

In Re:
*SEC 2012-01 ANTRIM WIND ENERGY
HEARING ON THE MERITS*

*DAY 5 - AFTERNOON SESSION ONLY
November 2, 2012*

*SUSAN J. ROBIDAS, N.H. LCR
(603) 622-0068 shortrptr@comcast.net
(603) 540-2083 (cell)*

STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

NOVEMBER 2, 2012 - 1:00 p.m. DAY 5
Concord, New Hampshire AFTERNOON SESSION ONLY

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

PRESENT: SITE EVALUATION COMMITTEE:

Kate Bailey, Engineer (Presiding Officer)	Public Utilities Comm.
Amy L. Ignatius, Chrmn.	Public Utilities Comm.
Harry T. Stewart, Dir.	DES - Water Division
Johanna Lyons, Designee	Dept. of Resources & Econ. Dev.
Craig Green, Designee	Dept. of Transportation
Brad Simpkins, Dir.	DRED-Div. Forests & Land
Ed Robinson, Designee	Fish & Game Department
Richard Boisvert, Designee	Div. Historic Resources
Brook Dupee, Designee	Dept. Health & Human Svs.

COUNSEL FOR THE COMMITTEE: Michael Iacopino, Esq.

COUNSEL FOR THE PUBLIC: Peter C. L. Roth, Esq.
Sr. Asst. Atty. General
N.H. Atty.Gen. Office

COURT REPORTER: Susan J. Robidas, N.H. LCR No. 44

1 APPEARANCES: Reptg. Antrim Wind, LLC:
2 Susan S. Geiger, Esq. (Orr & Reno)
3 Douglas L. Patch, Esq. (Orr & Reno)
4 Rachel Goldwasser, Esq. (Orr & Reno)
5 Jack Kenworthy (Antrim Wind)

6 Reptg. Antrim Board of Selectmen:
7 Galen Stearns, Town Administrator
8 Michael Genest, Selectman
9 Town of Antrim

10 Reptg. Harris Center for Cons. Edu.:
11 Stephen Froling, Esq.

12 Reptg. Antrim Planning Board:
13 Martha Pinello, Member
14 Charles Levesque, Member

15 Reptg. Antrim Conservation Commission
16 Peter Beblowski

17 Reptg. Audubon Society of N.H.:
18 David M. Howe, Esq.
19 Amy Manzelli, Esq. (BCM Environment
20 & Land Law)

21 Reptg. Intervenors Allen/Edwards:
22 Mary Allen

23 Reptg. Industrial Wind Action Group:
24 Lisa Linowes

Reptg. North Branch Group
of Intervenors:
Richard Block
Loranne Carey Block

I N D E X

WITNESS:

JOHN W. GUARIGLIA

PAGE

Direct Examination by Ms. Geiger

4

Cross-examination:

By Mr. Reimers

17

By Ms. Longgood

72, 110

By Mr. Block

80

By Mr. Roth

114

INTERROGATORIES BY SUBCOMMITTEE MEMBERS:

By Mr. Dupee

145

By Dr. Boisvert

166

By Dir. Simpkins

172

By Ms. Lyons

174

By Chairman Ignatius

176

By Mr. Green

193

By Mr. Iacopino

194

Redirect Examination by Ms. Geiger

203

1 (Whereupon the hearing resumed after the
2 lunch break at 1:07 p.m.)

3

4 MS. BAILEY: Okay. We're back
5 on the record and ready to proceed with
6 Mr. Guariglia.

7 MR. ROTH: Madam Chairman, I
8 need to introduce another exhibit. Someone
9 clearly has been trying to influence me and
10 has delivered this cookie mysteriously to me.
11 Let the record reflect that --

12 MS. BAILEY: You've been
13 catered to.

14 MR. ROTH: Thank you.

15 MS. GEIGER: You're very
16 welcome.

17 MS. BAILEY: Okay. Proceed.

18 (WHEREUPON, JOHN W. GUARIGLIA was/were
19 duly sworn and cautioned by the Court
20 Reporter.)

21 JOHN W. GUARIGLIA, SWORN

22 DIRECT EXAMINATION

23 BY MS. GEIGER:

24 Q. Yes. Good afternoon. Please state your name

1 and address for the record.

2 A. John Guariglia. My business address is 109
3 South Warren Street, Suite 400, Syracuse, New
4 York 13202.

5 Q. Mr. Guariglia, do you have your microphone
6 on? Press it so that you can see the red
7 button.

8 A. Now I do.

9 Q. Okay. Thank you.

10 And when you answer questions, could you
11 please speak into the microphone.

12 A. Yes.

13 Q. Mr. Guariglia, who are you employed by, and
14 in what capacity are you employed?

15 A. I'm employed by Saratoga Associates. I'm a
16 principal and landscape architect.

17 Q. Okay. And could you please give the
18 Committee a very brief summary of your
19 qualifications?

20 A. Sure. I have a degree in landscape
21 architecture from SUNY College of
22 Environmental Science and Forestry in
23 Syracuse. I'm also a licensed landscape
24 architect and have been practicing for close

1 to 20 years now. The last 10 to 12 years
2 have been focused on visual impact
3 assessments, and the past five to six years
4 more specifically on wind energy projects.

5 Q. And Mr. Guariglia, what is your role in the
6 Antrim Wind Project?

7 A. I authored the report and oversaw the
8 completion of the exhibits.

9 Q. And which report would that be?

10 A. The Visual Impact Assessment and the Shadow
11 Flicker Analysis.

12 Q. Okay. Are you the same John Guariglia who
13 submitted prefiled testimony on January 31st,
14 2012 in this docket?

15 A. Yes, I am.

16 MS. GEIGER: And for the
17 Committee's reference, Mr. Guariglia's
18 testimony is under Tab 4, Volume 1, the
19 volume that's been marked as AWE 1.

20 BY MS. GEIGER:

21 Q. Did you also submit supplemental prefiled
22 testimony in this docket on October 11, 2012?

23 A. Yes, I did.

24 MS. GEIGER: And for the

1 Committee's reference, Mr. Guariglia's
2 supplemental prefiled testimony is contained
3 in the binder marked AWE 9, Tab 4.

4 BY MS. GEIGER:

5 Q. Do you have any corrections or updates to
6 either your prefiled or supplemental prefiled
7 testimony?

8 A. No, I do not.

9 Q. Okay. Now, turning to the issue of oral
10 rebuttal, I'd like you to turn to the last
11 page of the supplemental testimony from
12 Ms. Vissering that was filed October 11th
13 this year in this docket. I believe it's
14 been marked as Exhibit PC 4. Do you have
15 that?

16 A. Yes, I do.

17 Q. Okay. Okay. Now, Ms. Vissering states in
18 response to a question about the Applicant's
19 agreement to use radar-activated lighting,
20 that, quote, Even the temporary use of night
21 lighting would result in unreasonable visual
22 impacts. Did I read that correctly?

23 A. Yes, you did.

24 Q. Would you like to respond to that statement?

1 A. Yes. I think that statement's unreasonable.
2 Antrim Wind cannot control the lights that
3 are on top of the turbines. This is
4 determined by the FAA. All wind projects
5 have to have these sort of lights, including
6 any of the projects here in New Hampshire.
7 So it's a standard item that's required for
8 safety.

9 Antrim Wind's commitment to use their
10 radar-activation light I think is a wonderful
11 solution. Once approved, it'll essentially
12 eliminate all night lighting, except for when
13 an aircraft is in close vicinity. So Antrim
14 Wind is mitigating as best as they can, and
15 it's quite essentially the only way they can.

16 Q. Now, the last Q and A, or question and answer
17 of Ms. Vissering's supplemental prefiled
18 testimony deals with your Expanded 10-mile
19 Viewshed Analysis. Do you have that?

20 A. Yes.

21 Q. And there, Ms. Vissering says that she's not
22 been able to review the sites that you've
23 identified in that Expanded Viewshed
24 Analysis, but that identification of the

1 additional resources affected by the project
2 within this expanded area supports her
3 conclusion that the project has an
4 unreasonable adverse impact on aesthetics in
5 and around Antrim; is that correct?

6 A. Yes.

7 Q. Would you like to respond to these
8 statements?

9 A. Yes. I think it's premature to come to a
10 conclusion based on this passage. It just
11 looks like it's merely saying, Hey, there's
12 33 receptors; there's visibility; there must
13 be impact. Without going out and actually
14 looking at each individual resource,
15 understanding what the resource is about,
16 what's going on at the resource, I just think
17 it's premature to make that statement. And
18 quite honestly, I think that rendering such a
19 statement without the facts is not supportive
20 of her original conclusion.

21 Q. And why do you say that, "without the facts"?
22 Did Ms. Vissering visit each of these
23 additional receptor locations?

24 A. According to this testimony, no, she did not

1 visit each of these locations.

2 Q. Okay. Now turning your attention to
3 Mr. Block's supplemental prefiled testimony
4 dated October 11, 2012, which I believe has
5 been marked Exhibit NB 7. Do you have that?

6 A. Yes, I do.

7 Q. On Page 1, Mr. Block states that he wants to
8 demonstrate the high inaccuracy of the
9 vegetated viewshed maps submitted by Saratoga
10 Associates. And in support of this,
11 Mr. Block has submitted a visual simulation
12 of an area called Blueberry Fields, where he
13 indicates that 8 to 10 turbines would be
14 visible, but that the vegetated viewshed map
15 indicates no turbines would be visible.
16 Would you care to comment on this testimony?

17 A. Yes. First off, in terms of the location
18 called Blueberry Fields, we took a quick look
19 at that location. We have found out that
20 it's privately owned, with no conservation
21 easements, according to Granite. It is not a
22 dedicated resource of statewide significance
23 or of importance to the community. In fact,
24 we also took a look at his GPS location. And

1 on this map here, Blueberry Fields is right
2 over here. And his photo location was
3 actually right there, right next to
4 visibility.

5 Q. And Mr. Guariglia, the court reporter
6 can't -- can only take down the words that
7 you speak. And when you say "right there,"
8 could you please state in words the area on
9 the map that you are pointing to.

10 A. Yes.

11 MR. IACOPINO: Also, please
12 identify the exhibit number for that map.
13 It's in the upper right-hand corner.

14 THE WITNESS: Okay. The
15 exhibit number is 39B. The area that he took
16 the photograph is east of Loveren Mill Road,
17 and it looks like west of Liberty Farm Road,
18 that wraps around near the town border. It's
19 on the high point of this mountain ridge.
20 And right on the high point there is some
21 coated visibility right where he took the
22 photograph.

23 BY MS. GEIGER:

24 Q. When you say "coated visibility," what do you

1 mean by that?

2 A. What it does is it shows -- quite frankly, he
3 found the one area along that ridge that we
4 did identify as having visibility to the
5 project.

6 Q. And when you say you did identify it, do you
7 mean that because there's a purple mark up
8 there that means that there's visibility from
9 that location?

10 A. Yes, because this right here is telling me
11 that there is visibility from this location
12 of the project.

13 Q. Okay. Do you have any other comments about
14 Mr. Block's testimony?

15 A. Well, we had reviewed the simulation and the
16 cross-sections and the documents that he
17 provided, and just kind of wanted to go
18 through some of the items that we had
19 noticed. Obviously, we didn't have any of
20 the files to test the accuracy or anything
21 like that. But there were some basic
22 comments that we had identified, and I'm just
23 going to go through them real quick.

24 The cross-sections that he developed,

1 there was no record of how he determined the
2 elevations to do those cross-sections.
3 That's a pretty basic thing when doing a
4 line-of-sight profile, saying I got them from
5 USGS or some other source, that way we can
6 verify the accuracy of the data.

7 The cross-sections didn't include any
8 vegetation. He didn't map any vegetated
9 areas. So what that does is it maximizes
10 visibility. And it's a little -- it's not a
11 realistic scenario, because this area is
12 quite vegetated. And because of that, he
13 also, on a number of locations, showed that
14 from the very base of the turbine to the tip
15 would be visible. And because he didn't
16 include that vegetation, we know that that's
17 not going to be a hundred percent accurate.

18 Let's see. The profile, again, in the
19 simulations don't show any tree clearing.
20 Based on the project, I know that has been
21 raised before. The simulations, when we --
22 the turbines, when we looked at the
23 simulations, we did some quick review of it.
24 And it appears as though many of the turbines

1 are approximately 50 to 70 feet tall, which
2 would exaggerate the visibility. And the
3 turbines do not appear to be based on 3D
4 models. They appear to be all the same. And
5 it seems more like -- kind of like a
6 cut-and-paste sort of scenario versus what we
7 do when we create an actual 3D model of each
8 turbine and include things like light
9 characteristics; that way we can get the
10 proper shade and shadow on the turbines.

11 And then the last item is Mr. Block in
12 the past has said or made reference that
13 basing a simulation on a 50-millimeter
14 photograph may not be appropriate; however,
15 that's exactly what he did for his
16 simulations. So, you know, he kind of
17 contradicted himself in terms of what might
18 be appropriate. And this all kind of goes
19 back to his statement of saying he believes
20 this is an accurate representation. There's
21 just too many flaws or questions that could
22 support that statement.

23 Q. Thank you.

24 MS. GEIGER: The witness is

1 available for cross-examination.

2 MS. BAILEY: Thank you.

3 Before we begin with the cross, I'd like to
4 poll everybody and get a best estimate of how
5 long your cross is going to take so that the
6 Applicant can plan whether to bring their
7 next witness in. I'm not going to hold you
8 to it, but if you double it, I'm going to say
9 something. So I really want this to be as
10 close to accurate as possible, please.

11 Mr. Froling?

12 MR. FROLING: No questions.

13 MS. BAILEY: Is Mr. Beblowski
14 here?

15 (No verbal response)

16 MS. BAILEY: Well, can I just
17 have a show of hands of who's going to have
18 cross?

19 (Show of hands from members of audience)

20 MS. BAILEY: Okay. So,
21 Mr. Reimers?

22 MR. REIMERS: Yeah.

23 MS. BAILEY: How long is your
24 cross going to be?

1 MR. REIMERS: I would estimate
2 one and a half to two hours.

3 MS. BAILEY: Okay. Mr. Block?

4 MR. BLOCK: I actually think
5 I'll only go maybe 20 minutes to a half an
6 hour.

7 MS. BAILEY: Mr. Roth?

8 MR. ROTH: It will depend to a
9 large extent on what those who go before me
10 do. I estimated, I think, half an hour to 40
11 minutes before. That may be probably on the
12 high side. So 15, 20 minutes.

