 unit than the decibels my son recorded?

6 A. Not knowing the specific meter that your son
7 used, I can only make an assumption. But the
8 most common measurement used in audio
9 engineering is a dBA, and it's the most common
10 reading on a meter. Almost all sound level
11 meters have a dBA setting.

12 So, combining what I've seen from
13 background sound levels testing done, both in
14 the 2012 and the more recent 2016 Application,
15 I would say that 19 is indicative of the
16 region, and that would be a dBA value. So, I
17 would say the two of them are comparable and
18 can be compared.

19 Q. Okay. So, in layman's terms, how different can
20 we expect the sound level of 31.8 dBA to be
21 from a current level of 19? Can you describe
22 what our experience might be and how much more
23 background noise can we expect?

24 A. Well, I think -- I think the important thing to

[WITNESS: James]

1 understand is that that will be a change of
2 about 10 decibels in level, but it isn't -- it
3 isn't the level that's really so important.
4 Right now, with 19 dBA, when you hear, when you
5 are listening at night, is the sounds of the
6 community around you. And that's what's
7 causing the 19 dBA. If we impose upon that a
8 sound level that is 10 decibels higher from the
9 wind turbines, then what you will hear is the
10 sound of the wind turbines. The other sounds
11 will be roughly 10 dBA lower and essentially
12 masked by the wind turbines.

13 So, what the results of operating the wind
14 turbines will be is to replace the natural
15 environment sounds and the community sounds
16 with what would sound like a highway or an
17 airport in the distance, a steady -- a steady,
18 continuous sound, and that would mask many of
19 the distant sounds that you now hear.

20 Essentially, it would transform your home
21 to mine. I live in a suburb, I'm a quarter
22 mile or a half mile north of a highway. It's
23 fairly busy. And, at night, when I go outside,
24 what I hear is the sound of the traffic on the

[WITNESS: James]

1 highways. I don't hear the sounds of the
2 neighborhood. And, so, it would be the same as
3 moving your home near a highway.

4 Q. Okay. My wife and I are both concerned that
5 health issues we have might be affected and
6 even exacerbated by wind turbine noise. For
7 instance, I know that I'm particularly
8 sensitive to very low frequency sounds. My
9 wife is very worried about sleep disruption.
10 In your experience and research, do you feel
11 that our concerns are justified?

12 MR. NEEDLEMAN: I'm going to object
13 to that question. The witness --

14 ADMINISTRATOR MONROE: Hold on. Hold
15 on, Mr. James. There's an objection. Hold on.

16 MR. NEEDLEMAN: The witness is not
17 qualified to address the health effects.

18 WITNESS JAMES: Yes.

19 MR. BLOCK: I think this witness is
20 very qualified, from things we heard yesterday
21 about places he's testified at. And he was a
22 witness for us in the last docket, and I know
23 there were things that he testified about that.
24 So, I think his research I'm very interested in

[WITNESS: James]

1 hearing about.

2 PRESIDING OFCR. SCOTT: I'll give you
3 a little bit of purview. To the extent,
4 obviously, the Committee understands his CV.
5 So, we understand his qualifications. So,
6 we'll let you go a little bit -- I'll let you
7 go a little bit down that road.

8 ADMINISTRATOR MONROE: All right.
9 Mr. James, you can answer the question.

10 **BY THE WITNESS:**

11 A. Let me see if I can use the best research we
12 have available. Health Canada conducted a
13 \$2 million study over a couple of years, I
14 think it was 2013 and '14 or 2012 and '13, in
15 which they interviewed roughly 2,000 people
16 living at various distances around wind
17 projects. What that study showed is that
18 people living at a mile and a quarter away from
19 the nearest wind turbine had almost double the
20 rates of migraines, dizziness, and tinnitus as
21 you would expect in the general population.

22 So, even though the sound levels may be
23 low, 35 dBA or lower, and that in -- in the
24 Health Canada study, these people at a mile and

[WITNESS: James]

1 a quarter were roughly 35 dBA, there is a risk
2 for people who are sensitive to the sound to
3 have a higher rate of migraines, dizziness, and
4 tinnitus.

5 That study is probably the best one done
6 to date, in terms of the medical surveillance
7 questionnaires. And it shows that what we used
8 to think was safe for wind turbines actually is
9 not safe, when we compare the medical complaint
10 or the complaints of common symptoms through
11 the general population.

12 BY MR. BLOCK:

13 Q. Do you believe that the people living closest
14 to these wind turbines would be adversely
15 affected by this Project as it is currently
16 planned?

17 A. Again, if I can refer back to the Health Canada
18 study, anyone within a radius of a mile and a
19 half is at risk of having an increased amount
20 of symptoms that I just described. The
21 closer -- the closer to the wind turbines, the
22 higher the likelihood of having those symptoms.
23 And that's just the -- that's just the findings
24 from the Health Canada study.

[WITNESS: James]

1 Q. Is there any mitigation, and I hate that word,
2 that we or other residents in the North Branch
3 area can avail ourselves of in order to
4 maintain our peaceful lifestyles and minimize
5 the effect of the added wind turbine noise?

6 A. I'm not aware of any, other than dramatically
7 altering your lifestyle, living in -- living
8 inside the home. Possibly having to
9 reconstruct your home, depending on how close
10 you are to the wind turbines. I mean, there
11 are designs for people who have homes near
12 highways or airports. But it's essentially
13 treatments to the home. And there's little
14 that can be done about the outdoor experience.

15 Q. There was a sound sampling station installed by
16 Antrim Wind on the Berwick's property. In her
17 testimony, Mrs. Berwick noted that high wind
18 gusts that were present for many days of the
19 study. Would wind gusts compromise or
20 otherwise affect that sound study?

21 A. Yes, it would. The procedures and protocols
22 for doing a background study call for carefully
23 screening the data that is collected, and
24 eliminating any transient sounds or

[WITNESS: James]

1 wind-induced sounds. I saw nothing in the
2 report that indicated that was done, and some
3 information indicated that those transient
4 sounds remain in the data that was presented.

5 Q. Would an ice coating on the ground affect the
6 noise levels recorded in that sound study?

7 A. It is a possibility. It depends upon where the
8 noise is coming from. Whether it was local to
9 the yard or whether it was coming from traffic
10 or other community noise at a greater distance.
11 I have experienced, and I suspect other people
12 have, on a cold morning, with hard-pack snow,
13 that you can hear sounds from much greater
14 distances than you would on other conditions.
15 So, there's that possibility that it would have
16 affected them.

17 However, I would say that the data from
18 the most recent study, the L90 data, did show
19 very quiet levels. And those are probably
20 indicative of the natural background sound.
21 It's called the "long-term background sound" in
22 the community. It's just that there is a lot
23 of other contamination that was included in the
24 average levels and some of the other data.

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[WITNESS: James]

1 Q. So, would a failure to note conditions
2 involving, for instance, hard ice on the
3 ground, compromise the sound study?

4 A. A failure to note that it's there?

5 Q. Yes.

6 A. It shows a failure to note an important fact.
7 In doing a background sound study, one of the
8 times you don't want to do a study is when
9 there is snow on the ground or any kind of
10 precipitation. And any of the data that was
11 contaminated by precipitation would need to be
12 removed.

13 Since there wasn't really a lot of detail
14 in that report about how the data was screened,
15 and that's why I focused on the L90 values,
16 because that method, the sound level meter
17 tries to eliminate the transient sounds. And,
18 so, I relied basically on the L90 data. And,
19 as I said, for all of the reports, nighttime
20 L90s were very low, they were 20 decibels or
21 lower.

22 Q. I believe that Mr. O'Neal's report did not
23 include any octave noises, stating that the
24 information is not provided by Siemens. Can

[WITNESS: James]

1 you explain to me what are "octave noises"?

2 A. Typically, a laboratory test report for a wind
3 turbine, the sound power level reports from the
4 IEC 61400 Part 11 test, include a table that
5 shows both the dBA and the -- the dBA is the
6 overall sound level with frequency weighting to
7 exclude low frequencies. They also generally
8 include a table that shows the sound pressure
9 level in each of the octaves, from the lowest
10 octaves, I believe now the most current version
11 of the standard goes down to 20 hertz, on up
12 through the higher frequencies. That octave
13 band data is more detailed than the A-weighted
14 level, and does show us what the low frequency
15 emissions of the wind turbine would be.

16 Why Siemens would not share that is beyond
17 me. I see it routinely in data from Siemens in
18 Ontario cases. I've seen it routinely from
19 other manufacturers. So, why they wouldn't
20 include it for this particular wind turbine, I
21 don't know.

22 Q. So, would it be reasonable to expect this
23 turbine to produce octave noises, and would
24 that affect or increase the decibel levels

[WITNESS: James]

1 expected?

2 A. No. The octave -- well, it's reasonable that
3 they should have been included, but the focus
4 on dBA, instead of on octave, means that we
5 really don't know anything about the low
6 frequency emissions from the wind turbines,
7 because the dBA value discounts low frequency.
8 And, as wind turbines have gotten larger, the
9 acoustic emissions have shifted from the
10 frequency range where dBA is a good measure,
11 down into the frequency range -- the lower
12 frequency ranges, where dBA is not a good
13 measure.

14 So, by excluding the octave band data, we
15 are denied information about how these Siemens
16 wind turbines will sound in that lower
17 frequency range. It doesn't alter the dBA. It
18 just means that we don't know anything about
19 low frequency emissions.

20 MR. BLOCK: All right. Thank you. I
21 have no further questions.

22 WITNESS JAMES: Thank you.

23 PRESIDING OFCR. SCOTT: Thank you,
24 Mr. Block. Ms. Berwick.

[WITNESS: James]

1 MS. BERWICK: I believe I'm only
2 allowed to ask questions on redirect. Is that
3 correct or not?

4 PRESIDING OFCR. SCOTT: Yes. Thank
5 you. I was thinking -- I was thinking he was
6 Ms. Longgood's witness.

7 MS. BERWICK: Well, he is Ms.
8 Longgood's, but I was --

9 PRESIDING OFCR. SCOTT: Yes, but
10 you're speaking for them.

11 MS. BERWICK: Okay.

12 PRESIDING OFCR. SCOTT: Okay. All
13 right. Thank you. The Harris Center?

14 MR. NEWSOM: No questions.

15 PRESIDING OFCR. SCOTT: Behind the
16 pillar there.

17 Counsel for the Public?

18 MS. MALONEY: No questions.

19 PRESIDING OFCR. SCOTT: Any I don't
20 see anybody from the Giffin/Pratt intervenors.
21 I don't see Mr. Enman either.

22 So, I think that leaves Mr.
23 Richardson?

24 MR. RICHARDSON: Thank you. I have

[WITNESS: James]

1 no questions. Mr. Enman indicated he would not
2 be able to make it today.

3 PRESIDING OFCR. SCOTT: Thanks for
4 that. Mr. Needleman, it looks like you have
5 something.

6 MR. NEEDLEMAN: Hi, Mr. James. This
7 is Barry Needleman. I represent Antrim Wind.
8 Can you hear me okay?

9 WITNESS JAMES: Yes, I can. It was
10 "Barry" --

11 MR. NEEDLEMAN: It's Barry.

12 WITNESS JAMES: -- "Needleman"?

13 MR. NEEDLEMAN: Barry, with a "B",
14 yes.

15 WITNESS JAMES: Okay.

16 BY MR. NEEDLEMAN:

17 Q. So, let me start off with octave information.
18 In fact, Mr. Block was incorrect about that.
19 On Page 26 of the report that was submitted by
20 Mr. O'Neal, there is octave information that
21 was provided by Siemens. I take it you weren't
22 aware of that?

23 A. I haven't read the report recently. I was
24 going off of what he said. Let me go check

[WITNESS: James]

1 then. I'm pulling it up. You said it was
2 "Page 26"?

3 Q. PDF Page 26 of the report.

4 A. Okay. I'm heading there now.

5 MS. BERWICK: Mr. Needleman, do you
6 know what page number that would be on a
7 printed copy?

8 WITNESS JAMES: Okay. Yes. I do see
9 Table 7-2. So, I do see the octave band data,
10 and it is included. Thank you.

11 BY MR. NEEDLEMAN:

12 Q. So, everything that you just said regarding an
13 absence of octave band data, and the problems
14 associated with that, is no longer accurate, is
15 that right?

16 A. Well, the octave band data is presented as
17 A-weighted. So, it still doesn't show the low
18 frequency component. The low frequency has
19 been extracted from it by the A-weighting.
20 But, with manipulation, I could reconstruct the
21 true spectrum.

22 Q. Mr. --

23 A. So that I would say half of what I said was
24 still applicable. The report doesn't show the

[WITNESS: James]

1 low frequency. It did show the A-weighted
2 octave bands, which could be mathematically
3 corrected.

4 PRESIDING OFCR. SCOTT: Hold on a
5 second, Mr. Needleman.

6 Ms. Berwick, that's Page 7-3.

7 MS. BERWICK: Thank you.

8 PRESIDING OFCR. SCOTT: Go ahead,
9 Mr. Needleman.

10 BY MR. NEEDLEMAN:

11 Q. Mr. Block mentioned to you a few minutes ago
12 about a "19 dBA sound level" that was measured
13 at his home. Do you remember that?

14 A. Yes.

15 Q. Do you know what the conditions were under
16 which that measurement was taken?

17 A. Other than, it would have to have been a very
18 quiet night. Similar to the kind of nights
19 that don't have nearby activity or transients.
20 That's my own assumption or my own knowledge.

21 Q. So, if we --

22 A. As I said, I compared it to the L90s that were
23 reported in the report. And, as a way to
24 benchmark whether or not that number was valid.

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[WITNESS: James]

1 And I've done a lot of testing in areas very
2 similar to Mr. Block's home, when I was up
3 there in 2012. I didn't do testing on the
4 site, but I did go through the area. And the
5 numbers that were reported as the L90s for
6 nighttime and the number that he reported are
7 not atypical. They're common in very quiet
8 rural areas, rural wilderness areas.

9 Q. Now, you just said it was a "very quiet night".
10 If the wind farm actually were constructed and
11 operating at that point, it's certainly
12 possible that, it being a very quiet night, the
13 turbines wouldn't be operating. Isn't that
14 right?

15 A. If you remember my earlier testimony, the
16 so-called "worst-case situation" is a night
17 when we don't have wind on the ground, but we
18 have upper level winds on the top of the ridge,
19 and particularly at the height of the blades,
20 providing enough power for them to operate at
21 nominal capacity or better.

22 So, I would say that, yes, there will be
23 nights when it's windy outside and it's noisier
24 than 19 dBA. But the nights that one might

[WITNESS: James]

1 want to spend on the patio, which are nights
2 without wind, could just as easily have wind
3 turbine noise operating, wind turbine noise
4 present. And, as I said, it would change the
5 character, just to sound like a highway in the
6 distance.

7 Q. So, regarding the point you just made about
8 "worst case", do you have any idea if the
9 alleged 19 dBA conditions are in any way
10 similar to the worst case 31.8 dBA analysis
11 that was done in Mr. O'Neal's model?

12 A. I'm not sure what you mean by that question.

13 Q. Is there any way for you to compare the
14 supposed 19 dBA that Mr. Block talked about
15 with the worst-case analysis that is included
16 in Mr. O'Neal's report? In other words,
17 Mr. O'Neal did the worst-case analysis.

18 A. Well, all of these -- all of these are
19 prospective. We're all matching or guessing
20 what will happen in the future. My assessment
21 of it, and I am pretty sure that Mr. O'Neal's
22 assessment of it, is benchmarked in the fact
23 that a number of projects we've done models,
24 and then after the project is operating, we've

[WITNESS: James]

1 gone out and taken measurements to confirm that
2 our initial assumptions were in the ballpark.

3 And, so, I don't see any problem in the
4 kind of statement that I made or in any of the
5 other prospective statements. What we have is
6 a quiet wilderness rural community with very
7 little noise. And, when we start operating
8 wind turbines on distances of particularly
9 under a mile and a half, mile and a quarter,
10 the audible sounds will be present and they
11 will mask the otherwise -- or, the original
12 quiet natural sounds. That's just -- that's
13 just what happens when you put in a noise
14 source. Doesn't matter whether it's wind
15 turbines or a highway or an airport. It alters
16 the character of the background sounds in a
17 community.

18 Q. Is there any requirement in the SEC rules that
19 imposes a relative sound standard, as far as
20 you know?

21 A. The standard is based upon a not-to-exceed
22 limit.

23 Q. So, that's not a relative standard, is that
24 correct?

[WITNESS: James]

1 A. That's right. Unlike New York and other
2 communities that have a not-to-exceed X dB over
3 the background sound level, the SEC rule sets
4 an upper threshold. Which is a way of, I
5 guess, simplifying some of the complexities of
6 prospective applications.

7 Q. Now, with respect to Mr. O'Neal's report, the
8 SEC rules required him to use the ISO 9613-2
9 standard, isn't that right?

10 A. That is correct.

11 Q. And Mr. O'Neal, in fact, did use that standard,
12 is that right?

13 A. He used parts of it.

14 Q. And you take an issue with how --

15 A. He selected -- he selected -- he selected parts
16 of it that -- I should say he excluded that
17 parts of it that require that the tolerances be
18 applied.

19 Q. Well, that's what I want to talk to you about.
20 You've taken issue with how he ran the model.
21 For example, you said that he used a "G factor
22 of 0.5", and you think it should have been
23 something different. Same with the K factor.

24 So, my question to you is, where in the

[WITNESS: James]

1 SEC rules does it say that it was wrong for him
2 to use a G factor of 0.5?

3 A. It says -- it says in the SEC rules that he is
4 to model the likely worst-case situation.

5 Q. That wasn't my question.

6 A. The likely worst-case situation -- yes, it
7 does.

8 Q. No, that's not my question, though.

9 A. The likely worst-case situation --

10 Q. My question --

11 A. Well, you're asking -- yes, you are. You're
12 asking me a question on "where in the SEC rules
13 does it say this and that?" And I'm telling
14 you that the rules have to be looked at in
15 total. And, in total, it says "the model shall
16 represent a worst-case situation", which means
17 the ground factor should be selected for worst
18 case, and other variables and options in the
19 model construction should be selected for worst
20 case. And selecting a ground factor of 0.5 is
21 not a worst-case situation.

22 Q. Is there any place in the SEC rules or the ISO
23 standard where it says that he was wrong to use
24 that 0.5 ground factor? Not your opinion. Any

[WITNESS: James]

1 place where it says it was wrong for him to use
2 it?

3 A. The SEC rules specified the conditions to be
4 modeled. The assumption is that the
5 acoustician constructing the model understands
6 what conditions will lead to a model of worst
7 case. My argument with Mr. O'Neal's model is
8 that he did not select those values.

9 Q. So, this is not a question about whether Mr.
10 O'Neal complied with the requirements. You're
11 not saying he didn't comply with a specific
12 requirement. You're saying that you would have
13 just done it differently?

14 A. He didn't -- excuse me. He did not comply with
15 the requirement to have the model represent a
16 predictable worst-case situation.

17 Q. But, again, --

18 A. And that is a requirement.

19 Q. But, again, this is an engineering judgment
20 issue. This is a dispute between you and Mr.
21 O'Neal about an engineering judgment as to what
22 the right number to use was. You're not saying
23 that Mr. O'Neal was obligated by the standard
24 to specifically use a 0.5 versus a 1.0 G

[WITNESS: James]

1 factor, isn't that correct? You're just
2 arguing about an engineering decision, isn't
3 that right? You would have done it one way, --

4 A. I'm arguing about the fact --

5 Q. -- he did it a different way?

6 A. Mr. O'Neal -- Mr. O'Neal had stated that, had
7 he used a ground factor of zero, the predictive
8 values would have been roughly 3 decibels
9 higher. If we assume that, during at least a
10 good part of the year we have frozen ground or
11 we have a canopy that would be reflective
12 similar -- relating to a ground factor of zero,
13 then, by his own admission, his model is 3 dB
14 below what would be "worst case", and that's
15 ignoring the arguments about tolerances and
16 other factors.

17 Q. So, in other words, --

18 A. So, I understand your -- I understand your
19 question, but I disagree with the premise.

20 Q. You disagree that it's an engineering choice or
21 you're prepared to point me to a particular --

22 A. That's right.

23 Q. So, you can point me to a particular part of
24 the SEC regs or the ISO standard that

[WITNESS: James]

1 demonstrates he was wrong to use that standard?
2 Not just your opinion, but empirically he was
3 wrong?

4 A. I can point to the fact that the standard says
5 that it's a not-to-exceed limit, based upon a
6 worst-case model. And that, in engineering and
7 acoustics, we all know what leads to a
8 worst-case model. There are a number of
9 variables we can tweak, and he selected
10 variables that did not lead to a worst-case
11 model. This isn't dueling engineers. This is
12 just "how do you get to a worst-case model?"
13 And, when you select the input variables, as he
14 admitted, 3 dBA above worst-case, you can't
15 call that model "worst case".

16 Q. When you were testifying yesterday, you said
17 that you would have added in a "3 dBA
18 correction factor", and then you also said you
19 would have "thrown in another 5 dBA". Do you
20 remember that?

21 A. That is correct.

22 Q. Now, when you say you would have "thrown in
23 another 5 dBA", there's no place in the SEC
24 rules and no place in the ISO standard that

[WITNESS: James]

1 requires that or even talks about that, isn't
2 that correct?

3 A. That is -- in the SEC rules, yes, there is.
4 And that is the requirement to represent a
5 "worst case". The model makes a number of
6 assumptions. But, in order for the model to be
7 directly applicable, the wind turbines have to
8 be only 30 meters above the ground or above the
9 receiver, which is definitely not happening on
10 a ridge. They have to be within one kilometer.
11 And the winds -- and the blades have to be
12 below any kind of temperature inversion
13 boundary in order to meet the formulas in the
14 ISO model.

15 The way that is handled, because wind
16 turbines don't meet those, the way that is
17 handled is to apply a design safety factor
18 based upon a number of different acousticians,
19 David Hessler being one I quoted in my report,
20 my own work, and the work of some of my other
21 colleagues, we find that, for the kind of
22 conditions for ridge-mounted wind turbines,
23 that an additional 5 decibels is reasonable,
24 and then relates to the kind of measurements

[WITNESS: James]

1 we'd get when we go out to follow up on
2 complaints.

3 So, if we want a worst-case model, I, and
4 I said "I", would apply not only the plus 3 dB
5 required by the ISO model, and required by
6 generally accepted engineering practice, I
7 would also apply an additional five dB to
8 account for the fact that the wind turbines are
9 above the temperature inversion boundary.
10 They're not near the ground, so that none of
11 the ground effects tie in.