13 MS. BAILEY: Okay. So it
14 looks like three hours, plus Committee
15 questions, which, I mean, it could be -- so
16 that doesn't help. Yeah, maybe we'll be done
17 around 5:00 or so.

18 MR. REIMERS: For what it's
19 worth, I'll try not to go the full two hours.

20 MS. BAILEY: Okay. Good.

21 Thank you.

22 All right. Mr. Reimers, why
23 don't we start with you, see how it goes.

24

1 CROSS-EXAMINATION

2 BY MR. REIMERS:

3 Q. Good afternoon, Mr. Guariglia.

4 A. Good afternoon.

5 Q. My name is Jason Reimers. I represent the
6 New Hampshire Audubon. I'm going to be
7 focusing mainly on your visual assessment --
8 the VIA, Visual Impact Analysis, your
9 prefiled testimony and your supplemental
10 prefiled testimony. And I'll be asking you
11 questions mainly based on those documents.

12 To begin with, your VIA, as I'll refer
13 to it, Visual Impact Analysis, which is
14 Attachment 9A to the Application, it doesn't
15 assess the visual impact after the turbines
16 are removed, does it?

17 A. No.

18 Q. Assume that easements allow for three
19 ridgeline houses after the turbines are
20 removed. Your report doesn't address the
21 visual impact of those homes on the
22 ridgeline, does it?

23 A. No.

24 Q. Your VIA -- actually, in your supplemental

1 prefiled testimony, you were asked about --
2 on Page 14, you were asked -- sorry. Let me
3 just get my bearings on this.

4 You were asked about Ms. Vissering's VIA
5 being subjective. The question was: Why do
6 you believe the Vissering VIA conclusion that
7 certain vantage points are highly sensitive
8 and subjective and does not consider all
9 relevant factors?

10 Your response, you refer to Willard Pond
11 and Bald Mountain. With regard to Willard
12 Pond, you stated that project views from
13 Willard Pond would be significant because of
14 the existing condition, which is -- I'm
15 sorry. Let me back up.

16 You are characterizing the Vissering
17 VIA, and you state that the Vissering VIA
18 concludes that project views from Willard
19 Pond would be significant because of the
20 existing condition, which is entirely
21 natural, with no development currently
22 visible from the pond, and because this is a
23 wildlife sanctuary and Audubon preserve,
24 there's an expectation that one will

1 experience a natural setting.

2 Now, there being no visible development
3 from Willard Pond, isn't that an objective
4 statement?

5 (Witness reviews document.)

6 A. Yes.

7 Q. And the property being a wildlife sanctuary
8 and Audubon preserve, those are objective
9 facts as well, aren't they?

10 A. Yes.

11 Q. And people expect a natural setting. Would
12 that be an objective statement as well?

13 A. I believe that's probably more of a
14 subjective statement.

15 Q. If the property is currently a natural
16 setting, you're saying that it's a --
17 nevertheless a subjective expectation that
18 they will encounter a natural setting?

19 A. Well, you had said that they would be
20 expecting. Not having been there before,
21 that's making an assumption that it's a
22 natural preserve, that they would expect
23 that.

24 Q. Okay. Would it be an unreasonable

1 expectation for people to expect a natural
2 setting if they visited there?

3 A. I think they would expect that the preserve
4 itself would be natural. Private properties
5 beyond the natural preserve, that's
6 questionable.

7 Q. Okay. If people had visited there before and
8 encountered a natural setting and looked out
9 beyond the preserve, would it be reasonable
10 for them to, when they visited again,
11 encounter a natural setting?

12 A. Based on past history, yes.

13 Q. You also mentioned Bald Mountain in your
14 response to the question about whether
15 Ms. Vissering's VIA is highly sensitive --
16 subjective. With regard to Bald Mountain,
17 you characterized Ms. Vissering's VIA as
18 "views from Bald Mountain would be
19 significant because of Bald Mountain's
20 location within the dePierrefeu-Willard Pond
21 Wildlife Sanctuary, and therefore would have
22 the expectation of a natural setting."

23 If people now look toward the project,
24 the proposed project area, and see a natural

1 setting without development, wouldn't you
2 objectively expect those people to have an
3 expectation of a natural setting?

4 A. Well, I'd expect the folks would think there
5 would be a natural setting on Bald Mountain.
6 Again, kind of repeating the same questions
7 as before.

8 Q. It is.

9 A. So my statements would probably be the same.

10 Q. Okay. Do you know that one of the primary
11 reasons people visit the Willard -- Willard
12 Pond Sanctuary is to escape the developed
13 world?

14 A. That could be part of it, yes.

15 Q. I mean, you wouldn't expect people to go to
16 Willard Pond looking for development, would
17 you?

18 A. Well, again, going to Willard Pond and the
19 wildlife sanctuary, there wouldn't be any
20 development there. So, again, controlling
21 off-site private land, that's a different
22 situation.

23 Q. Would a view of wind turbines from the pond
24 be part of an uninterrupted natural view?

1 A. I believe that there would be many locations
2 within the wildlife sanctuary that would not
3 be affected.

4 Q. But would a view of the wind turbines be part
5 of an uninterrupted natural view?

6 A. Off site?

7 Q. The wind turbines off site.

8 A. Yeah.

9 Q. What if you're looking --

10 A. So, yeah. Again, if you're at Willard Pond,
11 the Willard Pond and the sanctuary would not
12 be impacted, directly impacted. Again, it's
13 that view off site, and is there a realistic
14 expectation that that would stay in its
15 current form forever.

16 Q. Are you saying that Willard Pond is not
17 impacted because the turbines are not
18 actually placed on that property?

19 A. The property itself would not be impacted.

20 Q. But the view from the property --

21 A. Would be.

22 Q. -- would be impacted.

23 A. Would have visibility.

24 Q. Say that again.

1 A. Would have visibility.

2 Q. Of the wind turbine.

3 A. The wind turbines, yeah.

4 Q. But you're testifying that that is not an
5 impact on the visibility?

6 A. We did not -- impact and visibility are two
7 different things. Visibility does not
8 necessarily mean impact. We did not analyze
9 the level of impact from Willard Pond or the
10 sanctuary.

11 Q. Okay. In your first supplemental prefiled
12 testimony, you contrasted a privately --
13 these are your terms -- "a privately owned
14 wildlife sanctuary versus a publicly
15 designated recreation area."

16 A. I'm sorry. Where is that?

17 Q. I'm sorry. Page 14 of your supplemental.

18 A. Sure.

19 Q. Down on the bottom, I'm looking around Line
20 21.

21 (Witness reviews document.)

22 A. Yes. The VIA referencing Ms. Vissering's
23 study.

24 Q. You're aware, aren't you, that Willard Pond

1 is open to the public?

2 A. Yes.

3 Q. And you stated, just on the next page, the --
4 let's see. I'm sorry. Strike that.

5 Now, why didn't you analyze the visual
6 impact to the Willard Pond area?

7 A. Well, you could say that we analyzed the
8 visibility. Our report was geared towards
9 providing the information, so that way the
10 siting committee can make a determination of
11 impact.

12 Q. In your VIA, on Pages 8 and 9, you discuss --
13 you have two maps. One is Figure 1, which is
14 on Page 8, is a topographic viewshed map, and
15 Page 9 has Figure 2, a vegetated viewshed
16 map.

17 MR. IACOPINO: I'm sorry.
18 Which exhibit are you in, sir?

19 MR. REIMERS: Oh, it's
20 Attachment 9A to the Application, which is
21 Mr. Guariglia's -- or Saratoga Associates'
22 Visual Impact Analysis.

23 MR. IACOPINO: It's AWE 3.

24 MR. REIMERS: I'm sorry.

1 Which is it?

2 MR. IACOPINO: Just for the
3 Committee that's trying to find the exhibit,
4 it's AWE 3. In the electronic version of the
5 exhibit, it's Document No. 9, Appendix 9A.

6 BY MR. REIMERS:

7 Q. You just mentioned that you analyzed the
8 impact in order to provide that information
9 to the Committee?

10 A. The visibility.

11 Q. The visibility. Are you talking -- the
12 visibility of who?

13 A. The visibility of the project.

14 Q. Okay. Going back to your maps in your VIA,
15 you state that -- your map shows that 9 to 10
16 turbines would be seen from Willard Pond?

17 A. Yes.

18 Q. And did you consider if the vegetation was
19 removed between the sanctuary and the
20 turbines?

21 A. I'm sorry. What's that?

22 Q. Did you consider what the visibility would be
23 if there was no vegetation between -- that 9
24 to 10 from Willard Pond, that's with

1 vegetation.

2 A. Yes. That's correct.

3 Q. Did you consider what it would be -- how many
4 would be visible from the sanctuary if the
5 vegetation was removed between the sanctuary
6 and the turbines?

7 A. Well, that would be Figure 1.

8 Q. Okay.

9 A. The topo-only viewshed map.

10 Q. And that shows that in that event, 9 to 10
11 turbines would be visible from almost all of
12 the sanctuary?

13 A. Sure.

14 Q. Do you know whether timber harvesting is
15 prohibited or permitted on the land in
16 between the sanctuary and the turbines?

17 A. I do not know for sure, no.

18 Q. Do you know that timber harvesting is
19 permitted on sanctuary land?

20 A. No.

21 Q. And your study didn't address those items,
22 did it?

23 A. No. But my understanding, in terms of timber
24 harvesting, is usually it's done in swaths.

1 So in order to really have some sort of
2 change in visibility, you'd have to clear
3 probably the tops of the mountains, which
4 isn't always done. It's usually the sides of
5 the mountains, at least from my experience.

6 Q. Your experience in New Hampshire?

7 A. My experience in many states, not in New
8 Hampshire.

9 Q. Looking at your prefiled -- in your prefiled
10 testimony, you stated that the level of
11 visual impact will depend on each
12 individual -- I'm sorry. It's on Page 17 of
13 the prefiled testimony.

14 You stated the level of visual impact
15 will depend on each individual view, but over
16 time the wind turbines will be more accepted
17 as they become an integral part of the
18 landscape.

19 So in your view, people sitting on a
20 rock on Willard Pond or hiking to the top of
21 Bald Mountain, they would grow to accept the
22 wind turbines over time?

23 A. We have seen that happen, yes.

24 Q. If something is already built, what option

1 does someone have other than to accept its
2 existence?

3 A. Well, they can choose not to like it.

4 Q. Assuming a person is at Willard Pond at
5 night, are there currently any lights
6 visible?

7 A. No.

8 Q. And the radar-activated light, that will only
9 be -- that would be the only visible light
10 from Willard Pond; is that right?

11 A. The lights, yes.

12 Q. And these come on when a plane is nearby?

13 A. If they're radar-activated, yes.

14 Q. How nearby?

15 A. That, I do not know.

16 Q. Okay. Does your report -- did you look at
17 the flight paths going into Manchester?

18 A. No, that's not part of our analysis.

19 Q. So you don't know how often the lights would
20 be activated?

21 A. No, but it would be a short time in
22 comparison to having them all night like all
23 the other projects.

24 Q. Provided that planes aren't constantly flying

1 by.

2 A. Even then, you know, airports close at what
3 time? Manchester Airport doesn't work 24/7.
4 So...

5 Q. Perhaps midnight?

6 Are you aware of any -- currently, are
7 you aware of any lights -- flashing red
8 lights visible from Gregg Lake?

9 A. Gregg Lake, no.

10 Q. So if this project -- if these lights are
11 used, these would be the only visible
12 flashing red lights from Gregg Lake?

13 A. Yes.

14 Q. Are you aware of any other lights visible
15 from Gregg Lake besides flashing red lights?

16 A. Any lights?

17 Q. Yeah.

18 A. Around Gregg Lake? All the houses, cars.

19 Q. In your supplemental testimony on Page 8, you
20 were asked about potential visual impact to
21 Willard Pond.

22 A. Page 8 of my supplemental?

23 Q. I'm sorry. Page -- yes. Is that wrong? The
24 question was: If there is a potential visual

1 impact to a receptor such as Willard Pond,
2 why have you concluded that the project would
3 not have an unreasonable adverse impact? Are
4 you there?

5 A. Yes.

6 Q. Part of your statement was, "The project will
7 have some impacts on a limited number of
8 resources. However, given the relatively
9 small affected viewshed... [sic], the
10 collective impact on the study area will be
11 low. Taking into account the entire study
12 area, the project will not result in an
13 unreasonable adverse impact to the aesthetics
14 of the Antrim region." That was your answer?

15 A. Yes.

16 Q. Part of your answer.

17 A. Hmm-hmm.

18 Q. You were not saying -- you did not say that
19 the effect on Willard Pond, in particular,
20 was low, did you?

21 A. The visual impact?

22 Q. Correct.

23 A. Again, we didn't study the visual impact.

24 The statement is saying that we understand

1 that some folks would feel that there's
2 visual impact. However, we looked at a much
3 wider area than one or two resources. We
4 looked at the entire study area. We
5 recognized, based on the vegetated viewshed
6 map, that 95 percent would have screening.
7 We understand that Willard Pond and the
8 surrounding area is not a statewide or
9 designated resource. We understand that the
10 views from Willard Pond and Bald Mountain is
11 not preserved in any planning documents.

12 Q. Okay. Getting --

13 A. So there was a lot of different things that
14 went into that statement.

15 Q. Okay. But you were asked about Willard Pond.
16 In your answer, you weren't saying, as I read
17 this, that there was a small impact to
18 Willard Pond in particular.

19 MS. GEIGER: I'm going to
20 object to that question. I think the
21 question and the answer in the prefiled
22 testimony speak for themselves.

23 MR. REIMERS: I would differ
24 on that. He was asked about Willard Pond

1 and -- or individual receptors. But his
2 answer didn't really answer that and speaks
3 about collective impacts. And I would like
4 his opinion on the visual impact on,
5 specifically, Willard Pond.

6 MR. ROTH: If I may? It seems
7 to me Attorney Geiger is complaining about
8 the very nature of cross-examination, and I
9 don't think that's a legitimate objection.

10 MS. BAILEY: Could you,
11 Mr. Reimers, try to rephrase the question? I
12 mean, the question and the testimony is if
13 there is a potential visual impact to a
14 receptor such as Willard Pond.

15 MR. REIMERS: Right. I'll
16 try.

17 BY MR. REIMERS:

18 Q. In your answer that we're talking about, did
19 you specifically say whether there was a
20 small -- did you quantify the impact on
21 Willard Pond?

22 A. No, we did no impact ratings.

23 Q. Instead you spoke about there not being a
24 collective impact, didn't you?

1 (Witness reviews document.)

2 A. I believe what this was making reference to
3 is referring to Ms. Vissering's. I agree
4 it's not clear. But I know Ms. Vissering
5 came out talking about impacts on locations,
6 on particular resources. And what this is
7 saying is, yes, some people may feel that
8 there are potential impacts. And
9 Ms. Vissering pointed out a few locations and
10 talking about it collectively. So I think it
11 was more referring back to Ms. Vissering's
12 report.

13 Q. So you didn't analyze the visual impact on
14 specific -- specifically for Willard Pond?

15 MS. GEIGER: I'm going to
16 object to this question. I think it's been
17 asked a couple of times, and I believe it's
18 been answered.

19 MS. BAILEY: I think it has,
20 too.

21 BY MR. REIMERS:

22 Q. Okay. Why didn't you study the visual
23 impact?

24 A. That was already answered. I said in the

1 beginning the basis of our report.

2 Q. I remember you saying that you studied the
3 visibility. But why not study the visual
4 impact? Or if you could point me to your
5 prior answer.

6 (Witness reviews document.)

7 A. It's actually on Page 1 of the Visual
8 Resource Assessment -- under Methodology for
9 the Visual Impact Assessment. That states,
10 in part, "This process provides a practical
11 guide so decision-makers can understand the
12 potential visual impact and render a
13 supportable determination of visual
14 significance." The aim of our report was to
15 provide the information, so that way the
16 siting committee can make that determination.

17 Q. And you gave no opinion on impact?

18 A. We did not rate the impact, no.

19 Q. Looking at Page 11 of your supplemental -- I
20 believe I'm going to Page 11 -- you mentioned
21 that it needs to be considered how the
22 resource is used by an individual. And this
23 is -- you are differing with Ms. Vissering's
24 study.

1 A. Yes.

2 Q. And I believe that you were faulting her
3 study because she didn't consider how the
4 resource is used by an individual. You state
5 that people, quote, may be focused on their
6 activity and, therefore, may not be affected
7 by views of the turbines. And you cited
8 snowmobiling, running, hiking, cross-country
9 skiing.

10 Have you ever been to the top of a
11 mountain?

12 A. Yes, I have.

13 Q. And when you got there, did you look around?

14 A. Sure.

15 Q. And isn't that what most people do when they
16 get to the top of a mountain, such as Bald
17 Mountain?

18 A. Some people do that. Some people celebrate
19 that they actually made it up, have picnics.

20 Q. Have a picnic, have a snack, look around;
21 right?

22 A. Sure.

23 Q. Isn't the view an integral part of hiking?

24 A. I think it's part of it.

1 Q. An integral part. That was my question.

2 A. No, not necessarily.

3 Q. Okay.

4 A. Because, you know, there are some mountain
5 tops that don't have views.

6 Q. That's true.

7 Is the view an important part of
8 cross-country skiing?

9 A. Well, having cross-country skied before, wind
10 turbines would not affect me personally, as,
11 you know, sometimes people cross-country past
12 other buildings or, you know, other
13 transmission lines, a lot of different sort
14 of industrial uses as well.

15 Q. But if you were in a wildlife sanctuary,
16 wouldn't the view be an important part of
17 that activity?

18 A. Not knowing where they actually cross-country
19 ski at Willard Pond Sanctuary, if that's the
20 question, I can't answer that.

21 Q. If they're cross-countrying across Willard
22 Pond in the winter as it's frozen over, would
23 that be an important part of that experience?

24 A. Well, I think like any sort of running or

1 biking, you do run into different things. I
2 think it's part of it. I don't think seeing
3 turbines would make somebody not
4 cross-country on a frozen pond.

5 Q. Okay. That wasn't my question. But thank
6 you.

7 Where in your report do you take these
8 activities and the view during these
9 activities into consideration?

10 (Witness reviews document.)

11 A. Table 2 of Page 15 of the visual study, we do
12 include factors affecting visibility, and
13 that includes, like, landscape unit, viewer
14 group, view duration, and then scattered
15 throughout the report there are descriptions
16 of these different factors.

17 Q. Okay. And in the View Duration column, you
18 either have "moving" or "stationary." That's
19 talking about what the person visiting there,
20 whether they are moving or stationary?

21 A. Yes.

22 Q. So Willard Pond visitors are stationary?

23 A. Yes, that's how it is in here. But I'll also
24 say that they are moving as well with the

1 hiking and the boating and stuff like that.

2 Q. And except for the boating, the hiking, that
3 would be true for Bald Mountain as well?

4 A. I'm sorry?

5 Q. And what about for Bald Mountain? You list
6 them as stationary; is that right?

7 (Witness reviews document.)

8 A. Probably because of the summit that -- you
9 know, getting up to the summit, you'd
10 probably be stationary.

11 Q. You'd be stationary getting up to the summit?

12 A. No, at the summit. You know, obviously going
13 up Bald Mountain, you're in trees. Views to
14 the outside, unless there's discrete views or
15 filtered views through the trees, hikers may
16 not see. The orientation towards the turbine
17 may be incorrect as well.

18 Q. Does your report provide any more of a
19 detailed analysis other than stationary or
20 moving?

21 (Witness reviews document.)

22 A. In terms of each location or --

23 Q. In terms of people's use of these locations.

24 A. No.

1 Q. Have you -- well, I know you have. You've
2 reviewed Ms. Vissering's --

3 A. Yes.

4 Q. -- VIA?

5 A. Yes.

6 Q. And does she give a more detailed
7 description --

8 A. Yes.

9 Q. -- of places such as Willard Pond?

10 A. Well, let's see. She gives a description.
11 However, the -- yes, she does.

12 Q. And I'm sure that will be talked about more
13 in Ms. Vissering's examination.

14 But you would agree that she gives a
15 much more detailed description of the use of
16 Willard Pond than you do in your VIA?

17 A. Yes. However, there is a difference. She is
18 trying to substantiate a rating. I did not.
19 And my point, in terms of the prefiled, is if
20 you're going to do a rating, there should be
21 more to it than just a few factors,
22 understanding, as I have outlined in the
23 supplemental testimony, factors like that
24 should be considered as well.

1 Q. Okay. But in both of your reports, you're
2 assessing the visual -- visible impact on
3 these sites -- or of this project.

4 A. We're assessing visibility. Ms. Vissering is
5 more assessing impact.

6 Q. I'm now on page -- back to your supplemental
7 testimony on Page 11 to 12. Another thing --
8 we just talked about your critique of
9 Ms. Vissering's report about how is the
10 resource used by an individual. You also
11 stated that she should have considered when
12 is the resource used; is that right?

13 A. Yup.

14 Q. And at Line 22 on Page 11 you state, for
15 instance, if a resource, e.g., Willard Pond,
16 is limited to daytime activities and access
17 is not available during winter months, it
18 would receive fewer visitors during the
19 course of a year.

20 Is Willard Pond -- is the Willard Pond
21 area limited to daytime activities?

22 A. Generally, from the research that I've seen,
23 that is most -- most of that's highlighted.
24 I do understand just now there may be some

1 cross-country skiing on the pond that was not
2 in any of the information I had. But then I
3 would also say, how many people are actually
4 cross-country skiing on the pond versus the
5 summer use? So you have the number of
6 visitors. You also have the issue of, are
7 those folks actually going to be
8 cross-country skiing at night?

9 Q. Do you know that Willard Pond and Gregg Lake
10 are not -- do you know whether they are used
11 in winter for recreational activities?

12 A. I'm sorry. Repeat that again.

13 Q. Do you know -- do you know that Willard Pond
14 and Gregg Lake are not used in winter -- it's
15 an awkwardly worded question. Strike that.

16 You do know, don't you, that Willard
17 Pond and Gregg Lake are used in the winter
18 for recreational activities, don't you?

19 A. Well, Willard Pond, I just based on what you
20 had said. Again, all the literature that I
21 had read didn't refer to any sort of
22 wintertime activities.

23 Gregg Lake, I understand there may be
24 some ice fishing.

1 Q. Okay. Well, in your supplemental testimony,
2 you indicated that Willard Pond is -- access
3 is not available to Willard Pond during
4 winter months.

5 A. What line is that, please?

6 Q. It's bottom of Page 11, going on to Page 12,
7 where you state, for instance, if a resource,
8 such as Willard Pond is limited to daytime
9 activities and access is not available during
10 winter months -- what did you base its
11 unavailability on?

12 A. I think you stumbled upon a typo. We took a
13 look at Willard Pond and Bald Mountain.
14 We've come to the conclusion that there was
15 no -- and now significant winter sort of
16 activities. So therefore, the amount of
17 people visiting the park or the pond or the
18 sanctuary would be lesser than it would be
19 during the summertime, which would then
20 affect the number of viewers that could see
21 the project.

22 Q. So you were not -- you didn't mean to
23 indicate that Willard Pond was closed in the
24 winter?

1 A. Right.

2 Q. Do you know whether people hike up Bald
3 Mountain in the winter?

4 A. I imagine that there may be some cadets that
5 like to hike up there. But it's not the
6 norm, from everything that I've seen or
7 talked to folks about. There's a severe
8 safety issue.

9 Q. Do you know if that -- whether people hike up
10 Goodhue Hill in winters?

11 A. I would say the same thing.

12 Q. Do you know whether ice fishing occurs at
13 Willard Pond?

14 A. No, I do not. Again, if it does, numbers
15 would be limited. They have huts. They
16 wouldn't be seeing the project, anyway.

17 Q. Going back to your prefilled testimony at
18 Pages 11 and 12, you mentioned -- you seem to
19 contrast Willard Pond with a campground. I'm
20 looking at Line 6 on Page 12 where you state,
21 "None of the resources identified by
22 Ms. Vissering as having significant impacts
23 are public campgrounds or other resource
24 types that would have views of the project

1 during the course of an entire year or time
2 of day."

3 Are you referring to Greenfield State
4 Park as the campground?

5 A. No, not necessarily.

6 Q. Are there other public campgrounds that you
7 looked at?

8 A. No. We didn't look at many campgrounds.
9 It's just a general statement in comparison.

10 Q. Did you visit Greenfield State Park as part
11 of this -- as part of your study?

12 (Witness reviews document.)

13 A. Yes.

14 Q. Okay. And you -- Lines 6, 7 and 8 on that
15 page indicate that -- you're saying the
16 public campgrounds would have views and, I
17 guess, therefore, be used by the public
18 during the course of an entire year?

19 A. Again, we didn't make that reference to a
20 particular park in New Hampshire. It was a
21 comparison. I do know some public
22 campgrounds, even in parks, do have camping
23 available year-round. This line was not
24 necessarily meant towards a particular park.

1 It was just --

2 Q. A generic?

3 A. -- a comparison.

4 Q. Sorry to interrupt.

5 A. Yeah.

6 Q. A generic comparison that in maybe some parts
7 of the country it would be applicable. In
8 New Hampshire, it wouldn't.

9 A. Not necessarily.

10 Q. Looking at -- still at Page 12 of your
11 supplemental testimony, you state that the
12 number of annual visitors to -- I'll just
13 read it.

14 Line 16, "The number of annual visitors
15 to the resources that Ms. Vissering believes
16 will have a significant impact from the
17 project appears to be low." Do you have a
18 number?

19 A. No. I had researched that. Couldn't find a
20 number. It's based on observations. And
21 it's also -- continuing on, I even said here,
22 "While specific visitation numbers from
23 Willard Pond and Bald Mountain are not
24 available, the number of visitations to each

1 site is likely to be limited and may be far
2 less than the number of visitations to sites
3 such as state parks and other resources
4 designated as having state or national
5 significance.

6 Q. Okay. So you're not sure how many people use
7 it in the winter?

8 A. No.

9 Q. Now, Greenfield State Park that I just
10 mentioned, that's a recreational state park
11 that you visited; is that right?

12 A. One of my guys did, yes.

13 Q. And Greenfield State Park has a campground?

14 A. To my understanding, yes.

15 Q. To your understanding, does it have swimming?

16 A. I'm assuming, since there's a pond there.

17 Q. Does it have paved roads?

18 A. That, I do not know.

19 Q. Do you have any idea?

20 A. No. Like I said, I was not there. I had one
21 of my guys go.

22 Q. Is any of that information from your guy
23 included in your report?

24 (Witness reviews document.)

1 Q. Actually, I'm sorry, you don't need to scour
2 your report for references to Greenfield
3 State Park, unless there's a specific part
4 that you are going to.

5 A. Well, there is a section that describes
6 Greenfield State Park based on the simulation
7 that was completed. It doesn't give the
8 level that you're talking about, in terms of
9 paved roads or non-paved roads. In my
10 experience, paved roads and non-paved roads
11 are in numerous state parks. So --

12 Q. So, assuming that Greenfield State Park has
13 paved roads, out-buildings, camping, an
14 established campground, would you expect that
15 some people would prefer to visit an
16 undeveloped place such as Willard Pond or the
17 Willard Pond Sanctuary?