12 It's a way to make a model that is very
13 simplistic represent a condition that wasn't
14 just trying to represent or the model was not
15 designed for modeling wind turbines, it was
16 designed for modeling ground sources
17 *[inaudible]* monitored. So, that safety factor
18 is based upon experience.

19 Q. So, Mr. James, let's get back to my question.
20 It was a simple question. Isn't it correct
21 that there is no place in the SEC rules that
22 requires the addition of that 5 dBA and there
23 is no place in the ISO standard that requires
24 that?

[WITNESS: James]

1 A. There's no place in the ISO standard. There is
2 a requirement in the SEC guidelines to
3 represent "worst case" and to apply any
4 necessary correction factors to accomplish
5 that.

6 Q. The sound scale isn't linear, is it? It's
7 logarithmic, is that right?

8 A. What do you mean the "sound scale"?

9 Q. So, in other words, an increase in dBA --

10 A. You're talking about -- you're talking about --
11 okay.

12 Q. An increase in --

13 A. Go ahead. I understand now what you said.

14 Q. Yes. An increase in dBA from 31 to 36 is,
15 what, three times as much sound power,
16 something like that?

17 A. Well, every doubling of sound power is
18 3 decibels.

19 Q. Okay. So, 6 decibels would be a quadrupling,
20 right?

21 A. Yes. That would be a quadrupling.

22 Q. So, 5 is about three times, something like
23 that?

24 A. I wasn't going to try to estimate logarithms

[WITNESS: James]

1 this hour of the morning.

2 Q. Yes. Well, I certainly can't do it. But --

3 A. If we stay with -- if we stay with 6, you can
4 say that's four times more acoustic energy.

5 Q. Yes. Quite a bit higher. So, the predicted
6 sound level at Mr. Block's house, as he
7 mentioned before, based on Mr. O'Neal's model,
8 is 31.8. So, what you're saying, your
9 testimony is, you would have just added another
10 5 dBA and may it 36.8, is that right? And you
11 would have done that without --

12 A. That's correct.

13 Q. And you would have done that without any --

14 A. That would have been 3 --

15 Q. So, you would have made --

16 A. I would have done 3 dB for the tolerances, plus
17 another 5.

18 Q. All right.

19 A. It would have been 8 dB.

20 Q. So, you would have just made it more than four
21 times, you would have just added five, six
22 times as much, even though that's not required
23 anywhere in the ISO standard or the SEC rules,
24 is that right?

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS: James]

1 A. The standard -- my addition and the tolerances
2 are required in the rules, if you're going to
3 build a model representing the predictable
4 worst-case situation.

5 Q. We already talked about the fact that Mr.
6 O'Neal did what the SEC required here, in terms
7 of using this particular model. You heard Mr.
8 O'Neal testify that he used the exact same
9 methodology when he did the predictive sound
10 modeling for the Groton Wind Project here in
11 New Hampshire. Do you remember that?

12 A. I remember that, yes.

13 Q. And you also heard him testify that he then
14 went out and did post-construction monitoring
15 at the Groton wind farm, and that that
16 post-construction monitoring confirmed his
17 pre-construction predictions. Do you remember
18 that?

19 A. I remember him saying that.

20 Q. Okay. Now, the SEC regulations here, and I'm
21 looking particularly at 301.14(f)(2)(a), set
22 specific daytime and nighttime noise standards
23 that the facility would have to meet if this --
24 if the Committee gave it a certificate, isn't

[WITNESS: James]

1 that correct?

2 A. What was the rule number again?

3 Q. 301.14 --

4 A. 301 --

5 Q. 301.14(f)(2)(a). This facility would have to
6 meet those standards, isn't that correct?

7 A. Well, I'm looking for it. So, just give me a
8 second.

9 Q. Okay.

10 A. It's a fairly long section, from what I'm
11 seeing here. 301.14, "Criteria Relating" --
12 "Relative to Findings of Unreasonable Adverse
13 Effects".

14 Q. I'm looking at --

15 A. Okay.

16 Q. I'm looking at .14(f)(2)(a), the specific sound
17 standards. Do you see that? There's a
18 nighttime standard and a daytime standard. Do
19 you see those?

20 A. Are we looking at the same section, "Criteria
21 relative to findings of unreasonable adverse
22 effects"?

23 Q. Let's do it this way. You agree with me that
24 the SEC rules require that they meet a standard

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS: James]

1 of I believe it's 45 dBA during the day and 40
2 dBA at night, is that correct?

3 A. That is correct. Yes.

4 Q. So, that's the law. They have to meet that
5 standard if they get a certificate, right?

6 A. Yes. That is correct.

7 Q. And you're also aware that, as part of the law,
8 they would have to go out and do
9 post-construction monitoring to demonstrate
10 that they're meeting that standard, is that
11 correct?

12 A. That is. There is a requirement for
13 post-construction monitoring, yes.

14 Q. And they would have to do that during -- they
15 have to do it multiple times, during different
16 seasons, under different conditions, to
17 demonstrate they're meeting that standard,
18 right?

19 A. That is the proper way to do it, yes.

20 Q. And you're also aware that the facility has an
21 ongoing obligation to comply with the law, and,
22 if they're not meeting that standard, they have
23 to fix it or they have to stop operating. Do
24 you understand that to be true?

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS: James]

1 A. That is correct.

2 MR. NEEDLEMAN: Okay. Thank you. I
3 have no further questions.

4 PRESIDING OFCR. SCOTT: Dr. Boisvert.

5 DR. BOISVERT: Yes. Yes, I have one
6 question. Should I go over there?

7 ADMINISTRATOR MONROE: Yes. It would
8 be helpful.

9 Mr. James, this is one of the
10 Committee members coming to ask you some
11 questions.

12 WITNESS JAMES: Okay.

13 BY DR. BOISVERT:

14 Q. Good morning. You made reference --

15 A. Good morning.

16 ADMINISTRATOR MONROE: Just identify
17 yourself.

18 DR. BOISVERT: Oh. This is Richard
19 Boisvert, one of the Subcommittee members.

20 WITNESS JAMES: Good morning, sir.

21 DR. BOISVERT: Good morning.

22 BY DR. BOISVERT:

23 Q. You made reference to a study in Canada that
24 basically evaluated health effects of sound

[WITNESS: James]

1 within a 1.5 mile area. Do you happen to know
2 what the sample size was for that Canadian
3 study? How many residences or people?

4 A. Yes. Yes. Yes. Yes. It was a blinded study,
5 using questionnaires and trained -- we don't
6 call them "interviewers", and I believe it
7 involved, at the end, something like 1,800
8 samples that were validated and used for final
9 analysis. It represented six wind turbine
10 projects that had been operating for a period
11 of time, and ranging in different sizes of wind
12 turbines. And it -- and it included people on
13 both the [inaudible] says under 500 meters, out
14 to distances of about 4 to 5 kilometers. So,
15 it included people close up to the project and
16 in the middle of the project, because much of
17 this flat farmland, out to distances where the
18 visibility of the wind turbines was very
19 limited.

20 Q. Do you know if there was any differences in the
21 proportions of people who reported ill effects
22 based upon distance? Was there a phenomena
23 that the closer you were to the source of the
24 sound, the more likely there would be a report

[WITNESS: James]

1 of negative effects?

2 A. Yes, there was. It was a very strong
3 correlation, that showed an increasing
4 prevalence rates for these key symptoms,
5 migraines, dizziness, and tinnitus, and also
6 one called "health worse this year than last".
7 All of which the prevalence rates increased the
8 closer you got near the wind turbines. It
9 was -- the part of the study that was most
10 surprising was that, at distances of a mile and
11 a quarter, 2 kilometers, where we would have
12 expected to see these prevalence rates drop
13 off, because at that point the audible sounds
14 had dropped significantly, we're only looking
15 at low frequency in any sound, that the
16 prevalence rates were still over, in some
17 cases, double the general population, but, in
18 all cases, well over what we would expect for
19 the general population. By the time we get up
20 to 500 meters, a kilometer or less, actually,
21 the prevalence rates had exceeded double for
22 all of them.

23 DR. BOISVERT: Thank you. That's all
24 I have.

[WITNESS: James]

1 PRESIDING OFCR. SCOTT: Commissioner
2 Rose?

3 CMSR. ROSE: I'm all set at this
4 time.

5 PRESIDING OFCR. SCOTT: Okay. You're
6 going to make the trek, Ms. Weathersby?

7 MS. WEATHERSBY: I've got a few
8 questions.

9 ADMINISTRATOR MONROE: Sorry for the
10 inconvenience. We have another Committee
11 member, Mr. James, that would like to ask you
12 some questions.

13 WITNESS JAMES: Okay. Thank you.

14 MS. WEATHERSBY: Good morning. This
15 is Patricia Weathersby. I'm a public member
16 here on the SEC.

17 BY MS. WEATHERSBY:

18 Q. The Canadian study, did that study conclude
19 that the migraines were a result of the noise
20 from the turbines or might it have been shadow
21 flicker or some other cause?

22 A. Well, at that distance, shadow flicker is much
23 less of a problem at a distance of a mile and a
24 quarter. The study did not draw any

[WITNESS: James]

1 conclusions about cause-and-effect. It's only
2 the trend lines, when you compare -- when you
3 compare, we know what the prevalence of
4 tinnitus, dizziness, and migraines, and
5 worsening health is in the general population.
6 That is the control group for a study like
7 this. And, when we compare the prevalence
8 rates for the general population to the
9 prevalence rates found in the study, at
10 distances of a mile and a quarter, there are
11 sharp increases in all of these prevalence
12 rates. So, let me see if -- given that, now
13 ask your question, and let me see if I can
14 answer it directly.

15 Q. I think you answered it. And I'm going to ask
16 you something else.

17 A. Okay.

18 Q. One of your criticisms of Mr. O'Neal's report
19 was that the sounds that he collected during
20 the monitoring period didn't filter out noises,
21 such as traffic, birds chirping, rustling
22 vegetation, etcetera. And, to me, as sort of a
23 layman, if all of those background noises of
24 the rustling vegetation and the birds chirping,

[WITNESS: James]

1 *etcetera*, are factored out, don't you -- aren't
2 those sounds simply part of the environment?
3 And, if they're removed, wouldn't the
4 background sound level get pretty much close to
5 zero?

6 A. Well, this has to do with how our auditory
7 system and our brains work. Our brains are
8 real good at filtering out those transient
9 sounds. If you think about talking to someone
10 on the sidewalk with cars going by, it's the
11 quiet times in between the cars that allow you
12 to communicate.

13 And, so, when assessing a community for a
14 noise source, the rules that we have followed
15 for years, I took my classes back in the 1960s,
16 and they were the same then as they are now, is
17 to determine what the sound level is in between
18 those events, in order for us to understand
19 just how much room we have for not interfering
20 with speech, not interfering -- not creating
21 annoyance and other things.

22 It is the silence between events that we
23 use to assess the character of a community.
24 The events themselves may add color to that

[WITNESS: James]

1 community, but they're not part of the decision
2 as to whether a new noise source will be
3 compatible.

4 The other thing is that we make that
5 assessment for the quietest time of the day
6 that the new noise source is going to operate.
7 If wind turbines only operated during the day,
8 then we would look at periods during the day
9 when we have a lot more community activity.
10 But, at night, particularly at night during
11 sleeping hours, there aren't many of these
12 transient sounds.

13 If you're inside a home, the sound of wind
14 is relatively masked. So, the sounds that come
15 through the walls, the low frequency and the
16 rumble from the wind turbines, the thumps more
17 than the whistles, become the source of
18 annoyance and sleep disturbance. So, it's
19 important to know the background sound level,
20 this long-term background sound. Because
21 that's the way our brains and ears have learned
22 to work. That's what wakes us up. That's why
23 a dripping water faucet at night, in a quiet
24 room, can be so loud as to keep someone from

[WITNESS: James]

1 awakening [?], while, during the daytime, you
2 might not hear it drip.

3 So, the character of wind turbine
4 operation being nighttime, and the character of
5 a rural community, nighttime being quiet, means
6 we have to focus on, not the transient sounds,
7 but on these quiet periods when the wind
8 turbines will be operating.

9 And that's also the way the standards are
10 written. We have standards, as acousticians,
11 we have standards that we have to follow. In
12 order for someone to know that a test I did is
13 comparable to a test that someone else did, we
14 have standardized protocols. Those
15 standardized protocols for background noise are
16 covered in two documents. The most -- the
17 broadest one is called "ANSI S12.9 Part 3", and
18 that calls for very carefully excluding all of
19 the transient sounds when determining the
20 background sound level.

21 Q. Okay. Thank you.

22 A. And they spell out a procedure for how to do
23 that. Okay. Thank you.

24 Q. Thanks. This is my last question. I'm just

[WITNESS: James]

1 wondering about your personal opinion
2 concerning wind energy, in general?

3 A. My personal opinion about wind energy? I
4 think -- I think we need to focus on renewable
5 noise -- or, renewable energy sources. I am --
6 I am very much a person who has supported
7 clean, renewable energy. I just don't feel
8 that, in the process of solving one problem, we
9 should create a new problem, and, therefore,
10 putting them too close to homes is a problem.

11 Q. So, you're opposed to wind energy generally or
12 just opposed when they're close to homes?

13 A. Just when they're close to homes. I'm aware of
14 projects where -- in this country where there
15 are no complaints, where the homes aren't
16 nearby. I've been through Iowa, I've been
17 through states in the Great Plains, where wind
18 turbines are no where near homes. Those
19 projects I think are absolutely supportable.
20 I've subscribed to a number of wind energy
21 magazines; *Renewable Energy World*, *Wind Energy*
22 *Sentinel*. Basically, magazines that talk about
23 the trade. And I notice that, in all of those
24 magazines, the pictures of wind turbines seldom

[WITNESS: James]

1 have homes.

2 So, what I'm looking at is the problem
3 that occurs when you put a large industrial
4 machine or a utility-scale wind turbine in a
5 situation where it begins to interfere with the
6 quality of life and pose health risks to
7 people. We need to put them where people are
8 not located.

9 MS. WEATHERSBY: Okay. Thank you. I
10 have nothing else for you.

11 WITNESS JAMES: Okay. Thank you.

12 PRESIDING OFCR. SCOTT: Commissioner
13 Rose.

14 ADMINISTRATOR MONROE: There's
15 another Committee member, Mr. James, is going
16 to ask you some more questions.

17 WITNESS JAMES: Okay. Thank you.

18 CMSR. ROSE: Good morning, Mr. James.
19 This is Jeff Rose. I serve as a member of the
20 Site Evaluation Committee. And just a couple
21 of quick questions for you.

22 BY CMSR. ROSE:

23 Q. You had stated in your prefiled testimony that
24 you had "concerns about the location" -- "the

[WITNESS: James]

1 locations that were used for measuring the
2 background noise". And I think you may have
3 explained that a little bit earlier. But could
4 you give me a little bit better clarity as to
5 where or what better locations they should have
6 done and what the adverse impacts might have
7 been, based on what you believe to have been
8 inaccurate or inappropriate locations for the
9 measuring of the background noise?

10 A. Okay. The purpose of a background sound study
11 is to determine what kind of sound levels a
12 person, who's trying to enjoy the outdoors,
13 would hear. And, therefore, the sound -- the
14 background sound level testing locations really
15 need to reflect those locations. So, if we
16 look at the ANSI standard that I said defines
17 the protocols, the exact rules [?] given there
18 is putting the microphone in the backyard of a
19 home. Well, this has a number of purposes.
20 One, if we put the microphone in the front
21 yard, then we overstate the effect of traffic,
22 because people don't live in their front yards.
23 In fact, if we look at homes, many times homes
24 are back away from the road because we want

[WITNESS: James]

1 that separation distance.

2 We also -- and we also have in the
3 standard prohibitions against putting the
4 microphones or the test stands too close to
5 shrubbery or leaves or anything that might
6 cause localized high noise, and that would be
7 non-representative of what a person would
8 experience if they were in their yard or
9 sitting on the patio.

10 So, my goal in doing background testing,
11 is to identify where people expect quiet, and
12 to assess what those sound levels are. And,
13 then, when assessing a new noise source to
14 determine what its impact would be at those
15 locations, we don't really care about how much
16 noise the wind turbines make in the front yard,
17 near the road, or over near the creek, or near
18 the woods, where you have a lot of leaf rustle.
19 We want to know what the sound levels will be
20 where the people will be.

21 And, so, my criticisms were that there
22 were technical flaws by locating it too close
23 to another noise source. So, for example, the
24 logging operation and logging equipment, that's

[WITNESS: James]

1 not where people spend their time. Putting the
2 microphones in areas where we overemphasize
3 traffic noise is also wrong.

4 An acoustician who is taking a background
5 sound study has an awful lot of ability to
6 manipulate that data just by where they put the
7 microphone, where they put the test stand. And
8 I disagreed with some of the locations where he
9 put the test stands.

10 However, all of that aside, we find, when
11 we look at the L90 data for nighttime, that, in
12 all of those cases, we see numbers in the low
13 20s or a little less than 20. And that's
14 indicative of a very quiet -- very quiet
15 community.

16 My backyard, which is a suburb, like I
17 said, about a mile, mile and a quarter away
18 from major expressways, is 35 dBA at night.
19 That's when nothing's going on in my community.
20 And that's what I would expect in a suburban
21 community.

22 However, I also can't hear what's going on
23 in the -- from neighbors only a block away. If
24 I was out in Mr. Block's home, I would be able

[WITNESS: James]

1 to tell what the neighbors are doing, because
2 it's so quiet, I could hear them. And that's
3 the difference in character between a rural
4 community and an urban community. In urban
5 communities, we have different lifestyles,
6 because we learn to accommodate those noises.
7 Rural communities do not. In fact, in many
8 cases, people seek rural communities simply so
9 they don't have that type of noise.

10 In the ANSI standards on land-use
11 compatibility, these are used when -- I used to
12 work for General Motors designing new
13 facilities. We'd have all these same questions
14 come up. But, in the ANSI standards, there is
15 a presumption that, in a rural community,
16 people need 10 decibel lower sound levels,
17 because of the nature and the expectations of
18 people in the rural communities.

19 So, it's actually written into our
20 standards that, if it's a suburban community,
21 you can have sound levels 10 dB higher than you
22 can in the rural communities. And that's what
23 I was trying to, I guess, explain.

24 Q. Thank you. There was a little bit of

[WITNESS: James]

1 discussion, and it's come up a couple of times
2 during the course of the proceedings about
3 inversion. And I was just curious, could you
4 just confirm, inversion is more regular in the
5 wintertime than other times of the year. Is
6 that an accurate statement?

7 A. Actually it's more of a warm season phenomena,
8 although it can occur at any time. A
9 temperature inversion occurs because, during
10 the day, the Sun is heating the Earth, and the
11 warm surface of the Earth -- the surface of the
12 Earth being warm warms the air that is right
13 down at the ground level. Warm air rises. So,
14 there's -- during the daytime, we have this
15 convection, where air is moving from the ground
16 upwards, mixing with the upper level air in a
17 very smooth, almost logarithmic fashion
18 called -- that's defined as the "wind shear",
19 the rate of change. But it's all driven by
20 solar heating.

21 At night, when the Sun stops heating, then
22 the ground cools. Now, the air near the ground
23 begins to not rise anymore, and we develop a
24 thin layer maybe 30 feet, maybe 30 meters.

[WITNESS: James]

1 Oftentimes, at night, you can see the very tops
2 of tall trees waving in the wind, but there
3 isn't enough wind at the ground level to keep
4 mosquitoes off of you. That's -- that is what
5 a temperature inversion looks like. When you
6 have upper level winds and no wind at the
7 ground.

8 And, in general, I know in up -- in the
9 temperate zone, and I say this broadly, it's
10 about 30 percent of the nights in the
11 summertime when this occurs, where you have
12 sufficient wind to power the wind turbines and
13 no wind on the ground. There's been several
14 studies of it done in Ontario and in New York,
15 by the Snyder [?], it's reported in a
16 conference several years ago.

17 This is also the type of weather in which
18 we're most likely to get complaints. People
19 have their windows open, they're outdoors,
20 they're doing things, and the noise disturbs
21 them or keeps them awake or awakens them, or,
22 otherwise, they wake up. At my age, I wake up
23 several times at night. And, then, maybe that
24 wasn't prompted by the noise from outdoors.

[WITNESS: James]

1 But, if I'm listening to a noise outdoors, it
2 takes me longer to get back to sleep.

3 And these are all functionally the issues
4 surrounding whole level noise outside at night,
5 particularly for people who are vulnerable.
6 And those two categories tend to be seniors and
7 children. A lot of people, this doesn't
8 bother. There's a whole probably seven out of
9 ten people aren't going to be bothered by it.
10 But, for the more vulnerable members of the
11 community, and like I say again, that's
12 seniors, people with preexisting medical
13 conditions, children under six, *etcetera*, this
14 can be a major issue.

15 Q. Thank you. My last question is pertaining to
16 the New Hampshire rules, and the standard in
17 place for noise. Are those the most stringent
18 standards in the U.S. or is that average or
19 could you give me a feel for where New
20 Hampshire standards are, in terms of the 40 dBA
21 in the evening at night and 45 during the day?

22 A. Yes. Actually, 40 dBA is the agreed upon
23 standard at night. In the acoustical circles,
24 Dr. Paul Schomer, representing the American

[WITNESS: James]

1 Acoustical Society of America's Technical
2 Committee, and he's in charge of all ANSI
3 standards, and one of his colleagues, George
4 Hessler, who's done considerable work for wind
5 developers over the past ten years or so, wrote
6 an article in which they both said "based upon
7 modern evidence, 40 dBA should be the limit we
8 set for wind turbines."

9 In Ontario, where the study was done, the
10 Health Canada study, that is specifically
11 defined the way the New Hampshire standard
12 defines it, with the limits in Ontario are "not
13 to exceed 40 dBA under predictable worst-case
14 condition". And all of the projects in Ontario
15 have been approved under those guidelines,
16 which is one of the reasons why the results of
17 the Health Canada study, and the medical
18 surveillance of people in those projects were
19 so studied, because, up until the results of
20 those studies became available, the presumption
21 was that 40 dBA was a safe level.

22 So, I would say, at this point, 40 dBA at
23 night from New Hampshire is the accepted
24 standard. But evidence coming in from studies

[WITNESS: James]

1 like Health Canada indicate that it may not be
2 quite as safe as we thought it was.