18 A. I'm sorry. Repeat that.

19 Q. Assuming that Greenfield State Park --

20 A. Yeah.

21 Q. -- has paved roads, established campground,
22 out-buildings, perhaps a beach area, would
23 you expect that some people would choose to
24 go to an undeveloped place such as Willard

1 Pond?

2 A. I can't make that opinion on many people. I
3 know for myself it wouldn't matter.

4 Q. Some people might prefer to go to Willard
5 Pond. Would you agree with that?

6 A. And some people may prefer to go to
7 Greenfield State Park.

8 Q. Agreed. Are you aware that the Willard Pond
9 Sanctuary is Audubon's largest preserve?

10 A. Yes.

11 Q. That Willard Pond and Bald Mountain are
12 featured in many books and guides on hiking
13 and boating in New Hampshire?

14 A. I have seen a few. I wouldn't characterize
15 what I have seen as "many," though.

16 Q. But you've seen it referenced?

17 A. I've seen some, yes.

18 Q. How many books have you looked at?

19 A. Online books, just a handful, two or three.

20 Q. In two or three you've seen it?

21 A. I've seen them referenced, yeah.

22 Q. Have you read the testimony of Francie Von
23 Mertens?

24 A. I don't think I have.

1 (Witness reviews document.)

2 A. No, I have not.

3 Q. So you have not read Francie Von Mertens?

4 MS. GEIGER: I'm going to
5 object to that. He just answered the
6 question.

7 MS. BAILEY: Did you not hear
8 the answer?

9 MR. REIMERS: I did not.

10 MS. BAILEY: You can tell him
11 what you said.

12 A. No, I have not.

13 BY MR. REIMERS:

14 Q. Thank you.

15 Would you agree that the Willard Pond
16 Sanctuary offers a number of trails as well
17 as both boating and hiking?

18 A. It offers a variety of hiking trails,
19 non-motorized boating, yes.

20 Q. Would you agree that a pond that provides
21 these recreational opportunities and is
22 surrounded by entirely undeveloped land is a
23 unique experience? Visiting this is a unique
24 experience?

1 A. In some settings, yes. However, in the state
2 of New Hampshire and the northeast, I've seen
3 many.

4 Q. Many what?

5 A. Similar locations.

6 Q. Going back to your supplemental testimony --
7 I'm sorry. Hold on.

8 Actually, staying on Page 14, where you
9 were -- I spoke to you about this question
10 earlier on, where you were asked whether
11 Ms. Vissering's VIA conclusion, that certain
12 vantage points are highly sensitive, is
13 subjective and does not consider all relevant
14 factors. You critiqued Ms. Vissering's VIA
15 on Willard Pond -- her description on Willard
16 Pond and Bald Mountain, and then you stated
17 on Line 16, "In drawing these conclusions,
18 the Vissering VIA makes a personal judgment
19 based on perceived quality of the view."

20 If there is a natural setting -- if
21 there is a natural setting, isn't concluding
22 that a visitor has an expectation of a
23 natural setting -- is that a personal
24 judgment?

1 MS. GEIGER: I'm going to
2 object to the question. He didn't read the
3 whole sentence, and I think it's unfair to
4 ask this witness to give a response to a
5 question that doesn't contain a whole
6 sentence of the phrase or the excerpt that
7 he's referring to.

8 MS. BAILEY: All right.

9 MR. REIMERS: I will move on.

10 MS. BAILEY: Okay. Thank you.

11 BY MR. REIMERS:

12 Q. Going to Page 15 of your supplemental
13 testimony, on Line 3 you start a sentence,
14 "Resources of statewide significance are of
15 greater aesthetic significance by virtue of
16 their preservation by a governmental agency
17 for benefit of the State's citizens."

18 So, categorically, if a resource is
19 preserved by a government agency, it has a
20 greater aesthetic significance?

21 A. Yes.

22 Q. It is impossible for a resource owned by a
23 conservation organization, non-governmental
24 agency, to have a statewide significance

1 aesthetically?

2 A. "Statewide significance," there's a different
3 definition for that. Statewide significant
4 is protected by law or a legislative body for
5 the importance of the state's residents. So,
6 yes, it does -- in terms of a hierarchy, is
7 more than a not-for-profit organization
8 owning a parcel of land or sanctuary.

9 Q. Are you aware that Willard Pond is a Great
10 Lake owned by the State?

11 A. For fishing, yes.

12 Q. That the pond is owned by the State?

13 A. Yes, for fishing. Yes.

14 Q. Are you aware that the State, meaning Fish
15 and Game, maintains public water access at
16 Willard Pond?

17 A. So that way they can get their trout and
18 other fish in there, yes.

19 Q. Are you aware that the State invests federal
20 money to conserve land in the Willard Pond
21 area?

22 A. They also submit federal money to keep up the
23 roadways, too.

24 Q. Are you aware that the Department of

1 Environmental Services in New Hampshire
2 ranked Willard Pond as one of the clearest
3 lakes in New Hampshire in 2011?

4 A. It's not owned by that state agency, though.

5 Q. I didn't ask about ownership. I asked
6 whether you knew that they had ranked it.

7 A. Ranking it, no, I did not.

8 Q. I just wanted to clarify. When I asked you
9 whether you're aware that Fish and Game
10 maintains public water access at Willard
11 Pond, you do understand that it's public
12 access, not just for Fish and Game?

13 A. Yeah.

14 My apologies if I cough into the
15 microphone. Just let me know if I blow out
16 your eardrums.

17 Q. Looking at your report, your VIA, which is
18 Attachment 9A to the Application, on Page 19
19 you discuss compatibility with regional
20 landscape patterns. And I just want to draw
21 your attention to the bottom one on that
22 page, which is Texture.

23 A. Hmm-hmm.

24 Q. And you state, "Tubular-style monopole towers

1 have been specifically selected, instead of
2 skeletal or lattice frame towers, to minimize
3 textural contrast and provide a more simple,
4 visually appealing form. So the tubular
5 style selection was an aesthetic decision?

6 (Witness reviews document.)

7 A. The tubular style had become the preferred
8 because of its simplistic form instead of a
9 lattice tower.

10 Q. Did the Applicant consider lattice towers, as
11 far as you know?

12 A. Not that I know.

13 Q. In your supplemental testimony, I believe
14 it's Pages 5 and 6, you state that you had
15 gone back and looked at the effects on
16 Pitcher Mountain.

17 A. What page was that again? I'm sorry.

18 Q. I believe it's Page 5 and 6 --

19 A. Sure.

20 Q. -- of your supplemental.

21 (Witness reviews document.)

22 Q. Are you there?

23 A. Almost. Okay.

24 Q. Actually on Page 6, Line 2, you state, "In

1 addition, an existing wind farm is clearly
2 visible to the north from the Pitcher
3 Mountain summit." Do you know what wind farm
4 that is?

5 A. I think it's Lempster.

6 Q. Okay. Do you know the distance from Pitcher
7 Mountain to the wind farm in Lempster?

8 A. No, I do not. It is clearly visible, though,
9 so it can't be all too far.

10 Q. Would you believe that it's about 10 miles?

11 A. Could be.

12 Q. But it's clearly visible.

13 A. Okay.

14 Q. Well, I'm asking you that. It is clearly
15 visible?

16 A. Okay.

17 Q. Your VIA used only a 5-mile viewshed.

18 A. Yes.

19 Q. But a wind farm 10 miles away is still
20 clearly visible from a mountaintop?

21 A. Could be.

22 Q. You also say on Page 6 of your supplemental,
23 that since there are -- since they are not
24 seen in the same view, meaning the Lempster

1 wind project and the Antrim Wind project,
2 that there would be no cumulative impacts.

3 A. Yes, that's what's in there.

4 Q. Okay. Is this your definition of "cumulative
5 impacts," if you can't see them both in the
6 same view?

7 A. Typically, cumulative impacts, you wouldn't
8 have to turn 180 degrees in order to see the
9 other project. Usually they're much closer
10 or within one angle or view. So if there was
11 two projects to the north, that may end up
12 being more of a cumulative issue than if you
13 have to turn 180 around.

14 Q. Your panoramic vision is generally about
15 180 degrees. Would you agree with that?

16 A. More or less, 120 to 150-ish.

17 Q. More or less. So if you're standing on the
18 top of Pitcher Mountain, and both wind
19 farms -- you know, the Antrim Wind Farm
20 exists -- it sounds to me like you can't turn
21 in any direction and not have a wind farm in
22 your panoramic vision. Is that correct?

23 A. Well, let's put it this way: If you're
24 looking to the east and you've got a wind

1 farm to your immediate right, and immediate
2 to the left you're seeing it out of the side
3 of your eyes, you probably aren't going to
4 comprehend what you're seeing. Because I'm
5 holding up my fingers right now, and, you
6 know, not -- I see something. But 10 miles
7 away, you probably wouldn't perceive what it
8 is.

9 Q. But 10 miles away -- 10 miles away was for
10 the Lempster one.

11 A. No. One over here could be 6 miles. This
12 one over here is going to be 10. You're
13 still going to have that issue.

14 Q. So you wouldn't agree that seeing a wind farm
15 in two out of four compass directions
16 constitutes cumulative impact?

17 A. I would not consider this project and the
18 Lempster project to have a cumulative impact.

19 Q. In your supplemental on Page 6, you discuss
20 Powder Mill Pond. And you note that the
21 turbines will appear, quote, small in size;
22 yet, you just stated that the wind farm
23 10 miles away is clearly visible.

24 A. I think it could still be small in size.

1 Q. And clearly visible?

2 A. Well, there's two factors. To get into it a
3 little bit more here, clearly visible -- if
4 you're looking at a white turbine against a
5 white sky, it's not going to be as visible.
6 It all depends on the contrast between the
7 turbine and the background.

8 Up at Pitcher Hill there was a contrast
9 where they were clearly visible. So it
10 really depends on time of day, atmospheric
11 conditions, et cetera.

12 Q. On Page 8, getting back to Willard Pond, the
13 question was whether -- well, I'll read it in
14 its entirety.

15 "If there is a potential visual impact
16 to a receptor such as Willard Pond, why have
17 you concluded that the project would not have
18 an unreasonable adverse impact?"

19 I think your response was that, overall,
20 there is a limited visibility within the
21 entire study area. Is that your conclusion?

22 A. That was one of the items that I had
23 mentioned.

24 Q. Okay. And so, because there was, in general,

1 a limited visibility within the study area,
2 you concluded that there was not an
3 unreasonable adverse impact; is that right?

4 A. To the project area.

5 Q. Right. Couldn't one make the same argument
6 for most of New England, with New England
7 being as wooded as it is?

8 A. I haven't analyzed such a thing, so I can't
9 make a comment on that.

10 Q. If you are assessing visual impacts, isn't
11 the location where people gather to recreate
12 places that become important to examine in
13 more detail?

14 A. Yes. The visual study did focus on places
15 where people would gather.

16 Q. And can you show me in your report where you
17 looked in detail at Willard Pond and the
18 specific attributes of the pond?

19 A. Again, that table that had been mentioned did
20 do it. We did not analyze any specific
21 impacts. That's the difference between
22 looking at the project as a whole and also
23 trying to determine impact to a resource.

24 Q. Okay. In your supplemental testimony on

1 Page 11, you state that determining what
2 constitutes an unreasonable adverse impact is
3 more than a simple numbers game. Isn't your
4 conclusion based mostly on the fact that the
5 project would not be visible for 95 percent
6 of the surrounding area?

7 A. No, that was only one of the criteria I had
8 mentioned.

9 Q. On Page 9 of your supplemental testimony, you
10 stated that Ms. Vissering emphasized a
11 limited number of places where the project
12 would be visible and ignore -- I'm sorry.
13 Strike that.

14 The question was put to you: Please
15 explain the basis for your disagreement with
16 Ms. Vissering's findings. I'm on Page 9 at
17 Line 20 -- well, that was 18. You said,
18 "There are several reasons for my opinion.
19 These include the Vissering VIA places
20 emphasis on a limited number of places where
21 the project would be visible and ignores the
22 vast majority of the study area where the
23 project will not be visible."

24 The more forest in an area, wouldn't

1 that make open areas with a view to be more
2 highly valued?

3 A. Not necessarily. If you're valuing the
4 forested land, you have the opposite
5 considerations.

6 Q. You wouldn't agree that the open areas --
7 that open areas in a generally forested area
8 aren't more visually sensitive?

9 A. Might not be.

10 Q. Would you agree that in a generally forested
11 area, places that have open views are places
12 that are visited by people to get away, to
13 enjoy the view, to spend some time?

14 A. People do like to go and take a look, yes.

15 Q. And if it's a generally forested area, aren't
16 those open spaces -- you don't believe that
17 those are more highly valued?

18 A. No, not necessarily. For instance, I'd like
19 to see a nice waterfall that's off in a
20 vegetated area. So there are different
21 aspects that people enjoy.

22 Q. On Page 10 of your supplemental testimony,
23 you state that the Vissering VIA categorizes
24 views as being minimal, moderate or

1 significant without an objective basis. What
2 do you consider an objective basis?

3 A. Where's that?

4 Q. That is Page 10, Lines 1 and 2.

5 (Witness reviews document.)

6 A. Page 10... based on the reading of
7 Vissering's VIA, it sounded more like it's a
8 subjective description.

9 An objective opinion would include many
10 other things: How many people come, what are
11 the uses. There's a whole laundry list in
12 order, so that way that methodology could be
13 repeated.

14 I couldn't repeat Ms. Vissering's
15 methodology, in terms of trying to get a
16 significant, moderate or minimal impact to
17 test her theories.

18 Q. On the next page of your supplemental
19 testimony, you state that determining an
20 unreasonable adverse impact is more than a
21 simple numbers game. So what objective basis
22 do you use for determining the impacts to
23 areas such as Willard Pond?

24 A. Now, where's that?

1 Q. That is on Page 11, on Lines 5 and 6.

2 MS. GEIGER: I'm going to
3 object to this question. I think we've
4 covered this ground before. And even if we
5 haven't, I think that the answer to the
6 question is in the prefiled testimony at the
7 bottom or middle of Page 11, onto the next
8 page, several bulleted items there.

9 So, I mean, we could have the
10 witness read that into the record, if that --
11 but I just think that we are covering ground
12 we've covered before, and this is unduly
13 repetitious information that is excludable
14 under 541-A.

15 MR. REIMERS: We're trying to
16 find out -- I'm trying to find out what his
17 objective basis is. He says that
18 Ms. Vissering's use of "minimal," "moderate"
19 or "significant" is without objective basis.
20 And he also -- but he also says that making
21 this determination is more than a simple
22 numbers game. So I'm wondering what his
23 objective basis is.

24 MS. GEIGER: And I think the

1 answer to that question starts at line 9 on
2 Page 11 of the supplemental testimony, and it
3 says, "Examples of additional questions that
4 should be considered in further understanding
5 the resource and defining or determining
6 impact are the following..." and the answer
7 continues to the bottom of that page and onto
8 the entire next page.

9 So I think the answer has been
10 provided in writing. I don't know what more
11 we can gain by having this witness talk about
12 it again here on the record. I think if
13 there's a cross-examination question about
14 what he said in the testimony, that's fair
15 game. But at this rate, we could be here for
16 a long time.

17 MR. REIMERS: I'll move on. I
18 just have one related question.

19 BY MR. REIMERS:

20 Q. So the objective -- or the factors in your
21 answer -- you know, how the resource is used
22 by an individual, when the resource is used,
23 how many and how much of the turbine is
24 visible -- all of those that you gave in your

1 testimony, those are all objective bases?

2 A. It's all factual sort of information, yes.

3 Q. None of it's subjective?

4 A. How is the resource used? There's studies on
5 that. When is the resource used? There's --
6 that information could be gained. How
7 many -- how much of the turbine is visible?
8 That can be determined, too.

9 (Court reporter interjects.)

10 A. How often is the resource visited, number of
11 users? It's all factual information.

12 Q. Okay. It's an objective. I understand your
13 answer.

14 On Page 10 you state, "The Vissering VIA
15 draws its conclusions on project visibility
16 from receptors that have not been fully
17 evaluated." In what other ways should
18 Ms. Vissering have evaluated the sites?

19 A. Well, if we're going to talk about ponds that
20 are 5 miles away and say that's part of a --
21 whatever it was -- moderate impact, I would
22 suspect that the pond would have been
23 visited, photographs would have been taken,
24 maybe a simulation.

1 I did provide an example in here, where
2 one pond, even though it showed four turbines
3 visible, only one nacelle would be visible
4 and three sets of blades would be visible.
5 So that's a lot different than seeing an
6 entire tower, nacelle and turbine blade. So
7 there's more of an analysis that could have
8 been done at each of the locations.

9 Q. In your report, do you describe from each
10 location how much and what parts of the
11 turbine is visible?

12 A. No. However, I did not render a visibility
13 impact. And if you are, you should know
14 these sort of answers.

15 Q. You stated also on Page 10, "In drawing
16 conclusions, the Vissering VIA ignores the
17 results of the Saratoga VIA and relies on
18 potential views from 11 assorted vantage
19 points."

20 Would you agree that the vantage points
21 identified by Ms. Vissering should be
22 considered sensitive view points?

23 A. Well, there are view points that I've already
24 identified.

1 Q. Would you consider them sensitive view
2 points?

3 A. They were resources of interest, yes.

4 Q. Would you consider them important to the way
5 people experience the surrounding area?

6 A. Yes, they are community-type resources as
7 compared to statewide resources.

8 Q. I want to ask you about another document
9 authored by Saratoga Associates. It is
10 the -- and the Shadow Flicker Technical
11 Memorandum. I'm sorry. I don't know what
12 exhibit number that is.

13 MR. IACOPINO: Give me one
14 minute. I'll get it for everybody.

15 MR. REIMERS: Thank you.

16 MR. IACOPINO: That would be
17 AWE 3, Appendix 13B. If you're in the
18 electronic version of the exhibit, it's
19 Document 26.

20 BY MR. REIMERS:

21 Q. Mr. Guariglia, you didn't evaluate the impact
22 of shadow flicker on wildlife, did you?

23 A. No.

24 Q. Did you evaluate the impact of shadow flicker

1 in the forest?

2 A. Typically, shadow -- shadow flicker does not
3 occur through dense vegetation.

4 Q. Okay. So that would be a no?

5 A. I did not analyze it, but there is an
6 assumption in my report that states this.

7 Q. Isn't it possible that shadow flicker would
8 occur from light passing through the forest,
9 the same as light through a window?

10 A. Typically not. Again, the trees -- I'm
11 assuming you're saying if you're standing in
12 a forest.

13 Q. Correct, or wildlife. But, yes, if you're
14 standing in the forest.

15 A. First off, I've never heard of any
16 shadow-flicker issues according to wildlife,
17 so that's not an issue.

18 If you're standing in the middle of the
19 forest and you have a full canopy above you,
20 the shadows and the flickers should not reach
21 the ground. If it does, it should be
22 diffused enough where you're not really going
23 to get a flicker effect. A flicker effect is
24 determined -- is defined in the report as --

1 I don't think I need to read it. But wood
2 shadow flicker is already defined in the
3 report.

4 It also states that there is... let's
5 see. It also states someplace -- and I'm
6 sorry, I don't know the page number. But it
7 also mentions that ambient light on the
8 outside -- or on the outdoors also tends to
9 help mitigate because of the ambient light is
10 different outside than it is inside the
11 house.

12 Q. Okay. You stated that that was assuming with
13 a full canopy. Did I hear you use the words
14 "full canopy"?

15 A. Full canopy. Also -- yes.

16 Q. Okay. Is the entire sanctuary under a full
17 canopy?

18 A. The sanctuary is outside the study area of
19 the shadow flicker, I believe.

20 Q. You note on page -- in your report, receptor
21 windows, that it was conservatively assumed
22 that every receptor had windows, one meter by
23 one meter, and that these
24 one-meter-by-one-meter windows were one meter

1 above the ground?

2 A. All the way around the house.

3 Q. Is it possible that shadow flicker -- isn't
4 it possible that shadow flicker could come
5 through the forest in a similar opening,
6 similar in that, you know, rays of light
7 penetrate the forest and the woods all the
8 time? Is that true?

9 A. I have not heard of that being an issue.
10 Again, as I had mentioned, I'm making an
11 assumption here, is that if you're talking
12 about Willard Pond area, that is outside the
13 study area, so it should not be affected.

14 Q. Willard Pond was outside the shadow-flicker
15 area?

16 A. And it's also to the south. So shadow
17 flicker does not tend to occur south of the
18 turbine.

19 Q. So are you saying that... would shadow
20 flicker -- could shadow flicker affect people
21 or animals using -- or that are outside of
22 the sanctuary in -- that are outside?

23 A. Again, the sanctuary is not within the study
24 area.

1 Q. I'm asking about people or animals who are
2 outside, outdoors and outside of the
3 sanctuary area.

4 A. I guess the question is where.

5 Q. Within the study area.

6 A. Well, I think that's already been addressed
7 in the report. And I've already mentioned --

8 Q. You mentioned that shadow flicker is
9 especially likely early in the morning and
10 late afternoon?

11 A. Yes.

12 Q. Isn't it possible that there could be some of
13 effects of shadow flicker on wildlife, even
14 though it's not required currently to look
15 at -- into it?

16 A. I have never heard of an issue. I've
17 researched a lot of reports. Wildlife has
18 never been raised as an issue.

19 Q. I have no further questions. Thank you very
20 much. Thank you, Mr. Guariglia.

21 A. Thank you.

22 MS. BAILEY: Thank you. It's
23 been about an hour and a half. Does the
24 reporter need a break?

1 (Discussion off the record.)

2 MS. BAILEY: Why don't we do
3 Mr. Block because he said he had about 20
4 minutes. Why don't we let Mr. Block do his
5 cross-examination.

6 MS. LONGGOOD: Excuse me. I
7 was late. I'm sorry. But I would like to
8 have an opportunity at some point to ask
9 questions out of order, if that would be
10 permitted. I apologize.

11 MS. BAILEY: Okay. And can
12 you give me an estimate about time?

13 MS. LONGGOOD: I would say
14 maybe 10 minutes.

15 MS. BAILEY: Okay. Why don't
16 you go ahead, Ms. Longgood.

17 MS. LONGGOOD: Okay. Thank
18 you very much.

19 CROSS-EXAMINATION

20 BY MS. LONGGOOD:

21 Q. Again, for folks who were here yesterday, I
22 went up to the map and showed people where my
23 house is located. I'm on 156 Salmon Brook
24 Road, very close to the project site. Four

1 turbines are within one mile of my home.

2 I do see the visual simulation of the
3 turbine on Salmon Brook Road where the power
4 lines intersect the road. Could you please
5 tell me what number turbine that is?

6 (Witness reviews document.)

7 MS. GEIGER: Ms. Longgood,
8 could you please direct the witness to an
9 exhibit or map?

10 MS. LONGGOOD: It was in the
11 supplemental photo simulations testimony,
12 A4B. I had it out just a short while ago.

13 A. You're talking about -- this is the Salmon
14 Brook Road simulation, Viewpoint 26?

15 BY MS. LONGGOOD:

16 Q. Yes, that's correct. Thank you.

17 MR. IACOPINO: Mr. Guariglia,
18 is that in your VIA or --

19 THE WITNESS: Yes, it is.

20 MR. IACOPINO: Okay. So that
21 would be Appendix 9A. And that's in AWE 3,
22 and it's electronic Document 9 in that
23 exhibit.

24 A. You looking for the turbine numbers?

1 BY MS. LONGGOOD:

2 Q. I'm curious, what number turbine that is out
3 of the 10?

4 A. It looks like, just a quick look, Turbines 3,
5 4 and 5.

6 Q. Okay.

7 MR. IACOPINO: Which page --

8 BY MS. LONGGGOOD:

9 Q. I only saw one turbine in the picture that I
10 looked at, but --

11 MR. IACOPINO: Which figure
12 are we talking about?

13 THE WITNESS: The simulation
14 is Figure A4B.

15 MR. IACOPINO: Thank you.

16 A. And then, based on Figure A1, which shows the
17 cone of visions, it looks like 3, 4 and 5.
18 There are actually three turbines viewed from
19 that road -- from that location.

20 BY MS. LONGGOOD:

21 Q. Okay. Are you able to, although you didn't
22 use my location, but give me an idea of how
23 visible the turbines will be from my
24 residence. My home is 800 feet into the

1 forest, situated looking out onto the ridge,
2 are where all the -- the windows are rotated
3 that way.

4 A. Honestly, I don't know where you live or the
5 conditions of the house, so it would be kind
6 of hard for me to tell at this point.

7 Q. Quite likely, I could see most all of the
8 turbines, being in such close proximity?

9 A. Well, if you can see the ridgeline --

10 Q. I can.

11 A. -- then chances are you're going to see a
12 number of them.

13 Q. Can you please explain to me on the map about
14 shadow flicker? Pardon my ignorance. This
15 is all new to me. But again, I fear the
16 major impact that this entire project will
17 have on my residence, my life. And I suspect
18 if I can see the turbines that -- and I am in
19 that close proximity, that shadow flicker
20 will affect me and my residence. In
21 layperson's terms, please.

22 A. You're west of the road; right? You're on
23 the west side of the road?

24 MS. GEIGER: Ms. Longgood, it

1 might be helpful if you came up to the map --

2 MS. LONGGOOD: You want me to
3 come up to the map?

4 MS. GEIGER: Yeah, because Mr.
5 Guariglia was not here yesterday, so I'm not
6 sure he understands.

7 MS. LONGGOOD: I apologize.
8 I'm not very well versed in --

9 MS. GEIGER: That's okay.
10 Take your time.

11 MS. LONGGOOD: Here's Salmon
12 Brook Road. I'm trying to locate my -- this
13 map is not --

14 MR. IACOPINO: Yes, but
15 Ms. Longgood, when you speak, the reporter
16 has to take your words.

17 MS. BAILEY: This can be off
18 the record.

19 (Discussion off the record.)

20 MS. BAILEY: We're back on the
21 record.

22 A. All right. That way I can get to microphone
23 and pull this down.

24 So on Exhibit 39, Ms. Longgood lives

1 south of Route 9 along Salmon Brook Road, on
2 the east side of Salmon Brook Road, somewhere
3 in the proximity. I think you, Ms. Longgood,
4 said about three-quarters of a mile to a
5 mile?

6 BY MS. LONGGOOD:

7 Q. I'm two miles up the road.

8 A. I mean -- I'm sorry -- from the turbines.

9 Q. Three eight hundred feet from the nearest
10 turbine, Turbine No. 4.

11 A. Okay. So it would be Turbine No. 4 -- west
12 of Turbine No. 4.

13 So, actually, I hate to ask this, but do
14 we mind if she comes up and looked at one
15 more map for me?

16 MS. BAILEY: That would be
17 fine, if that's okay with you, Ms. Longgood.

18 MS. LONGGOOD: I'll try. But
19 my map-reading skills obviously are not up to
20 par either, so...

21 MS. BAILEY: You're doing just
22 fine.

23 (Discussion off the record.)

24 MS. BAILEY: Okay. We're back

1 on the record.

2 A. My apologies. I just wanted to get a little
3 more information based on a different map.
4 Talking through with Ms. Longgood, it looks
5 like she is outside the study area of the
6 shadow flicker map, which is Figure 2 in the
7 Shadow-Flicker Analysis.

8 Typically, shadow flicker occurs within
9 10 times of the rotor diameter. That's when
10 there is potential for shadow flicker inside
11 the house. Anything beyond 10 rotor
12 diameters, you still may get shadow.
13 However, it's diffused shadow, so it wouldn't
14 seem like it's chopping or entering your
15 house at such an intensity that would cause
16 shadow flicker.

17 So based on this map, you are outside
18 and you shouldn't experience what is called
19 "shadow flicker."

20 BY MS. LONGGOOD:

21 Q. But I'll get some chopping or some shadowing
22 or something such as that?

23 A. You just may get a little sweep because
24 you're at the tail end. You're just past the

1 study area, so you may get some shadows that
2 kind of sweep across your land. But it's not
3 going to be anything of intensity, as long as
4 we have the right location on the map.