3 Q. Are there any other states that have a standard
4 lower than 40?

5 A. Oregon, which has many, many projects, has a
6 limit of 35. Other states use different
7 criteria. Massachusetts uses a test, where you
8 turn the turbines on during a period when its
9 *likely to have complaints*, typically nighttime,
10 then you turn them off. And, if there is more
11 than a 6 decibel difference or 10 decibel,
12 depending upon how you interpret the standards,
13 then that wind turbine is out of compliance.

14 For those states -- for those states that
15 set a limit, 40 is the current go-to value.
16 It's not -- it's not lenient. And it also
17 benchmarks with the World Health Organization's
18 observation that, when sound levels exceed 40
19 dBA at night outside a home, it leads to
20 adverse health effects.

21 So, 40 right now is the most defensible
22 number. Although, we know that, from Health
23 Canada, that it still leaves some people at
24 risk of symptoms, particularly those that I

[WITNESS: James]

1 quoted, migraines, dizziness, tinnitus, and
2 health-worsening.

3 Q. And the last question. You had just
4 referenced, in your conversation with Ms.
5 Weathersby, that you "supported wind projects
6 when they weren't too close to homes", I think
7 that's what you had referenced. Do you have --

8 A. Yes.

9 Q. Could you tell me what your opinion about
10 "what's too close to a home"? That's -- yes,
11 "what's too close to a home"?

12 A. When -- back in 2008, when I first started
13 taking wind turbine noise complaints, I
14 prepared a paper with George Camperman [?].
15 Mr. Camperman is one of the senior acousticians
16 and ostensibly the father of modern community
17 noise ordinances, many of these noise
18 ordinances, and he did a vast amount of the
19 work in the 1960s and '70s on that. We sat
20 down using what we knew about wind turbines at
21 that time and calculated that the proper
22 setback distance should be 2 kilometers, or one
23 and a quarter miles.

24 Since 2008, I've held that, that a

[WITNESS: James]

1 non-participating person, someone who does not
2 have a say in the operation, does not have an
3 economic stake in the operation, should be no
4 closer than a mile and a quarter. And I see
5 that number having been adopted many places
6 around the world. Poland, for example, just
7 passed a new law that says "the setback should
8 be ten times the height", this is called the
9 "10H-rule". You take the total height of the
10 wind turbine to the tip, multiply it by ten,
11 and that is the closest that a wind turbine can
12 be to a home. That's another reasonable way of
13 doing it, because it scales with the size of
14 the wind turbines.

15 So, I -- you know, I don't want it to come
16 off that I am in any way anti-wind. I am in
17 favor of anything, any type of energy, and that
18 includes nuclear energy, hydro, solar,
19 *etcetera*, that doesn't cause more greenhouse
20 gas.

21 I am glad to participate in this, in this
22 event, using a conference call, because it
23 meant I didn't have to drive up there and we
24 saved a little carbon footprint in that.

[WITNESS: James]

1 So, I've been an advocate since the 1970s,
2 I started out as an environmental engineer
3 worrying about the environment. And I'm still
4 worried about the environment.

5 But, when you have a new machine showing
6 its potential to have adverse impacts on
7 people, then we should be putting it where
8 people aren't located. And, so, my original
9 distance, a mile and a quarter still stands.
10 Having looked at the Health Canada data, I'm
11 thinking I may need to update that, because I
12 did not expect to see high rates of adverse
13 health effects at that distance, and yet we're
14 seeing them. And that may be more of an impact
15 from, you know, the larger wind turbines. I
16 can't tell. The Health Canada study did not
17 reveal what the size of the wind turbines were
18 for each of the datasets.

19 CMSR. ROSE: Thank you.

20 PRESIDING OFCR. SCOTT: Mr. Clifford.

21 ADMINISTRATOR MONROE: We have
22 another Committee member, Mr. James, that would
23 like to ask you some questions.

24 WITNESS JAMES: Okay. Thank you.

[WITNESS: James]

1 MR. CLIFFORD: Good morning, Mr.
2 James. My name is John Clifford. I'm a member
3 of the Site Evaluation Committee also. I
4 really only have one question.

5 WITNESS JAMES: Okay. Good morning,
6 sir.

7 BY MR. CLIFFORD:

8 Q. You spoke earlier this morning about
9 adjustments to Mr. O'Neal's figures. And I
10 know you added and there was an exchange
11 between you and Mr. Needleman about the
12 5 percent factor that you would have added, is
13 that correct? I mean 5 dB?

14 A. Five, yes. Five dB, yes.

15 Q. So, just for my benefit, and I don't think this
16 came out in Mr. Needleman's questioning, where
17 would I -- what's the basis for that? Where
18 would I find -- was there any scientific or
19 journal-based, I'd say, studies that can point
20 me to why you would add five, but another
21 engineer might not? Because I'm trying to get
22 a handle on why you would just toss in the 5 dB
23 sort of "what if" factor, and I didn't hear any
24 scientific basis for it.

[WITNESS: James]

1 A. Okay. Here's the -- the basis for it is
2 experience. I've participated in, I think,
3 well over 30 cases like this. And, in the
4 process of doing so, I have listened to other
5 acousticians who have done compliance follow-up
6 and complaint follow-up, and the two of them
7 are distinctly different.

8 Compliance follow-up typically is as
9 Mr. O'Neal did for Groton. Makes measurements
10 of the wind turbines operating as you find
11 them.

12 Complaint follow-up, however, you try
13 to -- when a complaint is filed, and you take a
14 measurement, you try to duplicate the situation
15 that led to the complaint. And, when we do
16 that, both myself, in Ontario, the complaints
17 are followed up by government technicians,
18 government noise engineers, in other states
19 that may be followed up by separate
20 acousticians here in the U.S.

21 But what we find is that, during a
22 complaint, the sound levels are roughly
23 5 decibels higher than the model predicted
24 levels. And those models include the

[WITNESS: James]

1 tolerances. So, that's where I come up with my
2 5 dB.

3 Now, some of the people, like David
4 Hessler, who I quote in my report, and Dave
5 is -- Dave is an acoustician who works almost
6 entirely for the wind industry. He does the
7 same came of work Mr. O'Neal works -- does. He
8 said, in a report to the Minnesota Public
9 Service Commission, that, in his experience,
10 the models are -- the model levels routinely
11 exceeded by 5 dB when he does complaint
12 follow-ups. And, for periods of 20, 30, 40
13 minutes or so, 20, 30 minutes to an hour, he
14 finds exceedances as much as 10, 15, or even
15 higher. And I would have to go back to my
16 report for the exact quote. But, all of us who
17 have done complaint follow-up, know that wind
18 turbines do -- that the predicted level is the
19 level you would get on a nice warm afternoon,
20 when they're working well. But, during
21 conditions that are not favorable to efficient
22 extraction of energy from the wind, which means
23 turbulence or high wind shear, that they can
24 become much louder. And that is the

[WITNESS: James]

1 predictable wind -- predictable worst case.

2 Maybe some -- maybe there will be a future
3 design where they're not susceptible to
4 turbulence. But the design that we have today
5 is very susceptible to turbulent wind. Many of
6 the things that Dr. Ward described, ducting,
7 turbulence, eddies, crosswinds, upwinds,
8 drafts, microbursts, etcetera, all cause wind
9 turbines to be much noisier than you would
10 expect based upon the model.

11 And that's the basis of why I add the 5
12 dB. I could have said "10". I could have said
13 "15", as Mr. Hessler said. But I've chosen 5,
14 because I think that's conservative and
15 realistic, and covers probably 90 percent of
16 the situations that should be covered.

17 MR. CLIFFORD: Okay. Thank you. I
18 have no further questions.

19 PRESIDING OFCR. SCOTT: Mr. Forbes.

20 ADMINISTRATOR MONROE: We have
21 another Committee member, Mr. James, that would
22 like to ask you some questions.

23 WITNESS JAMES: Okay. Thank you.

24 DIR. FORBES: Good morning. My name

[WITNESS: James]

1 is Gene Forbes. You had talked a bit about
2 this Health Canada study. I was curious, were
3 there other studies done by Health Canada,
4 on the --

5 A. Health Canada -- well, the study I'm talking
6 about is the \$2 million study that was started
7 back in, I think, 2012.

8 Q. And, do you --

9 A. And it's just now getting to the point where
10 it's releasing the data. I'm not sure if they
11 have done other studies. They may have done
12 some earlier.

13 Q. Well, the reason I ask is, while you've been
14 talking, I went to the Health Canada website,
15 and they report on a 2014 study. And I just
16 want to read from the summary that they have.
17 They have an area boxed out here to kind of
18 highlight it. And it says "The following were
19 not found to be associated with Wind
20 Turbine" -- excuse me -- "Noise Exposure:
21 Self-reported sleep, self-reported illnesses,
22 self-reported perceived stress and quality of
23 life." It says "While some individuals
24 reported some of the health conditions above,

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[WITNESS: James]

1 the prevalence was not found to change in
2 relation to Wind Noise" -- "Wind Turbine Noise
3 levels."

4 That sounds very different the way that
5 you describe the report. And I just wonder if
6 there were other reports or if somehow they
7 came to different conclusions looking at the
8 data than you did. Can you explain that?

9 A. Yes. That's an excellent question. It is an
10 excellent question.

11 As I said earlier, and we're talking about
12 the same study, as I said earlier, I study was
13 actually done back in 2012-13 or so. And,
14 since then, we've heard all sorts of things
15 from Health Canada about how the study shows
16 that the current levels used in Ontario and
17 other provinces are okay.

18 It wasn't until March of this year, in a
19 paper written for the Acoustical Society of
20 America that some of the health -- the medical
21 data was revealed. What we found when we
22 reviewed that medical data is that the
23 statistical analysis that led to the
24 conclusions you just stated had used an

[WITNESS: James]

1 improper control group. A control group needs
2 to represent the general population. What they
3 used was one of the group -- one of the
4 measured groups is their control group. That
5 meant the group they used as a control group
6 was already showing high rates of these
7 symptoms. At the Acoustical Society meeting in
8 May, in Salt Lake City, the author of the
9 paper, Dr. David Michaud, was confronted with
10 the fact that, when a proper analysis is done,
11 meaning a control group representing the
12 general population, that the conclusion that
13 there are no trends is found to be inaccurate,
14 unreliable.

15 He admitted during that meeting that he
16 used the wrong control group. Since that time,
17 he has failed to re-correct or to correct the
18 record. There are papers that he wrote that
19 used the wrong control group, come to the wrong
20 conclusions, and he is still advocating the
21 conclusions based upon the improper control
22 group.

23 My statement was based upon my analysis,
24 and that of ten other people, including

[WITNESS: James]

1 epidemiologists, medical doctors, audiologists,
2 acousticians, who re-analyzed that data using a
3 proper control group, and found that, even at a
4 mile and a quarter, we were having these rates.

5 Well, so, the difference in interpretation
6 is, in Health Canada's website, is promoting
7 results that are based upon improper
8 statistical analysis. And my cautions to you
9 are based upon the reanalysis of that data,
10 that was only made possible in March, when the
11 raw data from the health study was finally made
12 available.

13 DIR. FORBES: Thank you. That's all
14 I have.

15 WITNESS JAMES: Okay.

16 ADMINISTRATOR MONROE: Okay. We have
17 one last member of the Committee, unless they
18 may have some follow-up, to ask you some
19 questions. Here you go.

20 PRESIDING OFCR. SCOTT: Good morning,
21 Mr. James. I'm Commissioner Scott. I'm the
22 Presiding Officer.

23 BY PRESIDING OFCR. SCOTT:

24 Q. I want to go back a little bit back to the --

[WITNESS: James]

1 obviously, there's been a lot of discussion
2 about the 5 dBA adder that you suggest. And
3 what I think I heard is that's based on
4 experience, it's based on complaint follow-up.
5 If I was to be doing a study and wanted to
6 include a worst-case adder as you're
7 suggesting, where would I look for that data?
8 So, is there a published chart or something
9 that the professionals should be using that
10 would say "5"? I think I heard you also say
11 some would say "10" or "15" as an adder. So,
12 that seems very subjective to me. So, I was
13 curious if there's a publication? Or how would
14 I know that, what number to pick?

15 A. Yes. There have been -- there have been some
16 publications. For example, I think in 2011 or
17 so, one of the Ontario acousticians, Brian
18 Howe, who's worked closely with the Ministry of
19 Environment on the -- on noise standards.
20 Reported that, even after improving the
21 modeling to require predictable worst case,
22 *etcetera*, that, during complaint follow-ups, he
23 was still finding a 5 dB exceedance over the
24 modeled results.

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[WITNESS: James]

1 And, to find this kind of data, we've gone
2 to FOIAs. This is not something that either
3 the industry or governments that are promoting
4 wind energy are putting into the public domain.
5 We've had these FOIAs to get internal
6 documents. We've had to use other similar
7 techniques, examinations and hearings, to get
8 people to admit it. But that number seems to
9 come up.

10 And I'd like to say, as far as New
11 Hampshire, if we just -- if we ignore my 5 dB
12 adder, which I think is a precautionary
13 statement, and we just go with the literal
14 interpretation of the ISO standard, requiring a
15 plus 3 dB tolerance, that the -- propose that
16 the Applicant's model shows that it will not
17 meet the 40 dBA not-to-exceed nighttime. So,
18 even without an adder, the model does not meet
19 the New Hampshire requirements.

20 But we know, based upon this other
21 experience, that wind turbines during complaint
22 conditions will be higher than what the model
23 predicts. To me, the model -- the model
24 predicts what I call a "rosy scenario". That

[WITNESS: James]

1 is the kind of sound you get from a wind
2 turbine when it's operating at as close to
3 100 percent as it can, when the air coming into
4 it isn't causing the blades to lose lift.
5 Everything is working right. As soon as --

6 Q. So, can we talk about complaints a little bit?

7 A. -- the conditions -- yes. Go ahead.

8 Q. Can we talk about complaints a little bit?

9 Assuming for a moment that we did issue a
10 certificate, it's pretty common for the
11 Committee to put conditions on the certificate.
12 One of the things we would be concerned about
13 would be how complaints would be addressed and
14 how they would be resolved. Do you any
15 recommendations, if we were to issue a
16 certificate, of how that would be -- any
17 suggestions on how we would address complaints?

18 A. Yes. I have some suggestions. One is that,
19 when a complaint is evaluated, that the
20 operator be required to participate in
21 duplicating the conditions that led to the
22 complaint. And that the acoustician who is
23 doing the testing have experience in complaint
24 follow-up, but also not be associated in any

[WITNESS: James]

1 way with either that operator or other
2 operators. In other words, an acoustician
3 who's independent from any economic incentive
4 to work for the developer.

5 There's a lot -- the follow-up of a
6 complaint means we need access to the SCADA
7 data, the operating modes. We need to know
8 that the wind turbine, at the time of the
9 complaint, was operating, let's say, at
10 80 percent power, the angle of the blades, the
11 wind speeds, the RPM, all of those things need
12 to be made the same. And the complainant needs
13 to be able to say "Yes. This is the condition
14 I was complaining about." And, then, the
15 measurement is conducted.

16 And they need to have faith that the
17 person doing the measurement is doing it
18 according to standard protocols, and not
19 looking for ways to minimize or, for that
20 matter, maximize the problem. We need a fair,
21 unbiased result. And that really is one of the
22 problems I faced.

23 In many cases, during complaint follow-up,
24 the operator complains that they want to have

[WITNESS: James]

1 an acoustician do the study that they trust.
2 Well, that's exactly the wrong person to use
3 for the study. It needs to be someone they do
4 not trust. We don't have police officers
5 patrolling the streets whom the speeders trust.
6 We have police officers who know how to be at
7 the right place at the wrong time for the
8 speeders. We need to have acousticians doing
9 the test that know how to do the same.

10 And the other is, for a complaint, the
11 solution could be -- well, the best solution to
12 wind turbine noise problems is to not put wind
13 turbines close enough that they cause these
14 problems. When we look at Health Canada, if we
15 look at the complaints that I dealt with,
16 and --

17 Q. I appreciate that, Mr. James. But I want to
18 talk about how to handle complaints at the
19 moment.

20 A. Okay.

21 Q. So, what we've done in the past, as a
22 Committee, for another wind farm, for instance,
23 we've had the applicant have a measuring device
24 available to the town. Is training somebody

[WITNESS: James]

1 local, for instance, in the town to do a sound
2 check, that type of stuff, is that -- does that
3 make sense to you? Or are we better to hire a
4 firm with experience in this type of thing?
5 A. This is a complicated situation. You're better
6 off hiring a firm. There is another approach,
7 and this is being tried someplace in -- or
8 being imposed in places like Vermont. And that
9 is that a permanent monitoring station be
10 established at a location, often a vacant home,
11 with microphones, with analysis equipment,
12 meteorological equipment, etcetera, connected
13 to the Internet. When a complaint comes in,
14 and this doesn't have to be -- this doesn't
15 have to be followed all the time, but it's
16 continuously collecting data. When a complaint
17 comes in, then the complaint time is noted, and
18 the data from that monitoring station is
19 pulled. It can be done remotely. The ones
20 we're talking about in Vermont, for example, a
21 local university professor or a department, an
22 acoustic department could have the contract.
23 And, when a complaint comes in, then that data
24 is pulled, and reviewed to see if there was

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[WITNESS: James]

1 anything that is found in the test location
2 indicating abnormal operation.

3 That -- the problem with complaints is,
4 the opportunity to measure the complaint
5 condition is always gone by the time the
6 complaint is filed. And, so, this idea of
7 having one or more monitoring stations
8 continuously collecting information, similar to
9 what's done around airports and around other
10 large urban noise sources, so that it can be
11 retrospectively analyzed, is, I think, one of
12 the better answers to it.

13 Q. Okay. Thank you for --

14 A. Wind turbine projects -- yes. Yes. Wind
15 turbine projects are hard to duplicate the
16 noise. But this gets around it by having
17 100 percent monitoring without 100 percent
18 cost.

19 Q. And you think a site like that would be
20 representative of -- obviously, there's homes
21 and structures 360 degrees around any
22 particular project. Would that be productive,
23 if you had one monitoring site, and would it be
24 representative?

[WITNESS: James]

1 A. It might be, for a ridge-mounted project, it
2 might be you would need one on each side of the
3 ridge. But, if you had more sensitive -- it
4 depends on where the sensitive locations are.
5 And it might that you need two, one on each
6 side, or you might be able to get by with one.
7 The important thing is that you can go and look
8 to see if there was something different between
9 the -- let's say the complaint was "two o'clock
10 last night I was awakened by a lot of noise
11 from the wind turbines." I should be able to
12 see, when I look at the data, even if that test
13 location is not near the complainant's home, I
14 should be able to see if something was going on
15 with the wind turbines that was different.
16 These remote stations record the audio, they
17 record the video, they record the weather, they
18 record the noise. So, all of the data would be
19 available to see "okay, the complainants,
20 during that time period, there was or was not
21 something different going on with the wind
22 turbines." And that allows us to narrow things
23 down rapidly, and also means that, if
24 complaints are purely specious, that we can

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[WITNESS: James]

1 weed them out.

2 Q. Isn't there also a factor, more psychological,
3 if you're a non-participant, and perhaps the
4 sound level is below allowable limits in our
5 rules, but you still may find it annoying, if
6 nothing else, because, for instance, if I
7 didn't want that wind farm there, if I heard
8 anything from it, I would be more susceptible
9 to hearing that? Is that a fair concern?

10 A. I've heard that concern raised quite a bit.
11 And it's raised more often by the wind
12 industry. But let me say this. If I sign an
13 agreement, to -- a "good neighbor agreement", I
14 think is the general term that the industry
15 uses, not only do I get some compensation, but
16 I give up my rights to have a complaint.
17 People who give up their rights to peace and
18 quiet, if I could use that term, for a monetary
19 exchange, can't be used as a ballast against
20 people who don't. A non-participant, who has
21 not signed the restriction about filing
22 complaints, has every right to file a
23 complaint. They were the first ones there. I
24 mean, and a lot of times land uses is decided

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[WITNESS: James]

1 by who is there first. Well, the residents, in
2 this case, are there first. They do have a
3 higher level of right to piece and quiet. And,
4 if they haven't given up that by signing an
5 agreement, then they deserve to be respected
6 for the complaints, assuming that the complaint
7 is valid and not just made up.

8 And that's why I said an independent
9 monitoring station is one way to weed through
10 when complaints are valid and when complaints
11 are not, because we have a track record on how
12 the wind turbines are operating.

13 Q. And, finally, I don't need -- I believe I've
14 heard your opinions on the health impacts. I
15 was curious that what you said is, I think, is
16 that the Health Canada study is just starting
17 to -- the results are coming out. Much like I
18 think the discussion you had earlier with one
19 of the Committee members on the -- you take
20 some issue with the 2014 health study.
21 Wouldn't it be the case, as likely as not, that
22 at least some people will take issue with the
23 Health Canada study, and this is kind of an
24 emerging thing that we should be paying

[WITNESS: James]

1 attention to, but it's emerging still?

2 A. Well, the data -- the data emerged in March of
3 this year. And we -- when that study was first
4 proposed, the statement was made by Health
5 Canada that the raw data from all of the
6 medical testing would be available for an
7 independent review by epidemiologists,
8 acousticians, and other interested parties.

9 When the study was done, we found that
10 Health Canada refused to release that data.
11 What they started to do was to release
12 conclusions. And the conclusions had no data
13 supporting them. And the prior Commissioner
14 who had done the research on the website was
15 accurate in his reflection of how Health Canada
16 portrays that.

17 However, once that medical data was
18 released, and we were able to see what was used
19 as a control group, and the study was done by
20 Statistics Canada. It wasn't done by any
21 consulting firm. It was done by a government
22 agency. They had selected a control group that
23 was already showing in the -- from the dataset,
24 they used a control group from the set of data

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1 that they collected, rather than using a
2 control group representing the incidence rates
3 of these symptoms from the general population.
4 When confronted with that at the hearing, the
5 author of the study, Dr. Michaud, admitted that
6 that was a mistake. But --

7 Q. And I understood that -- I understood that from
8 your earlier statements. I was just suggesting
9 that there will be some -- still yet to be
10 vetted how this is all going to play out, I
11 guess. I mean, reasonable people are going to
12 disagree, --

13 A. Yes.

14 Q. -- and something we'll pay attention to,
15 obviously. But I was just suggesting this is
16 not settled yet, is that correct?