5 Q. It all gives me pause for concern. But,
6 again, the lighting, having the turbines
7 visible from my home, where I live, there is
8 absolutely no nighttime light. I know other
9 parts you can see the ambient light from the
10 Crotched Mountain Ski and Ride area.

11 But if I understand it correctly, the
12 radar-activated lights have not been approved
13 yet, or they're in the process or --

14 A. My understanding, it's being reviewed.

15 Q. It's being reviewed. And those will light
16 and flash when an airplane goes over; is that
17 correct?

18 A. My understanding of it -- and there may be
19 more than one different technology out
20 there -- is that, as an airplane gets close,
21 I don't know how close it is, the light will
22 ramp up in terms of brightness, and that way
23 it's not a sudden flash on. So, you know, it
24 would just be lighter until it gets to a

1 certain intensity. It will stay on until the
2 airplane leaves the air space from the
3 turbines, and I think it's just supposed to
4 turn off after that point.

5 Q. Thank you. That's certainly -- all I'm
6 learning is certainly going to alter my
7 experience at my home.

8 Thank you.

9 MS. BAILEY: Okay. Thank you.

10 Mr. Block.

11 CROSS-EXAMINATION

12 BY MR. BLOCK:

13 Q. Thank you. I'd like to start with just a
14 couple general, kind of general questions.

15 Regarding your Visual Impact Assessment,
16 Appendix 9A, you mentioned earlier the basis
17 of your report. Can you help me -- can you
18 just define or explain what you mean by the
19 term "basis"? Is that the methodology or the
20 purpose of your report?

21 A. No, it's the purpose of the report.

22 Q. Can you point me to any specific statements
23 in the report that describe that? I couldn't
24 find something that described what the

1 purpose of the report was. Maybe I missed
2 it. And I just wonder if you can point me to
3 a paragraph or so.

4 A. Sure. Page 1 of the visual study, under
5 Methodology, 1.1, first paragraph, last
6 sentence. "This process provides a practical
7 guide so decision-makers can understand the
8 potential visual impact."

9 So it is -- the basis of the report is
10 to provide that information for folks to make
11 that determination.

12 Q. Okay. Would you consider this equivalent in
13 that way to like a scientific study or paper,
14 or similar at least?

15 A. I've never thought of that.

16 Q. I'm just wondering. I hadn't either.

17 A. Scientific papers got -- are much harder to
18 read.

19 Q. I agree with that. It just seems like
20 there's a similarity, in that there's
21 information gathered and then conclusions
22 developed. And the purpose of a scientific
23 paper is to get that out.

24 A. I mean, it is an analysis. I mean, we

1 collect the data. We provide the
2 information. We provide the exhibits and
3 then a summary.

4 Q. All right. I understand that.

5 Most papers that I've read usually have
6 a hypothesis they reach toward the end. Many
7 papers, I think, that hypothesis exists, and
8 then the purpose of the paper is to support
9 that and show how that hypothesis was
10 reached.

11 Did you have any hypothesis in mind
12 before you wrote this document?

13 A. Before I wrote this?

14 Q. Before you wrote it.

15 A. No.

16 Q. So the hypothesis was a conclusion of your --
17 of what you wrote in here?

18 A. The summary.

19 Q. The summary?

20 A. The Summary section is based on the
21 information-gathering.

22 Q. Okay. Again, speaking very generally, can
23 you tell me -- maybe it's specifically. I'm
24 just inquiring about you personally -- can

1 you name one place that you might visit in
2 order to enjoy the view?

3 A. Anywhere?

4 Q. Anyplace, yeah.

5 A. I'm a big fan of the Caribbean. So I love
6 going down to Barbados.

7 Q. A specific place there, just describe in 10
8 words or less what the view is there.

9 A. Blue waters, palm trees.

10 Q. Okay.

11 A. Frozen cocktails.

12 Q. Sounds good.

13 [Laughter]

14 Q. Would you consider your opinion of that
15 objective or subjective?

16 A. I'm sorry. What's that?

17 Q. Would you consider that opinion objective or
18 subjective?

19 A. Well, that's my opinion, so it's more of a
20 subjective --

21 Q. Okay.

22 A. My opinion.

23 Q. So the follow-up question is this:

24 Therefore, do subjective, aesthetic opinions

1 have value in your opinion?

2 A. I think you need to recognize it for what --
3 for what it is, and you need to have more
4 objective information.

5 Q. So you don't think your subjective opinion
6 has value in any situation there?

7 A. My professional opinion may.

8 Q. I'm just asking your subjective opinion of
9 that view. Is there a value in there?

10 A. Everybody has a subjective opinion. And if
11 you listen to folks, there's usually
12 something of good interest.

13 Q. Okay. So does it have value, that subjective
14 opinion? Maybe to that person, does it
15 have --

16 A. To that person, sure.

17 Q. Could it have value in -- for that person to
18 communicate to somebody else?

19 It's just a simple question. Yes or no?
20 And there's no hook in this. I'm not trying
21 to get to any gotcha or anything. I just
22 want to know, is your subjective opinion --
23 do you think that should have value when you
24 discuss it to other people?

1 MR. ROTH: I would like to
2 point out for the record that the witness is
3 looking at his -- at the attorney for the
4 Applicant, waiting to see if she's going to
5 object, and he's not answering the question.

6 MR. IACOPINO: He also has a
7 big smile on his face, Mr. Roth, so why don't
8 we just --

9 Please answer the question,
10 sir.

11 A. Could you rephrase the question?

12 BY MR. BLOCK:

13 Q. Do you believe that your subjective opinion
14 should have value?

15 MS. GEIGER: About what topic?
16 Could I ask that? What are you asking about?
17 His subjective opinion about what?

18 MR. BLOCK: For instance, the
19 example I just asked, a place he likes to go
20 because of what he enjoys for the view.

21 A. On certain things, yes. However, let me just
22 say that the report is written to be as
23 objective as possible.

24

1 BY MR. BLOCK:

2 Q. All right. I wasn't asking about the report.
3 I was asking about your subjective opinion of
4 the palm trees and the blue water.

5 A. Sure.

6 Q. So you're saying, yes, it has value.

7 MS. BAILEY: Mr. Block, his
8 subjective opinion on the palm trees and the
9 blue water in the Caribbean has value in this
10 proceeding?

11 MR. BLOCK: I just want to
12 know, does he consider subjective opinions of
13 aesthetic views as having value?

14 MS. BAILEY: You got to relate
15 it to the proceeding.

16 MR. BLOCK: I didn't want to
17 get into this, but I feel like what I'm
18 hearing him saying is that only objective
19 opinions -- only objective studies have value
20 in determining aesthetics. And I'm a teacher
21 of visual arts and aesthetics, and I just
22 want to know, can subjective opinions of
23 aesthetics have value? It's a philosophical
24 question maybe.

1 MS. GEIGER: And I'm going to
2 object on the basis of relevance. I thought
3 the purpose here was to analyze facts and
4 draw conclusions of law from them. So I'm
5 not sure what a discussion of philosophy is
6 going to do to further the time that this
7 Committee is spending.

8 MR. ROTH: Madam Chair, I'd
9 like to be heard on this point. I think the
10 witness has himself, in his testimony and his
11 cross-examination, introduced this challenge
12 to whether subjective opinion is worth
13 considering in making a visual impacts
14 assessment. So his views on that issue are
15 directly germane, whether or not he relates
16 them directly to this particular project. I
17 think it's the basis for his conclusions,
18 such that it is -- I'm not even sure how far
19 he goes with it -- but his conclusion that
20 there's no impact on visual and aesthetic
21 values in the region. And so I think that's
22 directly relevant, and he should answer it.

23 I thought the way Mr. Block
24 just asked him a minute ago said it

1 perfectly. And I hope he remembers how to
2 say that again, because I understood the
3 question very well.

4 MS. BAILEY: If you can answer
5 the question, answer it. If you can't, say
6 you can't answer it.

7 A. Subjective opinions are fine; however, they
8 really need to be backed up with objective
9 facts. My subjective opinion may not be what
10 you agree to. However, if you have facts,
11 then maybe you can start understanding more;
12 you can have something to really grab a hold
13 of that's not somebody's feelings.

14 Q. All right. Well, that's not a yes or no
15 answer, but for the sake of efficiency, I
16 will move on.

17 Looking at your prefiled testimony,
18 which I think is AWE 102, which is part of
19 the combined testimony -- so I'm looking at
20 Page 6, which electronically is 62 of 269 --
21 on the very bottom of that page you talk
22 about, I guess, your viewshed map here and
23 how you arrived at your -- essentially this
24 point, the vegetative version of the viewshed

1 map.

2 A. Sure.

3 Q. And you use the screening effect of
4 vegetation was incorporated by adding 40 feet
5 to the height of those DEM grid cells that
6 are forested according to NLCD dataset. I'm
7 finally understanding that DEM is Digital
8 Elevation Model.

9 A. Correct.

10 Q. NLCD is National Land-Covered Dataset.

11 Can you tell me a little bit more about
12 this National Land-Covered Dataset. I assume
13 it's something you got online from the
14 federal government; is that correct?

15 A. Yes.

16 Q. Okay. Is it dated? Is there -- how recent
17 is that, I guess?

18 A. I know it's in the report.

19 (Witness reviews document.)

20 A. On Page 5 of the visual study, the NLCD
21 dataset is 2001.

22 Q. And do you know how often that is updated?

23 A. Not very often.

24 Q. Okay. Do you know if the federal government,

1 or whoever puts that together, do you know,
2 do they field-check that?

3 A. No, it's all by satellite imagery.

4 Q. Okay. By imagery.

5 In the last couple of days, I know we've
6 repeatedly heard a lot about frequent timber
7 harvest in the area, both on Tuttle Hill
8 and -- it's an economic factor in Antrim and
9 various other towns. Do you know if that is
10 taken into account in talking about this
11 mature vegetation?

12 A. Sure. Actually, on the next page, Page 6,
13 Verification of Viewshed Accuracy, second
14 paragraph, "To help determine" -- I guess
15 I'll just read the short paragraph.

16 MS. BAILEY: Excuse me. Are
17 you on Page 6 in your testimony or in the
18 report?

19 THE WITNESS: In the report,
20 visual study.

21 A. It states, To help determine the accuracy of
22 vegetation data used for viewshed
23 development, the NLCD dataset was overlaid on
24 one-foot colored digital orthophoto

1 quadrangles infrared aerial imagery, dated
2 2010, of the study area and reviewed for
3 consistency against the NLCD data. So we did
4 take that data. We got the most recent
5 aerials and did a check.

6 And continuing on with that paragraph,
7 it did note minor discrepancies.

8 BY MR. BLOCK:

9 Q. Okay. But you also conclude that it was
10 highly consistent, though, with the NLCD
11 overlay; is that correct?

12 A. With minor inconsistencies, yes.

13 Q. Okay. Did you personally do any field
14 checking?

15 A. On public roadways, yes.

16 Q. On public roadways or --

17 A. Yeah.

18 Q. Can you give me an idea of how extensive your
19 field checking was?

20 A. I drove numerous roads, stopped at numerous
21 locations. The viewshed map did seem to be
22 pretty accurate.

23 Q. I noticed in your supplemental you extended
24 your viewshed study to a 10-mile radius?

1 A. Yes.

2 Q. Did you do the same thing covering that
3 10-mile area?

4 A. No, I did not.

5 Q. Okay.

6 A. However, the same review process did occur.

7 Q. Page 12, I guess I'm going back now to
8 your -- on the original prefiled direct
9 testimony, Page 12 -- no. Actually, I want
10 to go to Page 10 on that. I'm sorry.

11 Line 9 and 10 says, "The vast majority
12 of the study area -- i.e. 94.7 percent --
13 will be screened from the project by
14 intervening landform and/or vegetation."

15 So in terms of that, can you tell me --
16 I'm assuming, then, your field check included
17 that. Did you drive to a number of
18 locations, essentially get out of the car and
19 look and see -- could you see Tuttle or
20 Willard Hills from there?

21 A. Yes.

22 Q. Okay. How confident are you that driving
23 around and looking at that, from close to
24 95 percent of the town, you could not see

1 perhaps the existing met tower, which is a
2 very -- at least a distinct feature right
3 now, which is clearly -- then you know you're
4 looking at Tuttle Hill when you see that?
5 How confident are you that 95 percent of the
6 town cannot see that?

7 A. Well, based on the assumptions and what I had
8 seen, fairly confident.

9 Q. Okay. I mean --

10 A. Just to add one more thing, though, to help
11 balance the whole thing as well, also
12 remember that the NLCD data did not also
13 include screening effects by vegetation -- or
14 by tree -- I'm sorry -- structures. So, like
15 in the village of Antrim, where there may be
16 visibility, those houses down there would
17 actually screen visibility.

18 So the NLCD data doesn't include that,
19 so it is a little over-conservative for that
20 issue. It also doesn't include hedgerows
21 that may also affect visibility.

22 Q. So there are other possible screens is what
23 you're saying?

24 A. Exactly.

1 Q. So -- now maybe I'm wrong, but when I
2 interpret what you're saying about this NLCD
3 data, is it essentially is putting a 40-foot
4 layer over almost everywhere --

5 A. No.

6 Q. -- of dense tree canopy?

7 A. Actually, there's different criteria in the
8 NLCD data. We look for the mature grid
9 cells. So we try to stay away from all the
10 scrub/shrub sort of vegetation and look for
11 those cells that are noted as being more
12 mature vegetation. So it's not just taking
13 the NLCD data and just blanketing the whole
14 area. There are different criteria within
15 that information.

16 Q. Okay. So, forest age -- when you talk about
17 "mature," I assume you're talking about
18 forest age at that point would be a factor;
19 is that correct?

20 A. I'm sorry?

21 Q. The age of a forest in a specific area might
22 be a factor? Because you talk about mature
23 vegetation, and that is an age assessment?

24 A. Essentially, yes.

1 Q. So, for instance, on the --

2 A. Height, height.

3 Q. Height.

4 A. Yeah. Because scrub/shrub could be mature,
5 too, but it's only going to be 10 feet.

6 Stuff like that we wouldn't include in our
7 analysis.

8 Q. I'm not a forester, so I don't know the
9 answer. But do you have any idea how mature
10 a forest then needs to be to be 40 feet tall
11 in general?