17 A. It is not settled. We're still trying to, and
18 it takes time to publish papers, since that
19 data was very new, there are people who are now
20 working on redoing the statistical analysis,
21 and having their papers published. So, yes.
22 It is an ongoing discussion.

23 Q. Okay. Thank you for --

24 A. [inaudible] that Dr. Michaud admitted he was

[WITNESS: James]

1 wrong.

2 PRESIDING OFCR. SCOTT: Okay. Thank
3 you for that. I'm going to go back to my desk,
4 and then we'll see if there is redirect for
5 you. Thank you.

6 Ms. Berwick, are you --

7 MS. BERWICK: I do. But do you mind
8 if we take a short break first?

9 PRESIDING OFCR. SCOTT: I bet you
10 Mr. Patnaude would like that. So, why don't we
11 take a five-minute break.

12 *(Recess taken at 10:34 a.m. and*
13 *the hearing resumed at 10:45*
14 *a.m.)*

15 PRESIDING OFCR. SCOTT: Okay. Before
16 we go to redirect, the Committee's counsel had
17 a couple questions also.

18 ADMINISTRATOR MONROE: Mr. James,
19 we're back. And the counsel for the Committee
20 has a couple questions for you.

21 WITNESS JAMES: Okay.

22 MS. DORE: Hello, can you hear me?

23 WITNESS JAMES: Yes, I can.

24 MS. DORE: Okay. I have only two

[WITNESS: James]

1 real quick questions.

2 BY MS. DORE:

3 Q. I was wondering, apart from Mr. O'Neal's
4 modeling, did you do any independent modeling
5 of post-construction sounds associated with the
6 Project?

7 A. Can I ask you to repeat that? That broke up a
8 bit.

9 Q. No problem. I'm saying, I know that you
10 analyzed Mr. O'Neal's modeling. I just
11 wondered whether you prepared your own modeling
12 for that Project?

13 A. No, I did not. No, I did not.

14 Q. Okay. And the second question, I guess, is
15 that do you have independent opinion as to what
16 would be the sound post-construction associated
17 with the Project?

18 A. I really didn't focus on the construction
19 noise. I mean, there are some phases of that
20 that I would find concerning. But, since it
21 was temporary, I didn't focus on that.

22 Q. No, I'm sorry -- I'm talking --

23 A. I'd be concerned about blasting --

24 Q. I'm sorry, I'll interrupt you. I'm sorry I'm

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[WITNESS: James]

1 interrupting you. I said -- I meant
2 post-construction, do you have an opinion, your
3 independent --

4 A. Oh, post?

5 ADMINISTRATOR MONROE: Post. Post-
6 construction.

7 WITNESS JAMES: Post-construction?

8 MS. DORE: Yes.

9 **BY THE WITNESS:**

10 A. Yes. I would -- any measurements done with
11 post-construction need to be done in a manner
12 such that we know the operating conditions of
13 the wind turbines during the measurements. So,
14 they would need to be published with what I
15 call the "SCADA data". That includes the RPM,
16 the blade angles, the power being produced,
17 wind direction, speed, the nacelle direction,
18 and other operating parameters, so that we can
19 confirm that the follow-up measurements
20 actually represent the condition that the model
21 was supposed to represent, which was full
22 power, under high winds. And often -- and,
23 oftentimes, follow-up tests only take
24 measurements, and we have no idea at all

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1 whether the wind turbines were really operating
2 in a full power mode or not. So, that would be
3 one requirement.

4 And the other is that people who have been
5 experiencing the noise, participate in the
6 post-construction by identifying whether,
7 during the measurements, the sounds that
8 they're hearing are the sounds that they have
9 experienced since the project started. We need
10 people to validate that the conditions for the
11 post-construction measurements actually
12 represent the noise that people have been
13 hearing. And then solid data from the
14 operating computer systems that monitor the
15 wind turbines confirming that.

16 BY MS. DORE:

17 Q. Okay. I'm going to interrupt you. I
18 apologize, maybe I'm not very clear with my
19 question. I just want to know is that, as an
20 expert, do you have independent opinion as to
21 what would be the sound post-construction
22 associated with the Project? Do you know? Did
23 you estimate it?

24 A. Yes. I would estimate that, on a day with

[WITNESS: James]

1 moderate wind sheer, wind shear of 0.2 or less,
2 that the sound levels from the wind turbines
3 will be probably about 3 decibels higher than
4 what the model shows in the Application. And
5 that is based on my experience with projects.
6 That condition of wind shear is not going to be
7 the worst case, but it will be the easiest to
8 measure in order to determine the effectiveness
9 of the model.

10 MS. DORE: Thank you.

11 WITNESS JAMES: Yes.

12 PRESIDING OFCR. SCOTT: All right.

13 And, Ms. Berwick, so, again, you're on
14 redirect. So that should be -- the questions
15 for redirect should be based on questions that
16 have been asked.

17 MS. BERWICK: I don't have many.

18 PRESIDING OFCR. SCOTT: Okay. Thank
19 you.

20 **REDIRECT EXAMINATION**

21 BY MS. BERWICK:

22 Q. Mr. O'Neal [Mr. James?], this is Barbara
23 Berwick. You stated that you felt that the
24 model did not comply with the worst-case

[WITNESS: James]

1 scenario, is that correct?

2 A. That's correct. It didn't include the
3 tolerances. And the standard or the SEC rules
4 require that the model not only include the
5 tolerances, but corrections for model algorithm
6 errors to be disclosed and accounted for in the
7 model. And I did not see that that was done in
8 Mr. O'Neal's model.

9 Q. Are tolerances usually included in models?

10 MR. NEEDLEMAN: Mr. Chair, I'm going
11 to object.

12 **BY THE WITNESS:**

13 A. Tolerance -- yes. Tolerances are always --

14 ADMINISTRATOR MONROE: Hold on. Hold
15 on, sir. Hold on, I'm going to interrupt you.
16 There's an objection.

17 PRESIDING OFCR. SCOTT: Go ahead.

18 WITNESS JAMES: Okay.

19 MR. NEEDLEMAN: It sounds to me like
20 the first two questions are meant to just
21 reiterate testimony that's already in the
22 record.

23 MS. BERWICK: I didn't hear him.

24 PRESIDING OFCR. SCOTT: You can

[WITNESS: James]

1 respond to the -- you can respond to the
2 objection.

3 MS. BERWICK: I did not hear it
4 stated whether or not tolerances are usually
5 included in models.

6 PRESIDING OFCR. SCOTT: So, if I can
7 interject. So, Ms. Berwick, so, again, in
8 redirect, you're supposed to be discussing
9 things that were --

10 MS. BERWICK: But he was talking
11 about -- he was talking about the fact that
12 there should be a 5 decibel correction factor
13 in the model. And, so, I cannot ask if that is
14 a normal process or not? I guess I'm -- I'm
15 not a lawyer, obviously.

16 PRESIDING OFCR. SCOTT: I understand
17 that. And, hopefully, everybody understands we
18 have given the *pro se* intervenors quite a bit
19 of leeway throughout this whole proceeding.
20 So, I hope you understand that.

21 So, if you were to rephrase that to
22 ask about the 5 decibels, why don't you try
23 that.

24 BY MS. BERWICK:

[WITNESS: James]

1 Q. I'm going to rephrase it to ask about the 5
2 decibels that you were discussing. I'm not
3 sure how to ask it. What would you have to
4 say --

5 A. Is that question to me?

6 Q. Yes. That's my question. That's my question.

7 A. Okay. Yes. I believe that, under the rules,
8 which require that tolerances and adjustments
9 to account for the worst-case condition, I
10 believe that a safety factor of 5 dB should
11 have been added.

12 Q. Okay. What do you mean -- I'm not sure I can
13 ask this. What do you mean by "the canopy that
14 is reflective"? You said that several times.
15 And, truthfully, I don't understand what
16 "canopy being reflective" means.

17 A. "Canopy", when you look at a forested ridge,
18 and the sound is coming from above the ridge,
19 down into the valley or the plateaus alongside
20 of the ridge, the leaves that form the forest
21 roof, which is often referred to as the
22 "canopy", at least in my experience, act as
23 reflectors. And, so, the sound doesn't even
24 necessarily have to hit the ground, it can

[WITNESS: James]

1 reflect off of the leaves. So, "canopy" refers
2 to that roof of leaves, when we're looking up
3 into the forest and see blocking the Sun above
4 us, but, for the sound, which is propagating
5 above the canopy, it acts as a surface that
6 causes reflections.

7 Q. Is it not true that some of the models cited by
8 Mr. O'Neal used an additional 5 decibel
9 correction factor?

10 A. Mr. O'Neal's didn't use an additional 5 dB
11 correction factor. Did not.

12 Q. No, I don't mean Mr. O'Neal's model. I mean
13 some of the -- he used, in his testimony, to
14 show that the -- that the modeling that was
15 done for some wind turbine projects met the --
16 where they went back and did tests, that it
17 showed that they were pretty much in the
18 ballpark of the expected range. But weren't
19 some of those tests -- weren't some of those
20 models that he was -- weren't some of the
21 models that were done that showed that, hadn't
22 they used that 5 decibel correction factor?

23 MR. NEEDLEMAN: Mr. Chair, I'm going
24 to object again.

[WITNESS: James]

1 **BY THE WITNESS:**

2 A. No. No, I don't believe --

3 ADMINISTRATOR MONROE: Hold on.

4 **BY THE WITNESS:**

5 A. No, I don't think so.

6 ADMINISTRATOR MONROE: Hold on.

7 There's an objection, sir.

8 MR. NEEDLEMAN: I certainly
9 appreciate what you said about giving latitude
10 to intervenors. But, again, this was a topic
11 that wasn't discussed at all.

12 MS. BERWICK: Okay.

13 BY MS. BERWICK:

14 Q. Do you recall that Mr. O'Neal's predictive
15 model shows that the maximum noise level at
16 nearby property is 38 decibels?

17 A. Yes. Yes. His model shows that the average
18 level is 38, not the maximum. But that the
19 average level is 38.

20 Q. Okay. If 3 decibels is added to the G level,
21 would that not make this -- would that not, as
22 is required as -- sorry, let me read it again.
23 If the 3 decibels related to the G -- to the G
24 level is added to the modeled output, as

[WITNESS: James]

1 required by the ISO standard, would
2 Mr. O'Neal's report show a predicted noise
3 level that is above that -- above what the
4 rules permit?

5 A. If Mr. O'Neal's model included the 3 dB
6 tolerance for the ISO standard, then a number
7 of the homes would be above the SEC nighttime
8 limits. If it also included 3 dB for the
9 ground factor, then a larger number of homes
10 then would be included above that limit.

11 Q. From Mr. Needleman's questions, he would seem
12 to suggest that it is appropriate for a project
13 to be approved, and then, if it is out of sound
14 compliance, they will have to correct it. If
15 the purpose of conducting the predicting model
16 is to determine whether a project will have
17 unreasonable adverse effects, adverse impact
18 before a project is approved, would it be
19 appropriate for the project to be approved,
20 built, and only after that to determine if
21 there were violations?

22 A. I'm not really sure how to answer that. My
23 interactions with developers, when complaints
24 come in, is that all of the promises that were

[WITNESS: James]

1 made about being a good neighbor disappear.
2 And, then, if there are complaints, we end up
3 with operators threatening to sue. In Green
4 Bay, Wisconsin, for Shirley Wind, the Board of
5 Health [inaudible] a wind turbine project to be
6 a human health hazard in 2014. That triggers a
7 responsibility under Wisconsin law for the
8 operator to proactively correct the problem.
9 And all that has happened in that interim is
10 veiled threats of lawsuits that have
11 intimidated the county.

12 I think that the only time when the
13 community has any leverage on how a project is
14 designed or operated is prior to approval.
15 And, therefore, waiting until after the project
16 is up and running is only going to cause more
17 trouble down the road. The decision needs to
18 be on the front-end, not on the back-end.

19 MS. BERWICK: Thank you very much.
20 That's all my questions.

21 PRESIDING OFCR. SCOTT: Thank you,
22 Mr. James. I think you're released.

23 ADMINISTRATOR MONROE: Thank you, Mr.
24 James. We're done. And I'm going to hang up

[WITNESS: James]

1 the line. Thank you. Have a good day.

2 WITNESS JAMES: Okay. Thank you.

3 Bye.

4 PRESIDING OFCR. SCOTT: Before we
5 continue, so, again, as I've said earlier this
6 morning, my intention is to get through the
7 Levesque/Allen intervenors, the Meteorologists,
8 and Wind Action today, if we can.

9 Ms. Allen, so, I see Mr. Wells here.
10 I don't see Mr. Levesque here.

11 MS. ALLEN: That's correct.

12 PRESIDING OFCR. SCOTT: So, if we
13 were to -- I'm just curious, is there a
14 solution where we would have everybody you want
15 without delaying anything? So, we could do
16 Mr. Ward and Ms. Linowes first, and you all
17 last. But does that help you in any way?

18 MS. ALLEN: One way or the other, I'm
19 going to miss one, one person on the panel.
20 Mr. Levesque would be available after three
21 o'clock this afternoon, but Mr. Wells is not.

22 PRESIDING OFCR. SCOTT: Okay. So,
23 pick your poison, which would you like?

24 MS. ALLEN: I think we should go

1 ahead.

2 PRESIDING OFCR. SCOTT: Okay. So,
3 why don't we -- if you want to come up to the
4 panel.

5 Is there any administrative issues,
6 Mr. Richardson, in the meantime?

7 MR. RICHARDSON: Yes. Thank you, Mr.
8 Chairman. I have copies of the document I
9 offered to provide the Committee in lieu of
10 recross yesterday. It's Antrim Exhibit 6. And
11 I'll hand that out right now. It's just the --
12 it's the e-mail from myself, to Mr. Jones and
13 the Town Administrator, Mr. Coffey. And I
14 think it goes to what Mr. Jones testified to
15 yesterday.

16 PRESIDING OFCR. SCOTT: Okay. Why
17 don't you do that. And we'll go off the record
18 while everybody is getting situated.

19 *[Atty. Richardson distributing*
20 *documents.]*

21 (The document, as described, was
22 herewith marked as **Exhibit**
23 **Antrim 6** for identification.)

24 *[Off the record.]*

[WITNESS PANEL: Allen ~ Wells]

1 *[Ms. Allen distributing*
2 *documents.]*

3 (The document was herewith
4 marked as **Exhibit LA 14** for
5 identification.)

6 *[Brief off-the-record discussion*
7 *ensued.]*

8 PRESIDING OFCR. SCOTT: Okay. Back
9 on the record. And we'll swear the panelists
10 in.

11 (Whereupon **Mary E. Allen** and
12 **Christopher Wells** were duly
13 sworn by the Court Reporter.)

14 MS. DORE: Good morning.

15 WITNESS ALLEN: Good morning.

16 WITNESS WELLS: Good morning.

17 MS. DORE: Can you here me?

18 WITNESS ALLEN: Yes.

19 WITNESS WELLS: Yes.

20 MS. DORE: Okay.

21 **MARY E. ALLEN, SWORN**

22 **CHRISTOPHER WELLS, SWORN**

23 **DIRECT EXAMINATION**

24 BY MS. DORE:

[WITNESS PANEL: Allen ~ Wells]

1 Q. Mr. Wells, can you please state your name on
2 the record.

3 A. (Wells) Sure. For the record, my name is Chris
4 Wells. And I'm not actually representing
5 anybody. So, I'll say here as a private
6 citizen.

7 Q. And, Mr. Wells, did you file prefiled testimony
8 with the Subcommittee in this docket?

9 A. (Wells) Yes, I did.

10 Q. And do you have any amendments to that prefiled
11 testimony that was filed?

12 A. (Wells) No, I do not.

13 Q. And that prefiled was filed as "LA Exhibit 9"?

14 A. (Wells) If you say so, yes.

15 Q. Okay.

16 A. (Wells) Yes.

17 A. (Allen) Here's our Exhibit List.

18 A. (Wells) Oh, thank you. Sorry.

19 Q. Ms. Allen, can you please state your full name
20 on the record?

21 A. (Allen) Yes. It's Mary Elizabeth Allen.

22 Q. And you're here testifying on you're own
23 behalf?

24 A. (Allen) Yes, I am.

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[WITNESS PANEL: Allen ~ Wells]

1 Q. And did you file the prefiled testimony with
2 the Subcommittee?

3 A. (Allen) Yes, I did.

4 Q. And do you have any amendments or additions to
5 your prefiled testimony?

6 A. (Allen) No, I don't.

7 MS. DORE: Good to go.

8 PRESIDING OFCR. SCOTT: Does Audubon
9 have any questions?

10 MS. VON MERTENS: Yes. Thank you.
11 Going first adds a responsibility, I hadn't
12 really planned on that. Usually, you do
13 leading questions about who these people are
14 and everything.

15 I am prepared to say that this panel
16 is appearing under "orderly development of the
17 region". And I think that's hugely
18 appropriate. That's at the heart of land
19 conservation planning. And that's what I think
20 they will be talking about. You identify the
21 natural resource, high natural resource areas.
22 And that really helps you prioritize
23 conservation. And, by process of elimination,
24 it also gives you the leftover places where

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[WITNESS PANEL: Allen ~ Wells]

1 development should be.

2 So, conservation goals typically
3 identify where development should not go. A
4 couple simple questions for Mary Al about the
5 SuperSanctuary. I'm leaving the tough ones for
6 Chris.

7 WITNESS WELLS: Thanks.

8 MS. VON MERTENS: That's a joke.

9 **CROSS-EXAMINATION**

10 BY MS. VON MERTENS:

11 Q. Your testimony is mostly about the Harris
12 Center and the SuperSanctuary?

13 A. (Allen) Yes, it is.

14 Q. And you just handed out a map?

15 A. (Allen) Yes, I did.

16 Q. And the map is almost up-to-date, but it's
17 grown. Its over 34,000 acres now. And it's an
18 area that the Antrim Wind Project is located
19 within, correct?

20 A. (Allen) If I could point out, the handout that
21 I gave, I put a little circle. That's a --
22 circles of the area between Tuttle and Willard.
23 So, that is the area of the project site. It's
24 just sort of a handwritten thing in there.

[WITNESS PANEL: Allen ~ Wells]

1 PRESIDING OFCR. SCOTT: And, just to
2 note, obviously, that's in your hard copy
3 handout. It's not in the electronic?

4 WITNESS ALLEN: It's not on the
5 electronic and it's not on the big map.

6 BY MS. VON MERTENS:

7 Q. And, in your testimony, you said that the
8 SuperSanctuary -- "SuperSanctuary", it was
9 named that way because New Hampshire Audubon's
10 dePierrefeu/Willard Pond Wildlife Sanctuary is
11 at the very heart, it is the sanctuary at the
12 very heart of the SuperSanctuary. Is that
13 correct?

14 A. (Allen) That's correct.

15 Q. Okay. Thank you. Chris wells, I know you in
16 your Forest Society years, "Forest Society",
17 otherwise known as the "Society for the
18 Protection of New Hampshire Forests", you have
19 my -- you have Audubon's sympathies for such a
20 name for such a group. You were there for a
21 good dozen years?

22 A. (Wells) Sounds right, yes.

23 Q. And I attended the -- you're here, in large
24 part, for your experience with the

[WITNESS PANEL: Allen ~ Wells]

1 Quabbin-to-Cardigan Partnership?

2 A. (Wells) Correct.

3 Q. And can we just call that "Q2C"?

4 A. (Wells) Let's do.

5 Q. All right. Let's do it. And can we call the
6 "Society for the Protection of New Hampshire
7 Forests" the "Forest Society"?

8 A. (Wells) That sounds good.

9 Q. Terrific. And, as I'm number one, I'm supposed
10 to ask background questions, I guess.

11 A. (Wells) Sure.

12 Q. I think it's great that you're here, because
13 the Forest Society is -- no, I'm supposed to
14 ask you a question. Is the Forest Society the
15 leading conservation land trust in the state?

16 A. (Wells) I think that would be a fair
17 assessment. Certainly, based on the age of
18 organization, the number of acres they have got
19 in conservation, both fee and easement. So,
20 that's a fair statement.

21 I will take this opportunity, because I
22 know it's in the record, but just to make sure
23 it's totally clear, I do not currently work for
24 the Society for the Protection of New Hampshire

[WITNESS PANEL: Allen ~ Wells]

1 Forests. So, I'm not here representing them.
2 Nor am I here representing the organization
3 that I currently run, which is the Piscataquog
4 Land Conservancy, which is based down out of
5 New Boston. I am here as a citizen.

6 And, again, the other key thing, and,
7 again, you know, but I'll repeat it, is I am
8 not here to take a position for or against this
9 specific project. I agreed to be part of this
10 panel because this Project was being discussed
11 in the larger context of Quabbin-to-Cardigan
12 Partnership's Plan -- Wildlife Action Plan,
13 *etcetera*. And I agreed with my fellow
14 panelists that it would be good to have
15 somebody who could hopefully answer questions
16 about what this Quabbin-to-Cardigan Project is
17 and what it isn't, and provide context. So,
18 that is my intent sitting here, is to give you
19 all context and answer questions, because
20 you're hearing this Q2C thing being talked
21 about. And, as the person who, you know, had
22 the good fortune of coordinating, riding herd
23 on the whole thing, which is basically a big
24 partnership ad hoc project, I do have a lot of

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[WITNESS PANEL: Allen ~ Wells]

1 historic -- essentially historical background
2 on how this Plan was originally developed, and
3 what it means and what it doesn't mean.

4 So, just forgive me for that soliloquy,
5 but I just want to make sure everybody was
6 totally clear on why I'm here and what I think
7 my role is.

8 Sorry. Back to you.

9 Q. No. That's important. So, Page 5 of your
10 testimony has the Q2C map, superimposed on
11 Massachusetts and New Hampshire.

12 A. (Wells) Yes. There it is. Yes.

13 Q. And the meetings I attended in the early days,
14 there were over two dozen partnerships, --

15 A. (Wells) Uh-huh.

16 Q. -- conservation groups, --

17 A. (Wells) Yes.

18 Q. -- state and private. Okay. So, why this
19 particular area of focus?

20 A. (Wells) Sure. Well, it's in the testimony,
21 which was pulled largely from existing
22 documents that describe the Q2C. But, in the
23 simplest terms, the organizations, public
24 agencies, actually some of the regional

[WITNESS PANEL: Allen ~ Wells]

1 planning commissions, those were sort of the
2 three sets of entities that got together around
3 this whole Q2C Project to start with. Was that
4 you have got this, essentially, spine of high
5 ground watershed divide topography that's
6 running from, roughly speaking, from the
7 Quabbin -- what they call the "North Quabbin
8 area of Massachusetts", which is basically the
9 high ground, starting north to Quabbin, across
10 the border up the western spine of New
11 Hampshire, where it sort of bleeds into the
12 foothills of the White Mountains. So,
13 Cardigan, beyond Cardigan, as it bleeds into
14 the south edge of the Whites.

15 And that -- so, there was -- there is,
16 obviously, this basic, you know, physiographic
17 feature. And, then, within that, you know,
18 geographic/geological area, you had and have, I
19 keep describing it this way for a lack of a
20 better way to do it, sort of this chain or an
21 island chain, so to speak, of these four sort
22 of central and southern New England standards,
23 very large, and here goes -- here comes the
24 word you've heard a lot already, large

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[WITNESS PANEL: Allen ~ Wells]

1 unfragmented blocks of forests, you know, and
2 by "large" meaning, you know, 10 and, in some
3 cases, 20 plus thousand acres, and a couple, I
4 think, 30,000 acres, if I remember, that are
5 basically some of the last really big patches
6 of completely undeveloped, unfragmented forests
7 that are left, certainly, south of the White
8 Mountains.

9 And it's also -- it is somewhat
10 significant that it also gets as far south as
11 it does, all the way down into Massachusetts.
12 So, that is a unique thing, and that remains,
13 that continues to be true.

14 So, that was -- quite honestly, that was
15 the -- sort of the organizing principle
16 originally was, you know, we've got this
17 corridor of these big -- these big forests
18 left, they're reasonably well interconnected
19 with each other. And, then, from that starting
20 point, to say "is there anything that can be
21 done to look at it as a whole?" Try to do some
22 planning to say, "well, if we were going to try
23 to focus more conservation activity in this
24 area, how would we do it and what would be the

[WITNESS PANEL: Allen ~ Wells]

1 criteria by which we would do it?" And bring
2 in organizations, you know, in particular, I
3 would say, organizations like Nature
4 Conservancy, New Hampshire Fish & Game, their
5 equivalent in Massachusetts, Mass. Audubon and
6 New Hampshire Audubon. Basically, the -- what
7 is the word I'm looking for? Well, the
8 wildlife, the habitat, and biodiversity
9 experts, and say "okay, beyond the fact that
10 these blocks are just big, you know, what else
11 is going on inside them? Why do we care, other
12 than they're big?"

13 I'm sort of shorthanding, but this is --
14 this is really where the essential thread to
15 this whole exercise. And the planning piece of
16 it, which was the early years, roughly '03 to
17 '06 or so, I think, by the time we got done.
18 That was really what we were looking at, is
19 saying, at that time, which is now almost ten
20 years ago, "what's the best available data",
21 which, essentially, is expressed as GIS data
22 layers. You all know "GIS", right? Geographic
23 Information Systems. It's the way that
24 conservation planning gets done, certainly at a

[WITNESS PANEL: Allen ~ Wells]

1 large -- at a relatively large scale. Saying
2 "what is the best variable data that is trying
3 to get at those", as we put it then, it's
4 pretty wonky, "embedded ecological features
5 inside these big forest blocks, including
6 especially the wildlife habitat piece?" And we
7 were -- we had the good fortune of being able
8 to bake in some very, at the time, by those
9 standards, very fine-grain water quality
10 information. Again, a lot of this being
11 model-based.

12 And, then, again, I'm just trying to kind
13 of get you through the process quickly. But
14 then sort of layer cake all that data. Look at
15 what it tells us in terms of all these
16 different sets of data, I mean, it's in my
17 testimony, but it was certainly north of, I
18 think, twenty different GIS layers. Where are
19 we seeing a lot of co-occurrence? All these
20 different layers are saying this particular
21 place in the ground is important. And, then
22 say -- then take a step back from that and say
23 "well, what are we" -- you know, "what are we
24 seeing?" And that is really the genesis of

[WITNESS PANEL: Allen ~ Wells]

1 what ultimately then got refined into a final
2 plan; these core focus areas and supporting
3 landscapes.

4 The second sort of step we went past, the
5 pure layer cake, which was, by the way,
6 weighted, based on, essentially, the expert
7 opinion and the mission -- the different
8 missions of the different organizations saying
9 this or that data is more or less important.
10 But take that co-occurrence, and then do a
11 final refining of it, so we would have
12 reasonably crisp edges. So, we could say, you
13 know, a piece of ground is in or out. Which
14 is, you know, to some degree, you know, it's an
15 exercise like any. So, what we used to really
16 do the final delineation of those areas, to
17 make it an "in" and "out" question, were the
18 2005 iteration of the New Hampshire Wildlife
19 Action Plan, I guess now we're on the third,
20 from 2015, and also what was, I think,
21 ultimately, USGS created data looking at very,
22 very, very small-scale watersheds. I will
23 never remember what the acronym means anymore,
24 but it was the "SPARROW watersheds", which

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[WITNESS PANEL: Allen ~ Wells]

1 takes it down to a very small subset watershed
2 level. And we used the edges of those
3 watersheds and also the edges from the Wildlife
4 Action Plan saying "Here's the Tier 1 top of
5 the best-of-the-best habitat", to sort of build
6 those final edges. So, hopefully, that made
7 some sense. But that's how -- that's the
8 process through which, in summary terms, we
9 went through over two and a half to three years
10 to develop the plan, which, to this day,
11 remains the Q2C conservation plan that has
12 those core and supporting landscape areas.

13 Jeez. So, anyway, I guess -- I'm sorry, I
14 gave you a lot of background.

15 Does that answer your question?

16 *[Laughter.]*

17 **BY THE WITNESS:**

18 A. (Wells) I hope I did in there somewhere.

19 BY MS. VON MERTENS:

20 Q. I'm done. No.

21 A. (Wells) Okay.

22 Q. You actually answered one of my questions.

23 A. (Wells) Okay.

24 Q. So, I lost an opportunity to -- I was going to

[WITNESS PANEL: Allen ~ Wells]

1 ask you, I guess an obvious question, about how
2 New Hampshire Fish & Game's Wildlife Action
3 Plan assisted your prioritizing. So, when we
4 look at the big swath in the Q2C, --

5 A. (Wells) Right.

6 Q. -- you've refined areas within that swath.
7 You're not doing the umpteen million. But my
8 opportunity was to say that New Hampshire
9 Audubon was, I believe, the leading private
10 conservation group working with Fish & Game,
11 contracted by Fish & Game for the Wildlife
12 Action Plan, the original one. I don't know
13 about the update.

14 A. (Wells) Right.

15 Q. The sessions I -- the early sessions I attended
16 of Q2C, there was quite a lot of -- amongst the
17 various major conservation groups, there was a
18 lot of analysis of appropriate areas for Forest
19 Legacy Program applications.

20 A. (Wells) Uh-huh.

21 Q. And I think, during Geoff Jones yesterday, I
22 think you may have been here, there was mention
23 of Forest Legacy projects that had been applied
24 and accepted in the area. The viewshed area

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[WITNESS PANEL: Allen ~ Wells]

1 for the Antrim Wind Project is 10 miles across,
2 centered on the Project, or a 5-mile radius.
3 Within that radius, there are three Forest
4 Legacy projects: Willard Pond Wildlife
5 Sanctuary addition; Robb Reservoir,
6 considerably bigger, 1,700 acres; and the most
7 recent one is Crotched Mountain Rehab Center's
8 1,200 acres.

9 How unusual, in your experience, in two
10 states, really, but New Hampshire, in your
11 experience, is that an unusual number of Forest
12 Legacy projects for such a size?

13 A. (Wells) That's an interesting question. I
14 guess my best answer would be is, it's not --
15 it's not unusual only -- but only in the
16 context of this part of the state. I guess
17 what I'm trying to get at with that is, you
18 have a concentrated area of, you know, several
19 thousands of acres that have been put under
20 legacy easements in the immediate area around
21 this Project that you're looking at.

22 But, if you look at it in the context of
23 this wider corridor, there have been additional
24 major legacy investments up and down the

[WITNESS PANEL: Allen ~ Wells]

1 corridor. Which, I mean, I guess I would say
2 fairly that the Q2C Partnership has had some --
3 has made some, at least small, contribution to
4 that happening, because we have been, you know,
5 the whole point of it really being, this whole
6 set of organizations all saying, on the same
7 page. "this is a really important corridor".
8 And it isn't, while the localized areas, like
9 the one you guys are dealing with right now,
10 are important, there are areas like that up and
11 down this whole corridor that is, whatever,
12 about 100 miles from north to south, and
13 they're interrelated to each other. And, so,
14 -- and, forgive me, I don't have the full list
15 of every one that's been done, but it would be
16 relatively easy to find.

17 But there have been multiple major legacy
18 projects, I mean, many millions of dollars that
19 have been done now in the "North Quabbin" piece
20 in Massachusetts, in part, being supported by
21 the case it's made because it's important to
22 the Q2C Plan.

23 And, then, in the New Hampshire portion,
24 let's see, well, I think one of them would be

[WITNESS PANEL: Allen ~ Wells]

1 sort of about when we got started, but you've
2 got the Pillsbury/Sunapee legacy area, which
3 is, again, many thousands of acres. So, just a
4 few miles basically up the corridor from where
5 we're talking about today. And, then, one that
6 you all may be -- some of you will be familiar
7 with, is there is a major legacy project done a
8 few years ago now, up in the northern end of
9 the corridor, the "Groton Wind Project" is
10 located on what is now also a major Forest
11 Legacy easement on the balance of that
12 property, it was the Green Acre Woodland's
13 pieces. Those two things kind of converged at
14 that same time.

15 So, I'm just trying to give you some
16 context, is that this corridor, both in Mass.
17 and in New Hampshire, has been the focus of
18 multiple investments over now at least the last
19 10 to 15 years, by the Fed -- in particular, by
20 the Feds through the Forest Legacy Program.
21 And, I think, hopefully, at least the
22 case-making for this region done by the
23 Quabbin-to-Cardigan Partnership for the last 12
24 years, 13 years, has helped make that happen.

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[WITNESS PANEL: Allen ~ Wells]

1 We've been building, you know, a steady case
2 for this is a unique, you know, for New
3 England, and we would argue nationally unique
4 area, that is worthy of a sustained investment
5 up and down the corridor. Leave it at that.

6 Q. Okay. Thank you. The Forest Legacy criteria,
7 when groups are applying unfragmented forest
8 blocks, forest legacy, forest resources, their
9 watershed resource, watershed protection,
10 wildlife, pretty basic.

11 A. (Wells) Yes.

12 Q. Recreation might be. Forest Legacy is only for
13 private, privately-owned land. So, recreation.

14 A. (Wells) Uh-huh.

15 Q. Audubon's stewardship has to include trails and
16 public access.

17 A. (Wells) Right.

18 Q. And there's this tricky one, "aesthetics".

19 A. (Wells) Uh-huh.

20 Q. And it's right in there. You can -- forest
21 products, you can measure board feet and count
22 stumpage and all that.

23 A. (Wells) Yes.

24 Q. And aesthetics, which is one of the criteria

[WITNESS PANEL: Allen ~ Wells]

1 for the SEC Subcommittee here. And it's -- I
2 remember the 2012 docket, you know, how do you
3 grapple with sort of squishy aesthetics? And
4 is it measurable? Is it subjective? Is it --
5 so, that's my tough question to you. You're in
6 land protection. Where does -- help us out
7 here. How do we do aesthetics?

8 A. (Wells) Aesthetics? Well, I guess this will be
9 my first, probably, punt of the day. In terms
10 of the Quabbin, and I'll try to just put the
11 sort of answer in two different ways. In terms
12 of the Quabbin-to-Cardigan Partnership, --

13 *[Court reporter interruption.]*

14 **CONTINUED BY THE WITNESS:**

15 A. But, in terms of the Quabbin-to-Cardigan
16 Partnership, is I hopefully was getting across
17 to you, in my first -- my previous soliloquy
18 about it is, is, for better or for worse,
19 largely a "natural resource-driven plan". That
20 is, we were trying to create a conservation
21 plan driven by data, and the data that's
22 available is basically the data that's
23 available, and that was going to be natural
24 resource-driven stuff. So, you know, soil maps

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[WITNESS PANEL: Allen ~ Wells]

1 forest types, you know, Wildlife Action Plan
2 data, small watershed quality data, you know,
3 *etcetera, etcetera*. There was no one, to my
4 knowledge anyway, there is no sort of
5 "everybody agrees this is the right one to use"
6 dataset for aesthetic impact. Just, again,
7 I've been out of this for a couple years, but I
8 think that's still the case.

9 So, it is sort of -- it's on its own
10 track, for better or for worse, it's on its own
11 track. The point of that all being is, again,
12 I am going to be trying to keep myself within
13 sideboards of, again, as I tried to say at the
14 beginning, to provide context for this
15 discussion from what the Quabbin-to-Cardigan
16 Project is. And, so, aesthetics is not a --
17 has not been, to date anyway, a driver of that.

18 That said, and this is a point I did want
19 to hopefully get in there somewhere, and,
20 again, I will ask all of you to forgive me,
21 because I have been now running a little local
22 land trust for the last couple years, some of
23 this is not as fresh as it would have been
24 three or four years ago.

[WITNESS PANEL: Allen ~ Wells]

1 But -- and I'm guessing you all will have
2 already done this, perhaps in the last
3 go-around you had on this project of, whatever
4 it was, two or three years ago. But it would
5 be worth looking back at the criteria that were
6 used and the cases that were made for these
7 four, in particular, I would say, the Forest
8 Legacy projects that are in this immediate
9 area. And how much was it -- how much of that
10 decision-making was being driven by aesthetics
11 or not, and/or any of these other natural
12 resource values?

13 And, again, given the proximity of those
14 lands, the number of acres involved, and the
15 amount of money that was spent, ultimately, by
16 the people of the United States, going back and
17 refreshing your memory about "Well, what was
18 behind the decision-making that led to those
19 investments being made?" And does it -- does
20 it give you anything useful to work with
21 looking at what you're looking at now, in terms
22 of this Project potentially having an impact
23 back on to those Forest Legacy properties? Why
24 were they protected in the first place?

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 So, I'm sorry I'm sort of giving you
2 another question to answer, but it seems like a
3 good one.

4 BY MS. VON MERTENS:

5 Q. I just think it's important to know that
6 aesthetics, squishy aesthetics are a major
7 criteria, one of the five major criteria for
8 Forest Legacy.

9 A. (Wells) Indeed.

10 Q. I guess I'll end where I started, which is
11 orderly development of the region. And my
12 experience with the SuperSanctuary, maybe Mary
13 could help with this, and Chris, your
14 prioritizing land conservation. Often town
15 planning starts with identifying "okay, where
16 is it appropriate for development?" And, then,
17 by default, "okay, we don't care about the
18 risks." And conservation planning, and I
19 believe that documents for the SuperSanctuary
20 say, "Well, let's do it in reverse. Let's
21 identify, by a very rigorous criteria process,
22 where the natural -- the high natural resource
23 lands are", and there's a bunch of categories
24 of natural resources. And ordinarily

[WITNESS PANEL: Allen ~ Wells]

1 development of the region, therefore, becomes
2 identifying where development -- high-impact
3 development is not appropriate. Is that a fair
4 assessment of the principles of land
5 conservation?

6 A. (Wells) I guess I'll start, and Mary can chip
7 in, too. Again, looking at this from the
8 Quabbin-to-Cardigan perspective, I think that's
9 a fair way to put it. I mean that was,
10 ultimately, --

11 Q. Thank you.

12 A. (Wells) -- the point of the -- that was the
13 point of the whole exercise, was to say to
14 focus -- try to basically focus down on those
15 areas that at least, based on the data we had
16 available, were the best-of-the-best on
17 multiple different levels of natural resources,
18 and then focus our efforts and limited
19 resources to protect those lands. That was the
20 whole point.

21 So, from the Quabbin-to-Cardigan
22 perspective, yes. These were the areas where,
23 and it says it, you know, in the materials,
24 to -- as within the context of it always being

[WITNESS PANEL: Allen ~ Wells]

1 on a willing seller/willing donor basis, to try
2 to "consolidate the protection" that is, put
3 those puzzle pieces together of the different
4 tracts, and then have those lands be protected
5 in perpetuity, so that those large blocks, with
6 all of the stuff going on inside them, would be
7 protected forever and not have, as you put it,
8 "high-impact development", however defined.

9 Q. Thank you.

10 A. (Allen) If I could also answer from a local
11 standpoint, from an Antrim resident standpoint.

12 WITNESS ALLEN: But I have to bring
13 up a procedural thing. I'm looking at a sticky
14 note here that I wrote to myself, and this is
15 one of the problem with being *pro se*. I do
16 want to adopt Charles Levesque's testimony.
17 And I should have probably mentioned that a
18 while ago.

19 PRESIDING OFCR. SCOTT: Well, what
20 I'm thinking is, and what I meant by "pick your
21 poison" is "who do you want to come up with"
22 is, I would like to get everything done today.

23 WITNESS ALLEN: Yes.

24 PRESIDING OFCR. SCOTT: But, if

[WITNESS PANEL: Allen ~ Wells]

1 Mr. Levesque will be here, and I know the
2 Applicant has questions for him, I'm sure other
3 people do, too.

4 WITNESS ALLEN: Sure.

5 PRESIDING OFCR. SCOTT: We'll have
6 him up. So, what I wanted to suggest is, I
7 don't want to have you come up twice.

8 WITNESS ALLEN: Okay.

9 PRESIDING OFCR. SCOTT: Right? So,
10 however, having said that, I do believe when
11 you were asked regarding your testimony, you
12 were not asked the question "do you adopt your
13 testimony?" Is that correct?

14 MS. DORE: Yes. My fault. So, are
15 you adopting your prefiled testimony as your
16 testimony today?

17 WITNESS ALLEN: Yes, I am.

18 MS. DORE: Mr. Wells, are you
19 adopting your prefiled testimony as your
20 testimony today?

21 WITNESS WELLS: Can I ask a question
22 back?

23 MS. DORE: Yes.

24 WITNESS WELLS: Do we both have to or

[WITNESS PANEL: Allen ~ Wells]

1 can it be one or the both of -- one or the
2 other?

3 MS. DORE: You have your own
4 testimony and she has her own testimony. So,
5 you have to --

6 WITNESS WELLS: Oh, I'm sorry. I
7 thought you were asking me with Charles
8 Levesque's. Yes, I do adopt my own, my own
9 testimony.

10 MS. DORE: Your own testimony.

11 WITNESS ALLEN: But my procedural
12 question is, should I be adopting Charlie's now
13 or not?

14 MS. DORE: No. He's going to be
15 here, he can adopt it himself.

16 PRESIDING OFCR. SCOTT: Yes. As long
17 as Mr. Levesque is actually coming this
18 afternoon, and you're sure of that, correct?

19 WITNESS ALLEN: I will call him.

20 PRESIDING OFCR. SCOTT: Within
21 reason.

22 WITNESS ALLEN: Within reason.

23 PRESIDING OFCR. SCOTT: So, the
24 intention is that he will be here this

[WITNESS PANEL: Allen ~ Wells]

1 afternoon and will adopt his own testimony, is
2 that correct?

3 WITNESS ALLEN: Okay. I think that
4 would be better.

5 PRESIDING OFCR. SCOTT: And, if
6 that's the case, then you don't need to adopt
7 his testimony. If you're telling me he's not
8 going to come this afternoon, then you should,
9 if you fell comfortable, then you should adopt
10 it now.

11 WITNESS ALLEN: I think I'm going to
12 adopt it now.

13 PRESIDING OFCR. SCOTT: So, he's not
14 coming this afternoon?

15 WITNESS ALLEN: I hope he is. I
16 don't -- I don't know.

17 PRESIDING OFCR. SCOTT: Okay. So,
18 you're --

19 WITNESS ALLEN: He is running -- he's
20 on a business, he's running a seminar up in
21 Plymouth.

22 PRESIDING OFCR. SCOTT: Okay. Is
23 he -- let me rephrase. Is your understanding
24 that he intends to be here this afternoon and

[WITNESS PANEL: Allen ~ Wells]

1 be available to us?

2 WITNESS ALLEN: If I call him, I
3 think he will make every effort to be here.

4 PRESIDING OFCR. SCOTT: Okay.

5 WITNESS ALLEN: But what I don't want
6 to end up having is his testimony not be -- not
7 part of the record.

8 PRESIDING OFCR. SCOTT: All right.

9 WITNESS ALLEN: And I don't know --

10 PRESIDING OFCR. SCOTT: So, what I'll
11 propose is, call him. We'll assume he's going
12 to be here this afternoon. Worst case, I think
13 we'll have a little bit of time on the 7th that
14 we could probably work him in also.

15 WITNESS ALLEN: Okay.

16 PRESIDING OFCR. SCOTT: Is there any
17 objection to that, Mr. Needleman?

18 MR. NEEDLEMAN: Well, it's important
19 for us that we be able to ask questions to
20 Mr. Levesque or about Mr. Levesque's testimony.
21 And I would certainly prefer to do it today.

22 When Ms. Allen asked me about this
23 yesterday, I was happy to have her do this any
24 way she wanted. I just assumed we would get

[WITNESS PANEL: Allen ~ Wells]

1 the chance to ask those questions of Mr.
2 Levesque.

3 PRESIDING OFCR. SCOTT: And I think
4 that's preferable. So, what I'm suggesting, is
5 it sounds like, most likely, he'll be here this
6 afternoon. If not, would the 7th work for
7 people?

8 MR. NEEDLEMAN: I'm saying it really
9 reluctantly, because I'm afraid of how pressed
10 we'll already be on the 7th, so, to add more
11 concerns me.

12 PRESIDING OFCR. SCOTT: Okay. Tell
13 you what. Would you be able to call him now,
14 so we can get a read from that, and we'll go
15 off the record while you do that.

16 WITNESS ALLEN: Sure. And what time
17 now? Just as soon as he can get here?

18 PRESIDING OFCR. SCOTT: Right.
19 Right. So, the question is is when -- does he
20 plan on coming this afternoon? And when do you
21 think he would be -- when does he think he'd be
22 here?

23 WITNESS ALLEN: Okay.

24 PRESIDING OFCR. SCOTT: And then

[WITNESS PANEL: Allen ~ Wells]

1 we'll adjust accordingly.