12 A. It all depends on the species. But I, too,
13 am not a forester.

14 Q. Okay. I have heard in the last few days that
15 the Tuttle/Willard area has been logged
16 fairly consistently on and off for a number
17 of decades now.

18 A. Sure. Uh-huh.

19 Q. Do you have any sense of how mature the
20 forests are up there, then, as a result?

21 A. Well, based on what I have seen, I mean, they
22 look to be a good size. So I would say that
23 they're, in the whole scheme of things,
24 fairly mature. I mean, as you know, trees

1 could reach hundreds of years old. So to say
2 they're that old, no. But they do have a
3 nice size to them that will screen visibility
4 towards the ridge.

5 Q. Even if the area has been logged within the
6 last 10, 20, 30, or 40 years; is that true?

7 A. Again, I'm not a forester to know how fast
8 things grow. I do know that different
9 species grow at different rates. I would
10 imagine something planted 20, 30, 40 years
11 ago would be a decent size.

12 Q. Do you know of any plantings that occurred up
13 on Tuttle Road ridge?

14 A. I'm sorry?

15 Q. Do you know of any plantings that have
16 occurred up there in terms of the forestry
17 operations?

18 A. No.

19 Q. Have you observed any up there?

20 A. I've heard that there were some logging, but
21 that's the south side.

22 Q. Okay. I'm curious, because your vegetative
23 viewshed map essentially shows that there are
24 almost -- if I look at that there, it's

1 essentially all white, except for maybe along
2 where the road is proposed. So it looks like
3 there's no turbines visible from anywhere up
4 along that ridge, essentially.

5 A. Well, not necessarily. Pointing to the map
6 of 39, there is visibility along the
7 ridgeline down in the vicinity east of 8,
8 east of 6, a little spot east of 4, west of
9 6, west of 3, west of 1. So it probably has
10 been picking up some of that recently logged.

11 Q. Okay. So the -- and what colors are -- you
12 know, it's kind of distant to me. But can
13 you describe what the colors are in those
14 areas for your color coding there?

15 A. Colors are 1 to 10, different spots.

16 Q. One to 10. Can you show me some areas on the
17 ridge where you show that 10 turbines would
18 be visible?

19 A. Ten.

20 Q. On the ridge itself I'm talking about.

21 A. Well, as far as the road itself, all through
22 here, all through there, a little up here.

23 Q. Okay. While we're on this subject, since
24 it's far away, earlier we talked about -- or

1 you talked about -- earlier you talked about
2 the view that I did from the so-called
3 blueberry field. Can you point to that again
4 on the map up on the high point? There looks
5 to be a patch of color up there. Can you
6 describe that?

7 A. Yeah, somewhere between one and four.

8 Q. One and four turbines. Okay.

9 The photographs I took up there, not
10 counting -- not even in regard to anything
11 I've imposed on there, in terms of potential
12 view, show Tuttle Hill all the way down to
13 Willard Mountain.

14 Is that consistent with what you're
15 saying there, that I would only see very few
16 turbines there if I can see all the way to
17 Willard Mountain from there?

18 A. Well, again, we didn't do a complete analysis
19 of your simulation. So I can't really give
20 you an opinion on the total number that would
21 be visible based on your location.

22 Q. Okay. I'm not -- actually, I'm not really
23 talking about my simulation. I'm talking
24 about the view from that hill. So your

1 viewshed says that, from the top of that hill
2 or the top of Windsor Mountain, I could only
3 see one or two turbines, maybe three, maybe
4 four.

5 A. Yes, according to the viewshed map.

6 Q. I assume there was no field checking to
7 verify that. I assume there is no --

8 A. Again, that was private property.

9 Q. Okay. I guess -- so a question I have about
10 your -- and I had it written down here
11 someplace.

12 On this viewshed map, other than the
13 identified recreation land, which I assume
14 were the large green patches, do you -- does
15 that map differentiate at all between public
16 and private land?

17 A. I'm sorry. Could you repeat that? I was
18 looking at your simulation.

19 Q. I'm sorry. Okay. Other than the large green
20 areas, which I understand are recreation
21 areas, does anything else in your map
22 differentiate between public and private
23 land?

24 A. Just the color coding on the maps.

1 Q. Can you be more specific? What do you mean
2 by "color coding"?

3 (Witness reviews document.)

4 A. Yes, in our viewshed maps, we do show a
5 variety of green conservation, public lands,
6 that sort of thing.

7 Q. You call that recreation, which I assume some
8 might be private, some might be public. But
9 I'm saying, other than that, is there any
10 differentiation on the viewsheds between
11 public and private ownership of land?

12 A. No.

13 Q. Okay. Does the ownership of the piece of
14 land, say public versus private, change the
15 viewshed characteristics of turbines on that
16 piece?

17 A. I'm sorry?

18 Q. Would the ownership -- or does the ownership
19 of a piece of land, let's say whether it's
20 public versus private, does that change --
21 have any effect or change on the viewshed
22 characteristics on that piece of land
23 physically?

24 A. No.

1 Q. Okay. We've heard talk about shadow flicker.
2 I don't want to go into that too much, but
3 I'd just like a little clarification.

4 I understand what you said about the 10
5 diameters. If the sun was behind a turbine,
6 and you were greater than 10 diameters, what
7 would the effect -- what might the effect be?
8 How do you describe --

9 A. Depends on where you're located. If you're
10 located to the north, you shouldn't see
11 anything.

12 Q. Well, if the sun is behind a turbine, but
13 you're greater than 10 diameters, can you
14 describe the effect?

15 A. Again, if you're to the north, sun is coming
16 from the south, which is going to be higher?
17 So, as shown on some of those typical
18 patterns, the potential shadow flicker is
19 very close to the turbine. It would not
20 extend a great distance. It wouldn't even
21 make it to the 10th time rotor diameter. If
22 you're to the east or west, that's when you
23 have the potential for shadow flicker. The
24 intensity is within 10 times rotor diameter

1 is where there are potential issues. Beyond
2 that, you'll probably see more of a sweeping
3 for relatively short distances. It's not
4 something that will occur for miles; so,
5 probably just a little bit further than the
6 10 times rotor diameter, in which case then
7 the intensity of the light should be very
8 low. So all you'd see in the landscape is
9 just kind of like a shadow, like you would of
10 a passing cloud in the sky.

11 Q. Okay. But passing clouds usually move very
12 slowly; correct?

13 A. Sure.

14 Q. I'm trying to be more specific here, that if
15 you're in a situation where the sun is
16 directly behind the turbine, okay, I'm not --
17 it doesn't matter whether you're to the south
18 or north. But there's the sun. Here's a
19 turbine, and here's the viewer. But the
20 viewer is greater than 10 diameters. I'm
21 just wondering what -- what the effect will
22 be in that case. Let's say through a window.
23 Might it become sort of a pulsating?

24 A. We can't discount north and south in your

1 statement. So I'm assuming east and west.
2 And if you're, let's say, 15 times the rotor
3 diameter, you should not see a flickering
4 effect inside your house.

5 Q. Okay. So you would not have -- there
6 wouldn't be any pulsating or any -- the
7 shadow would be steady, you think, at that
8 point?

9 A. There's been no proof of pulsating beyond,
10 you know, that distance.

11 Q. So, 10 diameters is 3,806 feet.

12 A. That --

13 Q. That's correct, approximately?

14 A. Yes.

15 Q. So if I was 3,900 feet, I would not see any
16 flickering, any pulsating or anything; is
17 that true?

18 A. What's the numbers again?

19 Q. You've got a study area of 1,160 meters,
20 which is approximately 3,806 feet.

21 A. Yeah.

22 Q. So I'm saying -- and you're saying beyond
23 that point there's no shadow flicker. So if
24 I'm saying 3,900 feet, the shadow is steady.

1 Is there a cut-off? I mean, is there a sharp
2 cut-off --

3 A. It's not a sharp --

4 Q. -- the way your map shows?

5 A. It's not a sharp cut-off, no.

6 Q. Well, your map shows a sharp cut-off. That's
7 why I'm curious about that.

8 A. Again, according to rules and other
9 documentations from a variety of places,
10 within 10 times the rotor diameter is when
11 there is the potential to have a nuisance.
12 Outside the 10 times rotor diameter, there is
13 not a nuisance, understanding that there may
14 be somebody that's sensitive to it, that may
15 be an extra 40 or 50 feet away from that 10
16 times rotor diameter.

17 Q. Okay. Do you know if there's any
18 documentation that guarantees that receptors
19 beyond 3,806 feet will not have problems?

20 A. All I can tell you is, there's documentations
21 that studies were done that support the 10
22 times rotor diameter.

23 Q. And do you have any specific references of
24 documents that you're talking about there?

1 A. Well, I provided one in my prefiled
2 testimony. There are others as well. I
3 don't remember them, off the top of my head.

4 Q. All right. I'll leave that for now.

5 On Page 12 of your prefiled direct
6 testimony, at the bottom you say, "Wind
7 turbines will be set back from residential
8 structures by more than one-half mile" --
9 this is part of the mitigation measures, the
10 first one listed -- "by more than a half-mile
11 to assure the maximum screening benefit
12 provided by existing woodland vegetation."

13 So, would -- by setting back a
14 half-mile, would that assure a complete
15 screening of a view of a turbine?

16 A. I'm sorry. Could you repeat that?

17 Q. By setting a turbine back more than a half a
18 mile to assure the maximum screening benefit
19 provided by existing woodland vegetation, as
20 it says here, would that assure complete
21 screening of the view of a wind turbine?

22 A. And that's in my -- can you please provide a
23 location?

24 Q. I'm reading here, just the bottom of Page 12

1 on here where you have the first --

2 A. Page 12 of?

3 Q. Of your prefiled direct testimony, Page 12 of
4 17, where the question is: Have mitigation
5 measures been implemented? And you say, yes.
6 And the first one listed is that setting back
7 a half mile to assure maximum screening
8 benefit provided by existing woodland
9 vegetation.

10 And I just want to know, would that
11 maximum existing vegetation screening
12 completely -- in general, completely block
13 the view of a turbine?

14 A. Doesn't state that.

15 Q. It doesn't. I'm asking if you could state
16 whether or not it would.

17 A. It's all site-dependent.

18 Q. Okay. If it was partial -- screened in
19 partially, do you consider partial screening
20 to be a sufficient mitigation of the visual
21 effect of turbines?

22 A. Again, depends on site specifics.

23 MS. BAILEY: Mr. Block?

24 MR. BLOCK: Yes, I'm winding

1 up here.

2 MS. BAILEY: I'm sure that the
3 reporter's getting really tired at this
4 point. So go a little bit slower, but
5 swifter.

6 MR. BLOCK: Swifter but
7 slower.

8 MS. BAILEY: Speak slowly.

9 MR. BLOCK: Slower. Okay.

10 MS. BAILEY: And if you're
11 only like another five minutes, then we --

12 MR. BLOCK: Yes. Yes, I am.

13 BY MR. BLOCK:

14 Q. Okay. Actually, the very end of your
15 testimony, Page 17 of this prefiled
16 testimony, your conclusion, the last part is,
17 "Over time" -- and I know this was mentioned
18 earlier -- "Over time, wind turbines will be
19 more accepted as they become an integral part
20 of the landscape, similar to other
21 infrastructure projects -- e.g. transmission
22 lines -- seen within landscape."

23 Are you implying here that 492-foot
24 spinning wind turbines are similar visually

1 or eventually might be similar visually to
2 20- or 30-foot telephone poles?

3 A. No. What I am saying, though, is there will
4 always be people against the project.
5 However, people were also against
6 transmission lines, and you hear less and
7 less uproar about transmission lines. I hear
8 the same thing about wind projects going in,
9 that they become part of the landscape. The
10 acceptance continues to grow from there.

11 Q. Can landscape -- I just was curious. And
12 when you talk about landscape here, I looked
13 up in the dictionary, and it defines it as
14 "all of the visible features of an area of
15 countryside or land, often considered in
16 terms of their aesthetics appeal." And we're
17 talking about the whole thing, visual impact,
18 as aesthetics.

19 It also defined it as "rural scenery,"
20 which I thought was interesting. In fine
21 arts, it says it's the category of aesthetic
22 subject matter in which natural scenery is
23 represented.

24 So do you consider that these industrial

1 wind turbines will ever appeal -- appear
2 natural in the landscape?

3 A. I've never said that.

4 Q. Do you -- I'm asking for a yes or no answer
5 now. I know you haven't said it before.

6 A. I have mentioned in the -- my report that
7 these are man-made structures that will be
8 within the landscape.

9 Q. So they will -- does that mean they will
10 never look natural, in your opinion?

11 A. They're turbines. They're not natural.

12 Q. And they move.

13 A. Sure.

14 Q. And they spin.

15 MR. BLOCK: No more questions.

16 Thank you.

17 MS. BAILEY: Thank you.

18 Okay. We're going to take a
19 10-minute break and be back at -- maybe I'll
20 give you 12 minutes -- 3:25. It's now
21 3:13 p.m.

22 (Whereupon a recess was taken at 3:13
23 p.m., and the hearing resumed at 3:35
24 p.m.)

1 MS. BAILEY: Ms. Longgood.

2 MS. LONGGOOD: Yes. I'd like
3 to go on the record. I made a mistake. My
4 home is within the shadow-flicker range as I
5 looked at that map. So I would like that to
6 be reflected in the record, please.

7 CROSS-EXAMINATION

8 BY MS. LONGGOOD:

9 Q. And if you could possibly explain how that
10 might change my experience, I would
11 appreciate it. Thank you.

12 A. Is that that one house that --

13 Q. Would you like me to come up and show you?

14 A. That would be good.

15 Q. Okay.

16 MS. BAILEY: Off the record,
17 show him where it is on the map.

18 (Off the record discussion with
19 Ms. Longgood and the witness.)