2 WITNESS ALLEN: I'm glad to do that.

3 PRESIDING OFCR. SCOTT: Okay. So,
4 why don't we take a quick break and we'll do
5 that real quick.

6 *(Recess taken at 11:31 a.m. and*
7 *the hearing resumed at 11:35*
8 *a.m.)*

9 PRESIDING OFCR. SCOTT: Okay. We're
10 back on the record. So, Ms. Allen, I think
11 you've --

12 MS. ALLEN: I've been able to get
13 ahold of Mr. Levesque. He will be here by one
14 o'clock. And I would prefer not to adopt his
15 testimony at this point.

16 PRESIDING OFCR. SCOTT: Right. So,
17 since he is indicating he will be here, I don't
18 think there's a need for that. I think it
19 would be better for him to adopt his own
20 testimony.

21 WITNESS ALLEN: I agree.

22 PRESIDING OFCR. SCOTT: So, we will
23 proceed. So, I think, somebody correct me if
24 I'm wrong, I think we're with Ms. Linowes now.

[WITNESS PANEL: Allen ~ Wells]

1 MS. VON MERTENS: I didn't know if
2 Mary had a --

3 WITNESS ALLEN: I just had one
4 response to Francie. From the Town's point of
5 view, from the Town of Antrim, we have adopted
6 an Open Space document. And that's an
7 important part of our Planning Board and our,
8 you know, regulations in the Town. We've
9 been -- we've been actively, through our
10 Conservation Commission and through other Town
11 organizations, identifying, you know, critical
12 land and encourage people to look at different
13 ways to conserve it.

14 So, that's also a part of our own
15 town structure. Thank you.

16 PRESIDING OFCR. SCOTT: Okay. Now,
17 we're at Ms. Linowes.

18 MS. LINOWES: Thank you, Mr.
19 Chairman. Good morning.

20 BY MS. LINOWES:

21 Q. If you can go to Page 4, this is to Mr. Wells,
22 if you can go to Page 4 of your prefiled
23 testimony.

24 A. (Wells) Yes.

[WITNESS PANEL: Allen ~ Wells]

1 Q. And specifically Line 4, I had a couple of
2 questions regarding this section.

3 A. (Wells) Sure.

4 Q. And here you say "the Q2C region is one of the
5 largest remaining areas of intact,
6 interconnected, ecologically significant forest
7 in New England", and then you name other
8 attributes.

9 A. (Wells) Uh-huh.

10 Q. And further down you say "Habitat conservation
11 within the region is a high priority for both
12 the Massachusetts and New Hampshire [Wild]
13 Action Plans." Is it fair to say that the
14 priority for, and you may have answered this,
15 so my apologies, but is it fair to say that the
16 priority for the Q2C is wildlife protection and
17 habitat conservation?

18 A. (Wells) It would be fair to say it is one of
19 the main drivers of the project, yes.

20 Q. Is that the highest? I mean, are those
21 drivers, are they prioritized?

22 A. (Wells) Well, I mean, you can literally look
23 within the full technical report about how the
24 plan was originally built. I mean, there is a

[WITNESS PANEL: Allen ~ Wells]

1 list that says, okay, and it gets back to the
2 weighting I was talking about, where you have
3 however many -- you know, 20 plus different
4 people, with varying expertise, and sort of
5 representing different missions, etcetera, who
6 rank all those datasets to say this is -- this
7 or that being more important.

8 My recollection now, I would have to go
9 and look at it, but I think the thing that
10 popped the most in that ranking process was
11 literally just the sheer size of the blocks
12 involved. If I recall, followed shortly
13 thereafter by what were, at the time, called --
14 we were calling them the "TNC Matrix Forest
15 Blocks", which was Nature -- I'm sorry, and
16 "TNC" being "The Nature Conservancy", The
17 Nature Conservancy's own kind of, at that
18 moment, which, again, is about 10 years ago,
19 state-of-the-art, their kind of black box
20 modeling methodology. And they do a lot of
21 this work, and continue to do so. Saying
22 "where are these sort of biodiversity/wildlife
23 habitat hot spots, you know, across the
24 landscape?" And, so -- and, then, within --

[WITNESS PANEL: Allen ~ Wells]

1 within large unfragmented blocks of forestland.

2 So, this -- this, hopefully, isn't too
3 long-winded. So, that was -- that, in
4 particular, that dataset, was a big thing that
5 really drove the final outcome of that whole
6 layer cake of data that we used at the time.

7 So, yes. That's probably more detailed
8 than you needed.

9 Q. Now, you talk about the Massachusetts and the
10 New Hampshire Wildlife Action Plan. But has --
11 I have never seen the Massachusetts Wildlife
12 Action Plan.

13 A. (Wells) Uh-huh.

14 Q. I mean, is it comparable to New Hampshire?
15 Does it express the same kind of information?

16 A. (Wells) Again, as a non-Fish & Game
17 person/biologist person, I would -- I think
18 that's a reasonable thing to say, yes.

19 Q. Okay.

20 A. I mean, they're going to be using reasonably
21 similar methodologies. And, again, the data --
22 the data you have is sort of the data you have.
23 And, so, they may have some different datasets
24 collected in a slightly different way. But I

[WITNESS PANEL: Allen ~ Wells]

1 would say that it's fair to say they would be
2 roughly comparable, yes.

3 Q. And, with regard to the Q2C, do you have -- do
4 you conduct, maybe every five years or on a
5 regular basis, an inventory of the wildlife
6 that is present within the area and track
7 population sizes at all? Does any of that
8 happen?

9 A. (Wells) Certainly, that is not within the
10 purview of the Quabbin-to-Cardigan Partnership.
11 That work -- presumably, that work is happening
12 at some of the entities, whether they're
13 private or public, that are doing that work on
14 a regular basis. Again, most likely, the Fish
15 & Game agencies.

16 Q. Okay.

17 A. (Wells) And/or TNC.

18 Q. Thank you. Now, there was a statement that Mr.
19 Jones said yesterday, and I think you were here
20 for his cross-examination. And he said
21 something about "apex predators", and that the
22 importance of apex predators -- or at least the
23 health of a forest, and, you know, I'm sort of
24 paraphrasing here, that the healthier the

[WITNESS PANEL: Allen ~ Wells]

1 forest was measured in some respects by the
2 presence of apex predators. Do you remember
3 him saying something like that?

4 A. (Wells) I do remember.

5 Q. And, so, is it your -- would you believe, in
6 your work at the Q2C, that over times, since
7 this a large block of forested area, that we
8 would start to see some of those, that wildlife
9 that has been squeezed out of populated areas,
10 human-populated areas, find their way into this
11 large, unfragmented forested area?

12 MR. RICHARDSON: Mr. Chairman, it's
13 not clear to me that this is a wildlife expert.
14 Maybe we should have a foundation question
15 before we get in to speculation by non-experts
16 about wildlife issues.

17 MS. LINOWES: Well, I think his
18 testimony speaks specifically to "high value
19 resources", which I'm going to get to. And I'm
20 just -- and I'm just trying to get a sense of
21 those high value resources. I mean, I could
22 come back, cycle back on that.

23 BY MS. LINOWES:

24 Q. But do you have any thought on that?

[WITNESS PANEL: Allen ~ Wells]

1 MR. RICHARDSON: I'd like to say we
2 have his resumé, and it has a Master of Urban
3 Planning and a Bachelor of Art History, which I
4 think are great fields, but I think we're
5 asking the wrong person the question.

6 PRESIDING OFCR. SCOTT: We understand
7 that. So, we'll, again, continue to -- he does
8 talk about "habitat conservation" in his
9 testimony -- well, yes, I'll look at the right
10 testimony.

11 So, we're not going to dwell deeply
12 on this, are we?

13 MS. LINOWES: No. No, we're not.
14 I'm trying to get a sense of -- it's okay. I
15 think that I can move on. Unless you want to
16 answer?

17 WITNESS WELLS: No. But, for the
18 record, it's American History, not Art History.
19 That's all. I just had to say it.

20 MS. LINOWES: That's a big
21 difference. Okay. Let me move on then.

22 BY MS. LINOWES:

23 Q. On Line 11 of that same page, you write "Its
24 managed timberlands are an important source of

[WITNESS PANEL: Allen ~ Wells]

1 forest products and renewable energy". And I'm
2 sort of assuming that's biomass. But can you
3 tell us what you mean by "renewable energy"
4 there?

5 A. (Wells) That is correct. That was what was
6 meant by that sentence in that document, yes.

7 Q. Okay. So, the Q2C, at least the Partnership,
8 does not object, in general, to biomass? As
9 a -- if you don't have an answer, that's okay.

10 A. (Wells) It's honestly not a -- it's not a
11 question that has ever been, to my knowledge, I
12 mean, I haven't been there for a couple years,
13 but has never been raised or discussed one way
14 or the other within the Q2C Partnership. I
15 think that, when that was written, that
16 particular document that you're pulling from
17 was written, that was essentially a statement
18 of fact. That a lot, and this is still true, a
19 lot of forest products, including a lot of
20 low-grade, is coming off these properties. And
21 some portion of those are getting turned into
22 chips and sent to our biomass plants.

23 So, it's a statement of fact, rather than,
24 you know, an endorsement one way or the other.

[WITNESS PANEL: Allen ~ Wells]

1 Q. Okay. Thank you. Now, on Page 7 of your
2 prefiled testimony, you -- Line 5, you state --
3 or, actually, I should start with the question
4 itself. The question is stated on Line 3. "Is
5 the area proposed for the wind farm one of the
6 priority areas identified for protection?" And
7 you said "Yes".

8 A. (Wells) Uh-huh.

9 Q. And then state "The area proposed for the wind
10 farm is a core conservation focus area in the
11 plan." Do you see that?

12 A. (Wells) Yes.

13 Q. And, then, going down to Line 11, you say, in
14 your answer, Line 11, "Again it is part of a
15 large area of unfragmented forest", this is the
16 Project site and as well as what's in Antrim.

17 A. (Wells) Uh-huh.

18 Q. "That stretches into Stoddard and has a
19 combination of high value resources identified
20 in the Q2C Conservation Plan."

21 A. (Wells) Correct.

22 Q. Can you explain what you mean by "high value
23 resources" there?

24 A. (Wells) Again, it just is getting back to how

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[WITNESS PANEL: Allen ~ Wells]

1 was that plan constructed in the first place.
2 And, again, it is, in the end, driven by a
3 whole -- this whole layer cake of different
4 datasets that are representing different
5 resource values, you know, that are collected
6 in various ways, essentially, the expert
7 judgment and weighting of the experts that were
8 part of the process as expressed on the ground.
9 So, it's -- to say it is in a core or one of
10 those core Tier 1 conservation focus areas is,
11 again, simply a statement of fact that the plan
12 was developed through this layer cake of
13 datasets and the expert opinion -- the expert
14 judgment of the people around the table.

15 And, again, getting back, I mean, we
16 really wanted to have edges so you could say
17 "it's in" or "it's out". And, so, that was the
18 plan we came up with. And, so, yes, this is
19 in. This is in one of those areas, based on
20 how the plan was originally developed.

21 Q. So, if I --

22 A. (Wells) And it doesn't get into deeper levels
23 of detail than that.

24 Q. If I understand you correctly, though, I mean,

[WITNESS PANEL: Allen ~ Wells]

1 so, there is -- there is this classification
2 that you have, if you will, okay, that you have
3 set aside as part of the Q2C. There is also
4 the Wildlife Action Plan, and I'll talk
5 specifically to New Hampshire.

6 A. (Wells) Uh-huh.

7 Q. Is it fair to say that the Wildlife Action
8 Plan's recognition of this land area and the
9 Q2C's recognition of this land area are
10 consistent? Or would you -- and is there an
11 attempt to keep that consistent?

12 A. (Wells) I would say two things. One is that,
13 and I think I have said this before, but I'll
14 say it again, is that the Wildlife Action Plans
15 of both states were baked into the original
16 plan that we developed. So, they are one of
17 those data layers, and they were a highly
18 ranked one. So, the WAPs were used to do the
19 final delineation of edges of those focus
20 areas. So, they are, in fact, baked into the
21 Quabbin-to-Cardigan Plan.

22 Q. Okay.

23 A. (Wells) Which is sort of a combination of
24 priorities set by different perspectives. So,

[WITNESS PANEL: Allen ~ Wells]

1 one. And, then, two, I can say, again, I've
2 been away for two years. But the last time I
3 checked, when I was still at the Society and I
4 was still running Q2C, I was really interested,
5 because, as you guys have heard a lot, I think,
6 you know, we've been through multiple
7 iterations in New Hampshire, certainly, of a
8 Wildlife Action Plan being sort of redone every
9 five years or so, wanted to know -- I was
10 interested, because I knew that that had been
11 such a driver of the Plan to start with,
12 whether divergence is happening or not. And,
13 so, I know for -- absolutely for certain that,
14 as of the 2010 Plan, the two plans were very
15 highly correlated, in terms of what they said
16 was Tier 1 best-of-the-best and what Q2C was
17 saying Tier 1 best-of-the-best. So, --

18 Q. Okay.

19 A. -- again, those are sort of the facts that I
20 can give you.

21 Q. Okay.

22 MR. NEEDLEMAN: Mr. Chair, the last
23 two answers that Mr. Wells gave have
24 essentially been reiterations of things he said

[WITNESS PANEL: Allen ~ Wells]

1 before or are already in his testimony. I'm
2 mindful of what you said earlier about wanting
3 to get done. And I'm going to object if we
4 continue to go down this path.

5 MS. LINOWES: Mr. Chairman, I have
6 two more questions.

7 PRESIDING OFCR. SCOTT: And we're not
8 going to just re-ask testimony, are we?

9 MS. LINOWES: I didn't realize I was
10 reiterating. I'm reading his cross -- his
11 prefiled testimony. And I --

12 PRESIDING OFCR. SCOTT: Okay.

13 MS. LINOWES: And if I can ask him
14 where it is in the testimony then?

15 PRESIDING OFCR. SCOTT: Well, how
16 about we just continue, for time sake.

17 MS. LINOWES: Okay.

18 PRESIDING OFCR. SCOTT: And,
19 Mr. Wells, again, if it's in your testimony,
20 you can -- you don't need to regurgitate
21 anything, if you could.

22 WITNESS WELLS: Okay. Sorry. First
23 time I've ever done this.

24 MS. LINOWES: I'm sorry, what did you

[WITNESS PANEL: Allen ~ Wells]

1 say?

2 WITNESS WELLS: Oh, I was just
3 saying, forgive me, I'm learning as I go with
4 your process.

5 MS. LINOWES: Okay.

6 WITNESS WELLS: Sorry.

7 MS. LINOWES: Thank you, Mr.
8 Chairman.

9 BY MS. LINOWES:

10 Q. Mr. Wells, on the last page of your prefiled
11 testimony, this would be Page 8, you have a
12 question "What will happen if the wind farm is
13 built in this area?" And you say "Building a
14 wind farm in this area could negatively affect
15 the conservation attributes of the area
16 designated and identified in the Q2C
17 conservation plan." You mean specifically to
18 this area, right, if it were built in where
19 it's proposed to be built, correct? It could
20 affect the conservation attributes in that
21 area, is that correct?

22 A. (Wells) Well, it is, it's what I said. And,
23 for me, the key word there is "could", rather
24 than "will" or "will not". I said "could" very

[WITNESS PANEL: Allen ~ Wells]

1 consciously. So, my testimony is my testimony.

2 Q. Mainly because you're not wanting to engage in
3 a discussion over the attributes or values of
4 the wind project, is that correct? You're
5 simply not -- you're simply staying neutral?

6 A. (Wells) Well, I am staying neutral. And,
7 again, speaking as a citizen, and trying to
8 bring my historical information, essentially my
9 historical perspective of having been around
10 the Q2C for a long time.

11 Q. Okay.

12 A. (Wells) So, yes. I am -- I am not taking a
13 position on the Project. And I simply say
14 "could" because, you know, I'm looking at this
15 "okay, a wind farm is being proposed in the
16 middle of a core conservation focus area, the
17 Quabbin-Cardigan, with a very significant
18 amount of conservation land that's already been
19 done wrapped around it. So, to me, just sort
20 of commonsensically, as a citizen, that says
21 "Well, clearly, this is an important area.
22 This is a major Project that will have a
23 significant impact on the ground." Just
24 commonsensically, it could be -- it could have

[WITNESS PANEL: Allen ~ Wells]

1 a negative effect. And that is what you all
2 are trying to figure out over this many days of
3 review.

4 Q. So, Mr. Wells, if the -- if some -- let's take
5 this location off the table, so we won't even
6 talk about the wind project. But talk about
7 any kind of significant industrial development
8 that happens to occur within an area that is
9 considered "high value resource" for the Q2C,
10 and has such a thing happened? And, if it
11 does, does it cause a reevaluation of the Q2C's
12 partnership of that area?

13 A. (Wells) Well, I will say, I think that's a
14 really interesting question, that I have --
15 have been thinking about the last couple of
16 days. And I think maybe heard a little bit out
17 of the panel yesterday on this issue. Is, if
18 this piece of ground, and there are other
19 pieces of ground up and down this corridor like
20 it, are "unfragmented", big unfragmented
21 forestlands with great resource attributes, and
22 all the different modelings and all the
23 different ways of looking at it all come at the
24 same conclusions that they're important, and

[WITNESS PANEL: Allen ~ Wells]

1 you build something that's got a significant
2 footprint, I mean, I think it's fair to say in
3 this case, you know, more or less right in the
4 middle of it, it is going to have some kind --
5 it is going to have an effect. And, so, I
6 think, frankly, from my perspective, and
7 certainly for yours, you know, the question is,
8 is what -- "what is the degree of that impact
9 that could ever really be on the ground?"
10 That's what you're spending all these days of
11 time on.

12 So, again, trying to speak sort of
13 candidly and fairly as a citizen, who's got
14 some knowledge of this area, I think it's, on a
15 commonsense level, it's hard to say that
16 putting in a major access road, and I guess
17 I've heard something yesterday that maybe it's
18 a little smaller than some of the other ones,
19 but, again, just this is a significant project,
20 with a big permanent road going in. I guess
21 there's going to be some blasting. There's
22 going to be major footings put in, big towers
23 and a road chained together, in the middle of
24 this property, in the middle of this core of

[WITNESS PANEL: Allen ~ Wells]

1 this forest. That's going to have an impact.

2 And I think it is, you know, as somebody
3 who has been around this and was part of this
4 Q2C thing when we did the Plan originally is,
5 and you guys were getting at it somewhat
6 yesterday, is what -- and given that the whole
7 thing, to such a big degree, has been driven by
8 this "unfragmented" phrase, right?

9 What exactly is the fragmentation impact
10 of a wind farm? And I do not claim to know. I
11 do not. And I think, for better or for worse,
12 we are, through these projects, arguing about
13 whether they should or shouldn't get built, and
14 some of them getting built and then living with
15 them, we are in the process of finding that
16 out.

17 I will say that I think the -- sort of the
18 plain language understanding I think in the
19 conservation community, and, again, to his
20 point, I'm not a wildlife biologist, right?
21 So, I'm coming at this from somebody who's been
22 in this field for over twenty years, and has
23 been talking to a lot of people, and many of
24 whom are the wildlife experts at the time. Is

[WITNESS PANEL: Allen ~ Wells]

1 when they say -- when the kind of conventional
2 wisdom on what "fragmentation" is is permanent
3 roads, permanent structures, impervious
4 surface, people, vehicles. I mean, it's both
5 the footprint of that hardscape on a piece of
6 property, and then the level of activity on
7 that piece of property. And I think -- I think
8 we would all agree, those are sort of the
9 parameters of what we mean by "fragmenting".

10 So, you know, to the back-and-forth with
11 Geoff Jones yesterday, I mean, there's an
12 ongoing argument, whatever, debate about how
13 "fragmenting" is going into timber harvesting
14 or not. How fragmenting are those roads? How
15 fragmenting is the degree of harvesting going
16 on? I think there's a fair debate to be had
17 about that.

18 In terms of wind projects, it's -- to me,
19 it really is an interesting and difficult sort
20 of somewhere-in-the-middle kind of project.
21 Between, you know, this is not a major
22 subdivision or a big commercial development,
23 where it's lots and lots of impervious surfaces
24 and buildings, and lots and lots of people and

[WITNESS PANEL: Allen ~ Wells]

1 traffic in and out all the time. That's what
2 we -- that's a lot of what we mean by
3 "fragmenting".

4 But -- so, the flip of this, though, is,
5 these aren't just logging roads that are sort
6 of, essentially, almost ephemeral, right? You
7 go in, you do a harvest, you're not back for
8 ten, fifteen, to twenty years. The skid roads
9 literally grow up, the main truck road sort of
10 grows in. It almost disappears back in the
11 woods.

12 So, that's sort of almost one end of the
13 spectrum and a giant shopping mall being the
14 other. This is somewhere in between. There's
15 a lot more hardscape going on. But, I think,
16 by the nature of the development, I'm probably
17 saying way more than I should be, but too late
18 now.

19 You know, you're not seeing, you know,
20 lots and lots and lots of vehicles going back
21 and forth, that's not the nature of the
22 project. But what is different is you also
23 have these very high towers, with giant blades
24 spinning around. And, so, to me, the

[WITNESS PANEL: Allen ~ Wells]

1 fragment -- the question of "how fragmenting is
2 this or not?", I think is what you guys are
3 trying -- one of the things I hope you -- I
4 think you're trying to grapple with. And I
5 think it's -- we're figuring it out as we're
6 going, for better or worse, as these projects
7 are getting done.

8 So, I should stop -- I'll stop with that.
9 There was something else I want to say, but
10 I'll stop with that for now.

11 A. (Allen) Could I make a comment as well --

12 Q. Sure.

13 A. (Allen) -- to your question? I think the
14 important thing is to remember is that this
15 project is planned for a ridgeline, a
16 mountainous ridgeline, that's right on the
17 watershed between the Merrimack Rivers and also
18 the Connecticut River. This is a unique sort
19 of area, and subject to some pressures already.
20 And that's important to remember is this is a
21 ridgeline project. Thank you.

22 Q. And thank you for that. Mr. Wells, the one
23 part of my question that you didn't answer,
24 though, because -- and I'm hoping we can go

[WITNESS PANEL: Allen ~ Wells]

1 quickly, but was whether or not such a project
2 would cause a reevaluation of the area today?

3 A. (Wells) Yes. And, actually, thank you for
4 reminding me to try to get back to that. I got
5 off on my tangent I got off on.

6 No, I think that, again, really trying to
7 be, you know, sort of I'm trying to be
8 objective in bringing -- just bring an
9 information perspective to this thing, I think
10 that's a really interesting, open question, is
11 "well, what does this mean?"

12 I mean, the other piece of this, and I
13 will say it, is just, again, as a sort of
14 educated citizen, who's been part of this
15 community for a while, is we have multiple
16 plans, lots of data that says these are the
17 quote "best-of-the-best" places. But, again,
18 in, you know, full candor, it's being done
19 using relatively large-scale, relatively coarse
20 datasets. So, again, kind of gets back to my
21 "how fragmenting is this really or not?"

22 If we don't have, I guess, for your
23 perspective, you know, it would be really
24 useful to have the input from, especially, I

[WITNESS PANEL: Allen ~ Wells]

1 would say, some of those key entities within,
2 say, the Quabbin-to-Cardigan Partnership, like
3 TNC, the Fish & Game agencies, --

4 DR. WARD: Move to the mike please.

5 WITNESS WELLS: Oh, I'm sorry.

6 **CONTINUED BY THE WITNESS:**

7 A. (Wells) Especially, the wildlife-oriented
8 entities, because this fragmentation thing, to
9 such a large degree, is sort of driven by how
10 it's affecting wildlife or not, is to get their
11 take on how to square, you know, I guess
12 another way to put it is, to not -- to not
13 take -- either take a position or give you
14 their expert opinion about how if this -- you
15 know, how much this Project is going to impact
16 on the ground the specific place that has been
17 identified by multiple plans, including the
18 Wildlife Action Plans, as being "the
19 best-of-the-best and highly sensitive", and
20 most worthy of permanent protection and not
21 being disturbed.

22 That just seems to me, again, speaking
23 as -- trying to be, you know, trying to be
24 useful here, that's really important

[WITNESS PANEL: Allen ~ Wells]

1 information to have. And I did see that TNC
2 did provide some written testimony that I
3 honestly only scanned it, but seemed to be
4 saying that the impacts of this Project are
5 sort of can be -- essentially, can be lived
6 with in the grander scheme of things.

7 But, in terms of getting explicit feedback
8 from Fish & Game, again, if you have it,
9 forgive, but, as far as I think I understand,
10 you don't. So, an independent explicit
11 feedback from Fish & Game would be helpful.

12 You're getting it from Audubon now,
13 clearly, you're getting it from Audubon. But
14 just how they -- I guess what I'm trying to say
15 is, how does this land being -- this land, and
16 other like it, being prioritized at that sort
17 of bigger picture level, how does that
18 translate to the ground? Because, whether this
19 Project gets built or not, others have, others
20 likely will in similar spots up and down this
21 wildlife -- this chain, to get a better handle
22 on what are the specific impacts related to the
23 fragmentation created by these projects in
24 those ridgetop locations.

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[WITNESS PANEL: Allen ~ Wells]

1 Q. Okay?

2 A. (Wells) I don't know. Sorry.

3 Q. Thank you, Mr. Wells. And just one last
4 question, with regard to the Q2C goals and the
5 Partnership, have you identified in certainly
6 your Master Plan whether there are certain
7 types of development that -- land uses that you
8 would discourage, such as -- or, even
9 encourage, such as renewable energy development
10 on this scale? I mean, have you gotten -- does
11 your Master Plan talk about that or is it, you
12 know, appears to be largely about protection,
13 protection of habitat, but I don't see that
14 much about land use?

15 A. (Wells) That's correct. What you said. It was
16 built to be, and as far as I know, remains
17 intended to be a plan for how we would
18 prioritize permanent land conservation, period.

19 Q. So, would it be fair to say that development,
20 if that is your goal, would development be
21 inconsistent with that goal? Industrial
22 development, I should say?

23 A. (Wells) All right. Now that I've been going
24 off on all kinds of tangents, I will try to get

[WITNESS PANEL: Allen ~ Wells]

1 back to my sideboards of what is the Q2C and
2 what is not the Q2C.

3 Q. Okay. If you could just --

4 A. And I will just -- I will reiterate, again, I'm
5 also trying to represent what was a whole group
6 of people, and what was their intent going in?
7 And the intent going in was, let's take the
8 best available science, and all -- sort of all
9 the parties that are trying to do this work
10 together to prioritize and try to get on the
11 same page of what the most important lands are
12 in this region to do land conservation.

13 Q. Okay.

14 A. (Wells) Not land-use regulation.

15 MS. LINOWES: Thank you very much.

16 Thank you, Mr. Chairman.

17 PRESIDING OFCR. SCOTT: Mr. Ward.

18 BY DR. WARD:

19 Q. Were you the person who used the term
20 "existential threat" or was that someone else
21 earlier today?

22 A. (Wells) It wasn't me.

23 Q. Somebody earlier today, I don't know who it
24 was, you would have been -- would you use that

[WITNESS PANEL: Allen ~ Wells]

1 to talk about the potential affect of the farm,
2 on the facility, on the general conserved land
3 around here?

4 A. (Wells) Is it an existential threat? I guess
5 my answer would be, I don't feel qualified to
6 answer the question one way or the other.
7 Which I, hopefully, was trying to -- was
8 getting at with my long dialogue.

9 Q. Let me ask it slightly differently.

10 A. (Wells) Sure.

11 Q. In your experience, when you see a large
12 non-conserved, a facility going in, an
13 industrial wind facility, for example, does
14 that tend to make conservation in the area more
15 difficult, or vice versa, to make it so that
16 more industrial development is more likely?

17 I guess I can rephrase it slightly.

18 A. (Wells) Yes, I'm sorry. I'm just trying to get
19 a handle on your question here.

20 Q. Well, let me try it differently. Do you --
21 would you consider, as part of the things that
22 the Committee should consider, that, if this
23 were to be approved, wouldn't it lead or tend
24 to lead toward more industrial development in

[WITNESS PANEL: Allen ~ Wells]

1 and around the area?

2 A. (Wells) All right. Let me try to speak to your
3 question the best I can. Again, not having a
4 parcel map in front of me of the -- sort of the
5 immediate area around this particular wind farm
6 or not. You know, I don't know, are there
7 other parcels up and down sort of the
8 ridgelines in this particular neck of the woods
9 that would be essentially available for
10 potential projects? That I can't answer. I
11 don't know that. To the extent that there is
12 already a lot of permanent conservation land in
13 that immediate area, I think it's reasonably --
14 I think it's safe to say that it would be
15 highly unlikely, that more wind development
16 would ever happen on those properties.

17 But I honestly can't speak to "is there
18 potential for additional" -- I assume, when you
19 "industrial", by "industrial-scale wind going
20 in on other ridgelines in sort of the
21 surrounding area? I don't know.

22 Actually, I've taken a lot of your time
23 already. I'll stop there.

24 Q. Well, the reason I asked that is that we now

[WITNESS PANEL: Allen ~ Wells]

1 have a case, which the Supreme Court of New
2 Hampshire has accepted, against a -- I'll call
3 it a large industrial facility, it's a large
4 truck stop on Route 9, in Stoddard. Now, Route
5 9 was earlier discussed as one of the things
6 dividing the SuperSanctuary.

7 A. (Wells) Uh-huh.

8 Q. And I believe the idea of that was sort of
9 conflated with the question of this long,
10 couple of mile division that this proposal is
11 about. And, so, part of the reason that was
12 used in the course of the discussions about
13 this truck stop was that "Well, it looks like
14 we're going to have a big wind farm down the
15 road anyway. And, so, what are you complaining
16 about?" And, so, that's where I'm going with
17 this.

18 Do we, in the course of this, if we were
19 to approve it, are we not now reducing our
20 arguments for stopping other large
21 fragmentation development in this
22 SuperSanctuary?

23 A. (Wells) And I will, within the purview that I'm
24 trying to hold to, sitting here, I'm going to

[WITNESS PANEL: Allen ~ Wells]

1 pass on it.

2 Q. We're trying to get you out of it, right.

3 A. (Wells) Well, no. I'm just -- I will pass on
4 answering that question one way or the other.
5 Again, I'm trying to keep this to providing
6 information within the context of the
7 Quabbin-to-Cardigan Project. So, forgive, but
8 I will pass on answering, well, in expressing,
9 what would it be, expressing just an opinion, a
10 personal opinion. Sorry.

11 DR. WARD: I guess that's all I have.

12 WITNESS WELLS: Okay.

13 PRESIDING OFCR. SCOTT: And I don't
14 see anybody from the Stoddard Conservation
15 Commission. Mr. Block.

16 MR. BLOCK: Just a few, yes.

17 BY MR. BLOCK:

18 Q. Mr. Wells, how many organizations are currently
19 involved in the Quabbin-to-Cardigan
20 Partnership?

21 A. (Wells) That's a good question. Again, I have
22 been away now from being the day -- the
23 coordinator for a couple years. I would say it
24 is, in terms of who -- who shows up on a

[WITNESS PANEL: Allen ~ Wells]

1 regular basis to meetings of the Partnership,
2 which are still held on a quarterly basis, and
3 you can confirm this with SPNHF, it's probably
4 12 to 14 organizations, something like that,
5 that show up steadily. You know, and that -- I
6 think part of that is just the nature of what
7 is now a very, long, long running, essentially
8 all vol -- it's a voluntary ad hoc group.

9 The group that was assembled in the early
10 year or two, especially when the plan was being
11 built, was definitely bigger, in part because
12 we had three or four or five of the regional
13 planning commissions involved at that time,
14 again, because they brought a lot of data to
15 the table, for one. But I think at that time
16 everybody sort of understood they were not
17 practitioners of doing land conservation
18 transactions, so that they would sort of, you
19 know, draw back once the planning was done.
20 So, that's part of it. It's evolved.

21 Q. Is this kind of collaboration unusual? How
22 unique is a collaborative effort like this in
23 comparison to other conservation lands and
24 projects across the country?

[WITNESS PANEL: Allen ~ Wells]

1 A. (Wells) Hmm. That's a good one. Well, I guess
2 I would say that it, at the time that we got it
3 going, it was pretty unique. Again, those of
4 you who are the real natural resource folks on
5 the panel know, I mean there was -- we had sort
6 of a very local example, which was the "Great
7 Bay Partnership", which you might have heard of
8 at some point in the past, that had been going
9 for a few years, but was relatively small. I
10 think it was four to six organizations looking
11 at a very, very tight geography.

12 So, I think we can claim some credit for
13 being one of the first of these kind of large
14 landscape-scale, essentially, multistate,
15 multi-multi-primary agency organization
16 efforts. And it has -- and it is definitely
17 fair to say that. And it is something that's
18 actually become kind of the thing these days --
19 you know, the last few years, where now they
20 even have an acronymism [sic] for them,
21 "Regional Conservation Partnership", or "RCPs",
22 which are now popping up all over, especially
23 all over New England.

24 So, it was pretty unusual when we started,

[WITNESS PANEL: Allen ~ Wells]

1 and it's less so now. I'm going to try to be
2 pithier, sorry.

3 A. (Allen) Rich, if I could also answer. You
4 know, I'm supporting the SuperSanctuary
5 concept. That's like it on a smaller -- on a
6 smaller basis.

7 A. (Wells) Very true.

8 A. (Allen) And it's important to remember that the
9 land that's been conserved through the
10 SuperSanctuary includes both public and private
11 organizations. And, on Page six of my
12 testimony, I think Line 5, I list them. It's
13 the "New Hampshire Fish & Game, the Forestry
14 Foundation, the Harris Center, The Nature
15 Conservancy, the Society for Protection of New
16 Hampshire Forests, and local town conservation
17 groups".

18 A. (Wells) Right.

19 A. (Allen) And most of that does stay either in
20 private hands or, you know, in the town -- in
21 the town's case, it would be the town's hands.
22 But these are major cooperations that have been
23 going on, in terms of the SuperSanctuary, for
24 over 20 years.

[WITNESS PANEL: Allen ~ Wells]

1 A. (Wells) Right.

2 Q. Mr. Wells, can you describe specifically, in
3 regards to the Q2C lands, how -- what is the
4 impact of protecting these lands? How does it
5 extend beyond -- particularly beyond the
6 2 million acres that it encompasses?

7 A. (Wells) Uh-huh. I'm sorry. What was the
8 question again?

9 Q. Can you describe how the impact of protecting
10 the Quabbin-to-Cardigan lands extends beyond
11 the 2 million acres that it encompasses? Is
12 the impact wider than that?

13 A. (Wells) I mean, sure. I would say, and I'm
14 going to keep it general. Again, I am not a
15 wildlife biologist. There are better people
16 than I to talk to the details of that. But I
17 think the two kind of super regional, how would
18 this interact with the even larger world around
19 it, would be on the, essentially, here we go
20 again, the sort of the -- essentially, the
21 wildlife habitat/wildlife passive --

22 *[Court reporter interruption.]*

23 **CONTINUED BY THE WITNESS:**

24 A. (Wells) -- I'm sorry, connectivity, forgive me,

[WITNESS PANEL: Allen ~ Wells]

1 which these days is, I guess some of the
2 natural resource folks on the panel have heard
3 about, you know, there's the whole issue of
4 climate change is adaptation, and, to the
5 extent that animals, in particular, because
6 they can move around, are going to be migrating
7 north, you know, or have the ability to migrate
8 up the corridor, this being one to the
9 corridors they could potentially do that.

10 So, to the extent that what that -- sort
11 of the flow of wildlife, in particular, up and
12 down this chain is important, because then,
13 obviously, it's linking farther north, as I
14 said before. You know, it does link onto the
15 Whites, and from the Whites on, on into Canada
16 from there, in terms of these sort of big,
17 relatively undeveloped areas.

18 And, indeed it does, it's interesting,
19 this is something I've learned in more recent
20 years, but it does also interconnect going
21 farther south, to -- they're more built out
22 than we are, but still, by their standards,
23 southern New England standards, relatively
24 undeveloped corridors going down through Mass.

[WITNESS PANEL: Allen ~ Wells]

1 and Connecticut, in one case, I think all the
2 way to the Long Island Sound. So, it does
3 interconnect. That's part of what's kind of
4 special about it.

5 The other piece of it is, and this gets
6 back to just sort of pure data, what went into
7 the plan originally, was this small watershed
8 data. This, again, as she said, and you all
9 know, right, this is the watershed divide
10 between the Connecticut River and the Merrimack
11 River. And, again, I'm a couple of years out
12 of this from looking at it on a regular basis,
13 but I'm sure we could all confirm that, for
14 both the Connecticut and actually especially
15 the Merrimack, these are the -- the last best
16 headwaters of both of those river systems,
17 period. Certainly, with Connecticut, that's
18 true, for the New Hampshire portion of the
19 Connecticut River, that's where they are.
20 They're up that side of the chain. And
21 absolutely true for the Merrimack.

22 And, to the extent -- and I've been, in
23 more recent years, spent more time worrying
24 about the Merrimack, that's where my own land

[WITNESS PANEL: Allen ~ Wells]

1 trust now works. Is, you know, the Merrimack
2 system, which is, again, a by-state
3 Massachusetts-New Hampshire system, other than
4 those western most reaches, which are running
5 up into this whole Quabbin-to-Cardigan area,
6 there's not a whole lot of really high-quality,
7 relatively pristine watershed left. So, this
8 is kind of it for the Merrimack. The
9 Massachusetts portion is pretty well done. I
10 mean, there's not much to be done about it.
11 There's a few hot spots close in, but most of
12 it is out at the western edge of the watershed,
13 which is the Quabbin-to-Cardigan.

14 So, to the extent that it's a headwater
15 for a whole river system that is home to a
16 drinking water supply of millions of people --

17 A. (Allen) Drinking water supply.

18 A. (Wells) -- it matters. You know, I'll stop
19 there. It is contributing -- the cleanest
20 water that's left in the whole basin is coming
21 from those hills, headed downstream into the
22 river system that people are pulling drinking
23 water from and living next to.

24 BY MR. BLOCK:

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 Q. On Page 7 of your prefiled testimony, you
2 stated "Building a wind farm in this area could
3 negatively affect the conservation attributes
4 of the area designated and identified in the
5 Quabbin-to-Cardigan conservation plan."

6 Specifically, I'd like to know how
7 significant would the impact of this specific
8 Project be on the overall efforts and goals of
9 the Q2C?

10 A. (Wells) Hmm. Well, I don't want to -- I don't
11 want to repeat too much of what I've already
12 said. But I will just try to quickly, quickly
13 recap to say that I think that getting as much
14 close-to-the-ground/on-the-ground expert input
15 from -- especially from the wildlife
16 habitat-related agencies and entities would be
17 very useful to try to get a better handle on
18 what the site-specific impacts are going to be
19 in an area that, again, has been identified
20 both by the Q2C plan, but also the Wildlife
21 Action Plan, you know, *etcetera, etcetera*, as
22 best-of-the-best. So that I just will
23 reiterate that answer. I am not the guy to
24 tell you that. But there are -- you know,

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 getting as much of that information as possible
2 would be really helpful to this decision.

3 The only thing I would add to that, and I
4 guess it gets at the "cumulative impact"
5 phrase, is every one of these projects that --
6 every one of these projects that ultimately get
7 permitted and built is going to be adding, you
8 know, one more of these fragmented features,
9 the impact -- the exact impacts of which we're
10 figuring out, is going to have another -- kind
11 of another chunk, typically, it's going to be
12 in the core of these areas, because the
13 ridgelines are running down the middle of the
14 core of the areas, you're going to have another
15 one of these, another one of these. And, so,
16 every project that is approved is creating, to
17 some degree, a precedent for the next one being
18 approved. And, so, I don't know how far -- I
19 don't know how far it's going to go. How many
20 projects will be ultimately proposed and built
21 in western New Hampshire? But there is a -- if
22 you buy into this being sort of a singular
23 region that's interconnected with, you know,
24 kind of up this chain of forests, building wind

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 farms up and down that is going to have some
2 degree of "cumulative impact".

3 And I'll leave it at that.

4 Q. Ms. Allen, in regard to the Monadnock
5 SuperSanctuary, --

6 A. (Allen) Uh-huh.

7 Q. -- you were just describing some of it, how can
8 such a fragmented collection of conservation
9 easements, private parcels, tree farms, town
10 forests, and other tracts of land provide value
11 to the region?

12 A. (Allen) In lots of ways. One, we've just
13 talked about, fragmentation. These are -- it
14 does look like a mosaic. There's still land in
15 there that, you know, can be conserved, can be
16 encouraged to be conserved. But, if you look
17 at -- if you look at the map I handed out, and
18 also there [indicating], you see the red line
19 is around what is the SuperSanctuary. Already
20 about half of it has been conserved, and by
21 various groups, a lot of time, money, you know,
22 private funds, public funds have gone into
23 that. Conserving land like this really gives,
24 I think, this part of New Hampshire a very

[WITNESS PANEL: Allen ~ Wells]

1 unique flavor and feature. When you come into
2 the towns along the Contoocook River, you see,
3 you know, unadulterated, you know, hills, you
4 see valleys, you see, you know, rivers that are
5 running, you know, clean, and there are lots of
6 recreational activities, and also lots of, you
7 know, sporting activities, like hiking. It's
8 hiking, fishing, canoeing, paddling. This
9 mosaic supports that, mosaic of, you know,
10 conserved lands.

11 Q. So, for the record --

12 A. (Allen) Does that answer it?

13 Q. -- can you describe on this map just
14 geographically where the Tuttle-Willard Ridge
15 falls within the SuperSanctuary?

16 A. If you take -- if you look at this one, it's
17 that little circle that I've hand-drawn in
18 there. That's encircling the Tuttle Ridge and
19 the Willard -- the top of Tuttle and Willard.
20 So, there's a little circle there. And, as you
21 can see, that's not conserved land around
22 there. That's sort of a blank that, you know,
23 eventually, 50 years from now, will be, you
24 know, possibly filled in after it's been used

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 as an industrial wind farm.

2 Q. So, do you think that's a significant chunk of
3 this enclosed area?

4 A. (Allen) I think it's a significant chunk of the
5 uplands watershed. It is contiguous. It does
6 not have development now. Yes, in my opinion,
7 it is significant, very significant.

8 Q. And, finally, in your opinion then, how
9 significant do you feel the damage would be to
10 the SuperSanctuary, if these turbines were to
11 be erected?

12 A. (Allen) I don't know. I really can't -- I
13 think it would be -- I think it would be a
14 shame to lose this, you know, this parcel for
15 the 50 years that potentially it would be used
16 as an industrial wind source. The
17 SuperSanctuary will, you know, continue. But a
18 piece of this mosaic, a piece of this patchwork
19 will be definitely out of it. And it's a
20 significant place. It's on a, you know, on
21 Route 9, it's a very scenic area. The North
22 Branch River is well used as a fishing river.
23 I would hate -- personally, I would hate to see
24 this gone.

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 MR. BLOCK: Thank you.

2 PRESIDING OFCR. SCOTT: Ms. Berwick.

3 MS. BERWICK: Can I hand this?

4 PRESIDING OFCR. SCOTT: Go off the
5 record.

6 *[Ms. Berwick distributing*
7 *documents.]*

8 (The document was herewith
9 marked as **Exhibit Abutter 43**
10 for identification.)

11 PRESIDING OFCR. SCOTT: Back on the
12 record. Before you start, Ms. Berwick, this
13 doesn't appear to have anything to do with
14 anybody's testimony that's before us right now,
15 this handout you gave?

16 MS. BERWICK: Mr. Wells was talking
17 about the high-quality watershed area, and Ms.
18 Wells [Allen?] also mentioned something about
19 that in her testimony.

20 PRESIDING OFCR. SCOTT: Okay.

21 MS. BERWICK: So, I thought it would
22 be appropriate.

23 PRESIDING OFCR. SCOTT: All right.
24 Why don't you proceed please.

1 BY MS. BERWICK:

2 Q. Mary, in your testimony, you state that
3 "Although it is possible to describe both the
4 SuperSanctuary and the Q2C efforts in terms of"
5 -- actually, I'm going to skip this one. You
6 just answered it, really.

7 As you can see in the handout I have
8 provided, at the Ocotillo Wind Project in
9 California, which has Siemens turbines, they
10 have had issues with oil leakages, both from
11 two year-old Siemens turbines and from diesel
12 equipment. What would be the effect of
13 something like that in this area, specifically
14 on the high-quality watershed area?

15 MR. NEEDLEMAN: Mr. Chairman, I'm
16 going to object. This exhibit has nothing to
17 do with this proposal. And I'm also not sure
18 that either of the witnesses are qualified to
19 speak to water quality impacts.

20 PRESIDING OFCR. SCOTT: Ms. Berwick.

21 MS. BERWICK: Well, I thought that
22 they would be able to say whether or not this
23 would be an effect on the -- this is
24 conservation land that -- this is land that's

[WITNESS PANEL: Allen ~ Wells]

1 in the Q2C corridor. And, obviously, the
2 reason for that is the protection of the
3 animals and the water quality. And definitely
4 oil leaks would have something to do with water
5 quality.

6 Do I have to have a hydrologist here
7 to answer that type of question?

8 PRESIDING OFCR. SCOTT: No. I'll
9 tell you what. Why don't you proceed, but,
10 again, we understand that they're not water
11 quality experts.

12 MS. BERWICK: I promise you I only
13 have a few questions.

14 PRESIDING OFCR. SCOTT: Okay. Go
15 ahead.

16 WITNESS ALLEN: She asked you the
17 question.

18 **BY THE WITNESS:**

19 A. (Allen) Any time, any time there is an oil
20 spill, from whatever source, on any land that's
21 going to be a watershed going into the two
22 rivers, it's a concern. You know, I can't
23 really answer more than that. But any time
24 that there is any kind of oil on the ground,

[WITNESS PANEL: Allen ~ Wells]

1 it's a concern.

2 BY MS. BERWICK:

3 Q. Okay. Do you know how much of this Project
4 would be on land that -- oh, I'm sorry. You
5 know -- it was noted that Open Space
6 Conservation Plan was voted on at a Town
7 meeting in 2006?

8 A. (Allen) Correct.

9 Q. Okay. Do you recall if that vote was done by
10 ballot or by a show of hands?

11 A. (Allen) I believe it was done by ballot, but
12 I'm not absolutely --

13 Q. That's what I remember, too. Do you know how
14 much of this Project would be on land that the
15 citizens voted to protect as open space?

16 A. (Allen) I believe most of this would have been,
17 and possibly not the Ott lot. But I think most
18 of it was in the target area, that they were
19 concerned and wanted to include in future, you
20 know, in -- you know, in the future, as part of
21 their open space, it was targeted as part of
22 what they were concerned about with open space.

23 Q. Okay. If Antrim Wind Energy did not come to
24 the SEC, could they build this Project in

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 Antrim?

2 A. (Allen) It's not permitted by the Zoning
3 Ordinance.

4 Q. It's not permitted?

5 A. (Allen) By the Zoning Ordinance. In that --
6 the Zoning Ordinance for the Rural Conservation
7 District, which most of this Project is in,
8 just a little bit at the edge of Route 9 is not
9 in that zone, it would not be allowed, because
10 there are no industrial uses allowed in the
11 rural conservation zone.

12 Q. Okay. Thank you. I notice that, under Town
13 variance, that "No diminution in value of
14 surrounding properties" would be suffered is
15 one of the requirements. Would you expect that
16 these turbines would result in diminution in
17 value of surrounding properties?

18 MR. NEEDLEMAN: Mr. Chair, I'm going
19 to object. This is not in her testimony and
20 she has no expertise on this issue.

21 MS. BERWICK: Okay.

22 BY MS. BERWICK:

23 Q. Ms. Wells, do you -- oh, no. Mr. Wells, do you
24 personally feel that there are more

[WITNESS PANEL: Allen ~ Wells]

1 conservation groups that have concerns about
2 this Project, but have reserved -- but have,
3 for some reason, remained neutral?

4 A. (Wells) I have no opinion.

5 MS. BERWICK: Okay. That's it.

6 Thank you.

7 PRESIDING OFCR. SCOTT: The Harris
8 Center?

9 MR. NEWSOM: No questions.

10 PRESIDING OFCR. SCOTT: I apologize,
11 you're kind of behind the pillar, so I really
12 can't see you.

13 I don't see any -- I guess we'll go
14 with Counsel for the Public, I can see you.

15 BY MS. MALONEY:

16 Q. I'm not sure you can answer this, but I just --
17 I wanted to ask about the nature of the
18 development with this type of project. There's
19 been some suggestion that, you know, since this
20 has a beginning, middle, and end of 50 years,
21 this is sort of a temporary project. But
22 there's also been testimony that 7,000 tons of
23 rock have to be blasted out of that ridge in
24 order to build this Project. And those effects

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 will be permanent.

2 A. (Wells) Right.

3 Q. There may be some, eventually, some growth, but
4 a certain amount of that cement is going to be
5 remaining there. And I was wondering if you
6 had any opinion about that kind of impact on
7 fragmentation?

8 A. (Allen) I have an opinion.

9 A. (Wells) Yes. Let her go. I've talked too much
10 already.

11 A. (Allen) I think the Project site, particularly
12 with the access road, I think that that, even
13 after 50 years, is still going to be
14 fragmentation. It is not the way it is now,
15 it's not the way it was 100 years ago. It
16 won't be the way it is now. It won't be the
17 way it is 100 years ago. And I think there
18 will be an impact, you know, to that.

19 The site itself, it's, you know, roughly
20 900 acres, with conservation easements on the
21 lower slopes, you know, could go around it.
22 But, in terms of fragmentation, yes. That --
23 that corridor on the top of the ridgetop, where
24 the turbines are going to be, where the access

[WITNESS PANEL: Allen ~ Wells]

1 road is going to be, that is not going to be
2 pristine and wild ever again.

3 MS. MALONEY: Okay. Thank you.

4 PRESIDING OFCR. SCOTT: Anybody from
5 the Giffin/Pratt intervenors?

6 *[No verbal response.]*

7 PRESIDING OFCR. SCOTT: No.

8 Mr. Enman, I don't see him.

9 Mr. Richardson.

10 MR. RICHARDSON: Thank you.

11 BY MR. RICHARDSON:

12 Q. Mr. Wells, you testified, or as you were
13 answering questions, I heard you say at one
14 point "if these areas are all fragmented" --
15 "unfragmented, then it's going to have an
16 effect." And I also heard you say, in
17 reference to another question, "maybe it's",
18 meaning the Project, "is smaller than other
19 projects", and then I heard you say "I guess
20 there's going to be blasting." And, then, in
21 response to the question today -- another
22 question coming today, that was "what will
23 happen to the fragmentation if the wind farm is
24 built?", I think you said "I do not claim to

[WITNESS PANEL: Allen ~ Wells]

1 know." Do those sound -- did I sound like I
2 captured your responses correctly?

3 A. (Wells) Yes. Yes, that sounds fair. Yes.

4 Q. Okay. So, I want to look at your prefiled
5 testimony, I think it's the second to last
6 page.

7 A. (Wells) Page 8?

8 Q. Yes. It is Page 8.

9 A. (Wells) Yes.

10 Q. I think it's right at the top. Let me catch up
11 to you. Let me get to that. And you say "What
12 will happen if the wind farm is built in this
13 area?"

14 A. (Wells) Uh-huh.

15 Q. And, then, I think your answer is "Building a
16 wind farm in this area could negatively affect
17 the conservation attributes of the area
18 designated and identified in the
19 Quabbin-to-Cardigan conservation plan."

20 A. (Wells) Uh-huh.

21 Q. So, I take it you used the word "could" there
22 because you really don't know, in the same way
23 that you answered the questions today, you're
24 saying it might happen, but it might not,

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 that's really a question for the wildlife and
2 other experts?

3 A. (Wells) What the intent behind the "could", and
4 I think I said this, but I'll say it again, is
5 not knowing, and I don't know every detail of
6 the Project, in how it's going to be built and
7 maintained and decommissioned and all that, I
8 don't. I don't have that level, as many of you
9 guys do. So, I was trying to be, essentially,
10 be fair-minded and say "it could, based on what
11 I know", which is at a fairly general level
12 knowledge about the specific Project. So,
13 that's (A). (B), and this goes back to one of
14 my long-winded soliloquies earlier, is I do
15 think that -- that we are all, as a state and
16 regulators and conservationists, we are all
17 figuring out kind of as we go what exactly the
18 nature of these properties -- that these
19 projects, that is ridgeline wind farms, is
20 going to be in the context of the -- we are
21 trying to keep those unfragmented places
22 unfragmented.

23 We, and to my earlier thing about, you
24 know, a major highway, a shopping mall, a major

[WITNESS PANEL: Allen ~ Wells]

1 subdivision, housing subdivision, we know what
2 that looks like. That's sort of been the way
3 we thought of fragmentation to be. We've
4 thought of sort of the opposite end of the
5 spectrum being forestry operations that are
6 fragmenting to some degree, ephemeral or
7 otherwise, right, sort of two ends of the
8 poles. And where exactly, we're going to
9 ultimately find out, that these wind projects,
10 especially as they are permitted and built and
11 sort of accumulate in these areas, what are the
12 fragmenting effects going to be, or, not "the
13 fragmenting effects", they are, they are
14 fragmenting. The question is, what are the
15 impacts of that fragmentation really going to
16 be on the resources that we are measuring
17 "fragmentation" as being good or bad?

18 That is what I'm saying. I think we are,
19 again, trying to be candid, I think we're
20 figuring out as we go.

21 Q. Okay.

22 A. (Wells) And, so, this Project is one more
23 opportunity to be trying to get -- essentially
24 get to the bottom of that question. I guess,

[WITNESS PANEL: Allen ~ Wells]

1 if I have one thing I'm trying to get across
2 today, is that.

3 Q. Right. So, --

4 A. (Wells) Is use this project, and every future
5 project, to try to get to the bottom of that
6 question.

7 Q. So, my question, I guess, is pretty focused,
8 though. When you were asked "What will happen
9 to fragmentation if the wind farm is built?",
10 I wrote down that your response was -- or,
11 included your response is the phrase "I do not
12 claim to know". And that was an accurate
13 response when you gave that testimony this
14 morning?

15 A. (Wells) If I said it, I said it. And could you
16 remind me again, I mean, that was -- I answered
17 that to what specific question exactly?

18 Q. Some of your answers were longer than others.
19 So, my ability to transcribe the notes, I can't
20 tell you.

21 A. (Wells) All right. Fair enough.

22 Q. I want to ask you, you spoke a lot at the
23 beginning, I don't remember if it was Ms.
24 Linowes or someone else, who asked you about

[WITNESS PANEL: Allen ~ Wells]

1 the "range of the Q2C Partnership".

2 A. (Wells) Uh-huh.

3 Q. And I think, on Page 5 of your testimony, there
4 was a long map -- or, it's kind of a
5 small-scale large area.

6 A. (Wells) Right. Yes.

7 Q. And, so, I wanted to ask you, the Q2C's
8 Partnership includes Washington, is that right?
9 The Town of Washington?

10 A. (Wells) Washington, New Hampshire?

11 Q. Yes.

12 A. (Wells) Yes.

13 Q. Okay. And it includes the Town of
14 Hillsborough, right?

15 A. (Wells) Yes.

16 Q. Okay. And it includes -- it looks to me like
17 it goes up above 89, in that area, so that
18 would include Enfield as well?

19 A. (Wells) Yes.

20 Q. Okay. But not -- not Hooksett. Hooksett's
21 nearby, but Hooksett isn't in the area, right?

22 A. (Wells) That is correct.

23 Q. Okay.

24 A. (Wells) Yes.

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 Q. I'm going to go back to this issue, I've
2 touched on it before. But the state has a list
3 of eight water bodies that are so -- have
4 mercury contamination that's so high from
5 power-point sources -- excuse me -- power point
6 sources.

7 A. (Wells) Point sources, right.

8 Q. And that includes Ashuelot Pond, in Washington;
9 the Jackman Reservoir, in Hillsborough; Mascoma
10 Lake, in Enfield; and May Pond, in Washington.
11 So, those four out of the eight are in the area
12 of your Q2C Partnership or your former
13 partnership.

14 A. (Wells) Uh-huh.

15 Q. So, I guess, I mean, isn't one of the most
16 effective ways to try to address problems of
17 power point pollution and accumulating, and you
18 understand, I assume, that there's some pretty
19 severe impacts of mercury on wildlife?

20 A. (Wells) Sure.

21 Q. Okay. So, I mean, isn't -- don't we need to do
22 everything we can to try to correct that
23 problem and switch to renewable energy?
24 Because climate change is getting worse,

[WITNESS PANEL: Allen ~ Wells]

1 pollution is continuing. These are
2 bio-cumulative compounds. Don't we have to do
3 everything we can to kind of stop this problem
4 before the wildlife resources that we're trying
5 to protect are impaired?

6 A. (Wells) That's a great question. But, as I did
7 to the gentleman over here, I will try to keep
8 myself in the sideboards of talking of, as I
9 tried to say at the beginning, talking about
10 the Quabbin-to-Cardigan Project as the context
11 for the discussion that you're having on this
12 Project. So, I will not be expressing an
13 opinion on that.

14 We'll go out for a beer sometime and talk
15 about it.

16 Q. So, you're acknowledging that it's a legitimate
17 concern, but you don't want to weigh in on --

18 A. (Wells) I'm acknowledging that it's a fair
19 enough -- it's a fair and general "big picture"
20 question. But I don't think it's a good use of
21 my time or anybody's time for me to start
22 expounding about it one way or the other. And
23 it's certainly not germane to the role I'm
24 trying to play at this proceeding.

[WITNESS PANEL: Allen ~ Wells]

1 Q. Okay. All right. You indicated that it was
2 important to get the opinion on fragmentation
3 from -- and wildlife impacts from organizations
4 like TNC. I assume that you would agree that
5 Fish & Game was another important source that
6 you'd want to consider?

7 A. (Wells) Yup. Said as much. Yup.

8 Q. And I assume that you're not so much of a
9 skeptic that you would also say it would be
10 important to look at what wildlife
11 professionals, such as those retained by Antrim
12 Wind, and who go out and do surveys and
13 studies, that would be another source of
14 information to look at?

15 A. (Wells) Sure. And, obviously, it has been.

16 Q. And have you read Antrim Wind's wildlife
17 studies?

18 A. (Wells) I have not.

19 Q. Okay. Did you review your testimony with the
20 members of the Q2C Partnership before it was
21 filed or after it was filed?

22 A. (Wells) Did not.

23 Q. Okay.

24 A. (Wells) Not even sure whether they know that

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 I'm doing this or not.

2 Q. And, as a former GIS professional before I went
3 to law school, so this is a long time ago, --

4 A. (Wells) Yes.

5 Q. -- I notice you said that the Project area was
6 "kind of in the headwaters for the Merrimack
7 River".

8 A. (Wells) Uh-huh.

9 Q. And, so, it was -- did you say it was "one of
10 the only remaining" or "one of the cleanest
11 sources", or what exactly were you referring to
12 in that context?

13 A. (Wells) What I was referring to was, again,
14 based on, again, as a former GIS guy, the data
15 layer, in particular, that we used to develop
16 the Q2C Plan was, again, this USGS/maybe
17 DES-derived, the SPARROW -- "SPARROW" layering,
18 again, that long acronym for something, but --
19 which is essentially a -- it's a model that
20 takes, and this is the USGS bit, right? Brings
21 it down to, actually, I think the base of the
22 smallest scale, possible scale cache [sic]
23 myriads, and then runs a model that's looking
24 at nitrogen and phosphorous load. It was

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 originally designed -- really was originally
2 designed by USGS, *et al*, to try to get a handle
3 on, essentially, water pollution coming from
4 developed land uses and/or ag, whatever, right?
5 A model basically to look at loading within
6 those very small watersheds. So, what we --
7 but you can also use it essentially to say
8 "where is there a complete absence or a near
9 complete absence of nitrogen and phosphorous
10 loading.

11 Q. Okay.

12 A. (Wells) So, that's what's driving that model.
13 I mean, again, in full candor. So, based on --

14 Q. So, --

15 A. (Wells) Yes. And, again, just to finish the
16 point. And, so, based on that, that's sort of
17 the data that's backing that up, saying these
18 are essentially as close to pristine as we're
19 going to get, watershed areas that are
20 collecting and then running water downstream.
21 And a lot of it, honestly, is a function of the
22 fact that they're big empty areas of forests
23 with no people living there.

24 Q. So, --

[WITNESS PANEL: Allen ~ Wells]

1 A. (Wells) And there are no other activities going
2 on.

3 Q. So, thank you. Although, I wasn't --

4 A. (Wells) Sure.

5 Q. -- really looking for that level of GIS detail.

6 A. (Wells) Sure.

7 Q. What I want to get to was, is but the -- the
8 Merrimack River, at the confluence of either
9 the Franklin Falls hydroelectric dam or the
10 Winnepesaukee River, --

11 A. (Wells) Right.

12 Q. -- depending on which person you ask, --

13 A. (Wells) Uh-huh.

14 Q. -- changes from the Pemigewasset to the
15 Merrimack.

16 A. (Wells) Right.

17 Q. So, there's also, I mean, there's tremendous
18 area. There's the entire east branch of the
19 Pemi, Franconia Falls.

20 A. (Wells) Sure.

21 Q. Those are very pristine waters that are going
22 into the Merrimack River Basin?

23 A. (Wells) Yes. And, actually, on a purely sort
24 of procedural level, that's a fair point,

{SEC 2015-02} [Day 11/Morning Session ONLY] {10-20-16}

[WITNESS PANEL: Allen ~ Wells]

1 right. I mean, it does depend on how you're
2 defining the Merrimack.

3 Q. Right. And, so, --

4 A. I'll leave it at that. So, either you count
5 the Pemi and, whatever, is the Winnepesaukee,
6 as also part, then, you're right. If you say
7 "no, it's really from the" --

8 *[Court reporter interruption.]*

9 WITNESS WELLS: I'm sorry.

10 **CONTINUED BY THE WITNESS:**

11 A. "From the confluence", I'll use -- that's a
12 less jargony way to say it, "the confluence of
13 the Pemi and the Winnepesaukee". So, just "how
14 do you define the watershed?"

15 BY MR. RICHARDSON:

16 Q. One thing that I wanted to ask you about was
17 you were in -- how Mr. Levesque knew to ask you
18 to join this panel.

19 A. (Wells) Uh-huh.

20 Q. I assume you had some experience with him when
21 you were at the Forest Society, where he
22 formerly worked, or were you both there at the
23 same time? How do you know of him?

24 A. (Wells) I've known Charlie, really,

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[WITNESS PANEL: Allen ~ Wells]

1 professionally, since -- more or less since I
2 got to New Hampshire, which was in 19 -- not
3 "19", sorry, 2002, when I came to work for the
4 Society for the Protection of New Hampshire
5 Forests, and was really hired in primarily to
6 do "policy work", i.e. State House government
7 relations, federal government relations. As
8 I'm sure you guys know, one of the things that
9 Mr. Levesque has done, and I think still does,
10 is a certain amount of contract lobbying work,
11 and especially in the conservation field. And,
12 so, that's how we know each other. And I've
13 known him ever since.

14 Q. And he does that on behalf of wood-fired
15 generating facilities?

16 A. (Wells) Well, he's done it for a number of
17 clients. But you asked "how do I know him?
18 That's how I know him.

19 Q. Yes. Okay.

20 A. (Wells) And, honestly, I know him best because
21 of work that we did, especially in the early
22 years, around getting LCHIP -- the LCHIP
23 Program created and funded and defended.

24 Q. Right.

[WITNESS PANEL: Allen ~ Wells]

1 A. (Wells) That's how I know about him.

2 Q. Because you were with the Trust for Public
3 Lands, and he was, I believe, Executive
4 Director of the Trust for New Hampshire Lands.
5 Did you know him from that time as well?

6 A. (Wells) Oh, no. No. That's before either of
7 our times.

8 Q. Okay. So, --

9 A. Or, I was in New York at the time.

10 Q. Now, during the technical session, you may
11 recall, I believe you were on the phone, so, I
12 don't know if you knew it was me, but I asked
13 you if you had reviewed your testimony with
14 anyone, and I believe you said that
15 Mr. Levesque originally provided you with your
16 testimony and you made a couple changes to it?

17 A. (Wells) Correct.

18 Q. Okay.

19 A. (Wells) Yes. After I requested that he do
20 that.

21 Q. So, how much of his testimony did -- how much
22 of your testimony did he write?

23 A. (Wells) Well, if we're -- all right. We're
24 counting my testimony as being basically 1

[WITNESS PANEL: Allen ~ Wells]

1 through 9 here, I would say, actually, I wrote
2 most of it, because most of it is cobbled
3 directly out of existing Q2C documents that I
4 wrote. So, that's the answer.

5 Q. Okay.

6 A. (Wells) Essentially, he compiled it, --

7 Q. He compiled it.

8 A. (Wells) -- is what he did. He compiled it.

9 Q. He wrote all of the questions --

10 A. (Wells) From existing material, which is part
11 of why I said "Would you do this please?"

12 Q. So, he wrote the questions --

13 A. (Wells) "I wrote this already. Could you pull
14 it together?"

15 Q. So, actually, he wrote the questions, and then
16 plugged in the information from the documents
17 that you discussed with him?

18 A. (Wells) Correct.

19 Q. Okay. And, when I asked for the copy, and this
20 shows up in the Committee's tech session report
21 of -- this is in the record, so to speak, from
22 July 19th, where it says "Mr. Levesque shall
23 provide a copy of the draft prefiled testimony
24 of Chris Wells", I believe Mr. Levesque

[WITNESS PANEL: Allen ~ Wells]

1 objected to doing that. Do you know why he
2 objected?

3 A. (Wells) I think I remember that he did. But
4 why? No. I don't have a comment about that
5 one way or the other. Don't know.

6 MR. RICHARDSON: Okay. Thank you.
7 That's all I have.

8 PRESIDING OFCR. SCOTT: Does the
9 Applicant have questions?

10 MR. NEEDLEMAN: We do.

11 MS. SCOTT: Yes. Mr. Wells, I'd like
12 to start with you.

13 PRESIDING OFCR. SCOTT: Hold on
14 please.

15 MS. SCOTT: Yes.

16 PRESIDING OFCR. SCOTT: Go ahead
17 please. Well, let me ask you this. How much
18 does the Applicant have for questions?

19 MS. SCOTT: About a page.

20 PRESIDING OFCR. SCOTT: What does
21 that mean?

22 MS. SCOTT: Depends on the length of
23 the answers, frankly. But ten, twenty minutes.

24 PRESIDING OFCR. SCOTT: Okay. Sounds

[WITNESS PANEL: Allen ~ Wells]

1 like we should take a break then. So, we'll
2 take a 45-minute break, and we'll be back.

3 (Lunch recess taken at 12:44
4 p.m. and concludes the **Day 11**
5 **Morning Session.** The hearing
6 continues under separate cover
7 in the transcript noted as **Day**
8 **11 Afternoon Session ONLY.**)

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