20 MS. BAILEY: All right. Back
21 on the record.

22 MS. LONGGOOD: Thank you.

23 MS. BAILEY: Do you have a
24 question for him?

1 MS. LONGGOOD: Yes.

2 BY MS. LONGGOOD:

3 Q. I'd like to know how being in that
4 shadow-flicker area will affect me, differing
5 from your explanation of being outside of
6 that area.

7 A. The structure that Ms. Longgood identified
8 was No. 80 on our viewshed map -- or I'm
9 sorry -- on our shadow-flicker map, which is
10 Figure 2.

11 Best guess is that's the residence, her
12 house we modeled as having upwards to 21
13 hours and 28 minutes of shadow flicker over
14 the course of a year. There is a good
15 potential for vegetation to help screen that
16 shadow flicker. Let me just -- now, let me
17 just -- I'll back up a little bit, but let's
18 just talk about general time frames of
19 potential shadow flicker at your house.

20 As part of the report -- I don't know if
21 you have access to the report, but there's a
22 graph on Page 8 that's actually of your
23 house. And generally, shadow flicker will
24 occur several months of the year, not every

1 year, for relatively short periods of time,
2 upwards to an hour. However, it may be less.
3 Sometimes I do round up, just to give even
4 time frames.

5 And it would be coming from multiple
6 turbines, so it wouldn't be necessarily one
7 turbine every day. It may be Turbine 3. It
8 may be -- actually, I could tell you.
9 Turbine 5, for instance, you may experience
10 shadow flicker between 8:00 and 9:00 from the
11 middle of November to the middle of January.

12 And then, you know, each turbine is
13 slightly different, in terms of each month.
14 Again, this wouldn't be an everyday
15 occurrence. There's many factors that will
16 influence whether you may have shadow
17 flicker: Is the turbine running? Is it
18 raining out? Because if it's raining out,
19 you're not going to get shadow flicker. If
20 it's cloudy out, you're not going to get
21 shadow flicker.

22 So it's not an everyday occurrence. And
23 what we have found is, a lot of these are
24 over-conservative for a variety of factors.

1 This was based also on the turbines
2 running 24/7, which may not always be the
3 case. So there would be some relief as well,
4 just based on operation of the turbines.

5 So it would occur early in the morning,
6 short periods of time, not every day and not
7 every month. And I would really refer you
8 just to this page here, Page 80, if you have
9 access to the shadow-flicker report. It
10 gives you a little better idea of the
11 potential time frames.

12 Now, the other thing is orientation of
13 your window towards the project site. As
14 mentioned earlier, when we ran it, we tried
15 to be overly conservative and essentially
16 said your house was a glass house.

17 Q. All my windows look out on the ridge towards
18 where the turbines will be.

19 A. Okay.

20 Q. It was purposeful, as that is the view,
21 unobstructed view.

22 A. But that also could help, not knowing what's
23 on the north side of the house, the south
24 side of the house, and the orientation to the

1 turbines. For instance, if the turbine north
2 of your house is casting a shadow flicker, it
3 may not enter your front windows. It may try
4 to enter the north side of the house. So
5 that would also limit the potential shadow
6 flicker. So there's a lot of different
7 varieties that -- different things that could
8 actually limit your shadow-flicker potential.

9 Q. Thank you. I'm nervous about all this
10 information I'm learning about, but thank you
11 for explaining it.

12 MS. BAILEY: Okay. Mr. Roth.

13 MR. ROTH: Thank you.

14 CROSS-EXAMINATION

15 BY MR. ROTH:

16 Q. Mr. Guariglia, you testified earlier that
17 people grow accustomed to wind farms. Isn't
18 it also true that, in some instances,
19 communities that accepted wind farms grew to
20 dislike them and become annoyed by them?

21 A. Do you have a specific?

22 Q. I'm just asking you from your general
23 knowledge.

24 A. From what I have seen, those people who have

1 not liked the project from the beginning are
2 very vocal after the project as well. I can
3 tell you those that I have talked to have
4 said either, I wasn't sure about it, now I
5 don't mind them, or, you know, I find them
6 very graceful, or, you know, they've become
7 accustomed to them. So really --

8 Q. You're restating your previous opinion, but
9 what I asked you is, are there instances --
10 and maybe your answer is no, where people
11 have grown to dislike them after they were
12 initially accepted by the community?

13 A. Well, based on information, it's hard to say
14 because there's a lot of naysayers, and those
15 are the ones that make the most noise. So
16 it's really hard to render an opinion on
17 that.

18 Q. Okay. Now, there was some testimony earlier
19 on the noise element in this proceeding that
20 sound and visual together create a double
21 whammy. Do you agree with that?

22 A. I heard that, too. I've never studied that.
23 I've never heard it, so I can't really render
24 an opinion on that.

1 Q. Okay. Now, I'd like to turn your attention
2 to your exhibit -- or the attachment to your
3 supplemental testimony, JWG 2. It's the
4 10-mile Vegetated Viewshed Map. Do you have
5 a blow-up of that by any chance?

6 A. There you go.

7 Q. Thank you.

8 Now, it's my understanding -- and
9 correct me if I'm wrong -- that anyplace you
10 see a little sort of salmon-colored spot
11 there, that those are locations where 9 to 10
12 of the turbines from the project will be
13 visible.

14 A. Yes.

15 Q. Okay. Now, isn't it true that on this map
16 there may be dozens of these places?

17 A. Sure.

18 Q. Okay. Now, in your prefiled, and perhaps it
19 was this morning or earlier this afternoon
20 when you did your rebuttal, you criticized
21 Ms. Vissering's testimony saying that she
22 didn't go out and assess the additional 33
23 sites, and therefore, it's premature to
24 suggest that there's any impact from that.

1 Wasn't that your testimony?

2 A. Yes, I believe it was premature.

3 Q. Okay. Now, in your prefiled testimony on
4 page -- your supplemental prefiled testimony
5 on Page 8, didn't you yourself render an
6 opinion that, even in light of the 10-mile
7 viewshed map, that the project wouldn't have
8 an unreasonable adverse effect?

9 A. Can you refer me to a page?

10 Q. I just did.

11 A. Yeah. I'm sorry, I missed it.

12 Q. Page 8.

13 MR. IACOPINO: Of which
14 testimony, Mr. Roth?

15 MR. ROTH: It's the
16 supplemental prefiled testimony of
17 Mr. Guariglia, Page 8.

18 BY MR. ROTH:

19 Q. And maybe I'm misinterpreting the study area,
20 but on Line 7, 8, 9, taking into account the
21 entire study area, the project will not
22 result in an unreasonable adverse impact to
23 the aesthetics of the Antrim region.

24 A. Yes, that was based on the 5-mile.

1 Q. Okay. So isn't it -- so would you agree that
2 you could conceivably do the 10-mile view and
3 determine that those -- what you agreed were
4 dozens of additional places where 9 to 10
5 turbines would be visible, could create an
6 unreasonable and adverse effect on the
7 aesthetics?

8 A. I did not -- similar to Ms. Vissering, I did
9 not go out and look at it. I created the
10 viewshed map. I created the summary analysis
11 based on the resources that we found. So I
12 couldn't render an opinion on the type of
13 view and how there may be some sort of
14 impact.

15 Q. Okay. And do you agree that the way you
16 would determine the impact is by the
17 proximity of the location, the number of
18 turbines visible, and the area of the
19 resource that has views of the turbine?

20 A. Well, I haven't rendered an analysis on
21 impact, in terms of like Ms. Vissering did,
22 for each resource, but there would be a lot
23 of criteria that you would look at.

24 Q. So I guess from -- just so I'm clear, your

1 testimony is that you -- notwithstanding what
2 I read on Page 8 of your supplemental
3 prefile, you're not rendering an opinion that
4 when you include the 10-mile viewshed, that
5 there is still not an unreasonable adverse
6 effect?

7 A. I didn't -- I didn't review the 5- to
8 10-mile.

9 Q. Okay. With respect to the survey that you
10 did -- and I heard you say, if I quoted you
11 correctly, if I wrote it down correctly, you
12 said, "I am assessing visibility. Jean
13 Vissering is assessing impact." Is that a
14 correct at least paraphrasing of what you
15 said before?

16 A. Yeah. We identified visibility, yes.

17 Q. Okay. And I guess I went through the earlier
18 cross-examination and your prior testimony,
19 kind of scratching my head to try to
20 understand whether what you did in your
21 assessment here, that's Appendix 13B -- no,
22 wrong one -- your Appendix 9A to the
23 Application, the Antrim Wind Energy Project
24 Visual Impact Analysis of January 9, 2012, is

1 what you did -- did you perform a visibility
2 assessment -- a Visual Impact Assessment?

3 (Witness reviews document.)

4 Q. This shouldn't be a hard question. I mean,
5 you did this almost a year ago.

6 (Witness reviews document.)

7 A. In this report, we identified visibility and
8 how it may be perceived, which could be
9 categorized as an "impact." However, this is
10 a different sort of analysis than Ms.
11 Vissering had completed. We looked at an
12 area as a whole versus specific locations,
13 and I think that was the difference I was
14 trying to make.

15 Q. So is this kind of a hybrid of a visibility
16 assessment and a visual impacts assessment?
17 I mean...

18 A. The report, yes, I guess you could -- because
19 we do identify, saying how many turbines are
20 visible, project visibility and stuff like
21 that. So I guess it could be considered a
22 hybrid.

23 Q. Okay. Now, in your business as a landscape
24 architect -- was that the proper description

1 of your --

2 A. Sure. I'm a landscape architect, yeah.

3 Q. Is a visibility assessment different than a
4 visual impacts analysis?

5 A. Depends on what level you bring it to. There
6 can be differences. For instance:

7 Ms. Vissering did a visual impact assessment,
8 which is looking at more specific locations.

9 We did a general visual impact assessment
10 looking at the entire study area rather than
11 honing in on specific and thoroughly
12 analyzing on those locations.

13 Q. Now, is the way you did it a common practice
14 in your --

15 A. Yes.

16 Q. -- in your industry?

17 A. Yes.

18 Q. And do you know any other projects where it
19 was done this way, that this was accepted by
20 a regulatory body such as this one?

21 A. Yes.

22 Q. Can you tell us what those were?

23 A. In terms of what we have done?

24 Q. Well, anybody that's done a hybrid of a

1 visibility assessment and a visual impacts
2 assessment such as you described here.

3 A. I've got many projects that have been
4 constructed in numerous states where this
5 methodology has been followed, yes.

6 Q. Can you name a couple of them?

7 A. Tuscola Bay out in Michigan. That was going
8 to be completed. There's numerous ones
9 throughout New York. Probably too many to
10 mention. Beech Ridge Wind Farm down in West
11 Virginia.

12 Q. Okay. Are there any where a regulatory body
13 such as this one has rejected this analysis?

14 A. No. As a matter of fact, it's usually
15 welcomed.

16 Q. Now, there was some discussion about
17 objective and subjective. And I don't really
18 want to get into the philosophical nature of
19 it, other than, would you agree that the
20 standard that is being applied in this case,
21 which is, does the project have an
22 unreasonable adverse effect on aesthetics, is
23 that an objective standard or a subjective
24 standard?

1 A. Well, you know, that's a good question.
2 Visibility impacts assessment, visibility
3 projects are very subjective. So everybody's
4 going to render their own opinion.

5 When I rendered my opinion, I tried to
6 use facts or objective statements, you know,
7 such as we looked at the community. It's
8 very rural and highly vegetated. So there
9 would be fewer potential viewing the
10 project --

11 Q. I didn't ask how you did it. I asked whether
12 that standard is a subjective one or a
13 subjective one. And you answered the
14 question, and I appreciate that. Thank you.

15 Now, in your testimony you criticized
16 Ms. Vissering for failing to do sort of a
17 sufficient objective analysis of the various
18 locations. And I would ask you to look at
19 Pages 5 through 14 of her report. And that's
20 PC Exhibit 1.

21 A. What page was that again?

22 Q. Page 5 through 14.

23 A. Thank you.

24 Q. PC 1.

1 A. Yeah.

2 Q. I just -- you don't have to read it all
3 carefully, but just look through there. You
4 see on Page 5 there's a description of
5 Willard Pond and its uses.

6 A. Sure.

7 Q. On Page 6 there's a description of Bald
8 Mountain and its characteristics. On Page 8
9 there's a description of Goodhue Hill and its
10 uses and characteristics. On Page 9, Gregg
11 Lake, it's characteristics and uses. Page
12 10, Pitcher Mountain and so on each of these
13 containing some sort of description of the
14 resources and its uses. And I ask now for
15 you to turn to your report dated January 9,
16 2012, and show me in here where you contain a
17 similar analysis of the resources that you
18 decided in this assessment were impacted or
19 not.

20 (Witness reviews document.)

21 A. Just so that way I answer your question,
22 because I have a couple of thoughts here, can
23 you restate your question?

24 Q. The question was: Can you look at your

1 report and show me, show the Committee, where
2 in your report you conducted a
3 resource-by-resource discussion of the uses
4 and characteristics of the resources that
5 you're evaluating?

6 A. No. Ms. Vissering looked at the resources in
7 more detail, as I would suspect she would,
8 given her approach on the report.

9 Q. Okay. So I guess you would agree with me
10 that there's nothing like that in your
11 report?

12 A. No, I would agree.

13 Q. Okay. Thank you.

14 Now, you could either look at Ms. Von
15 Mertens' testimony or I'll just read you some
16 bits from it. And her testimony, I honestly
17 don't know what exhibit it is.

18 MR. ROTH: If the counsel to
19 the Committee could help us out?

20 MR. IACOPINO: What are you
21 looking for?

22 MR. ROTH: The testimony of
23 Frances Von Mertens dated July 31st, 2012.

24 MR. IACOPINO: That would be

1 ASNH. Actually, you know, they did not mark
2 Ms. Von Mertens' testimony as an exhibit.

3 MR. ROTH: Okay. I guess I
4 would like to have it admitted as an exhibit.

5 MS. MANZELLI: If it's easier
6 for organizational purposes, the plan is for
7 the Audubon testimony -- prefiled testimony
8 to be marked as exhibits prior to the Audubon
9 panel, which will be occurring in the later
10 part of this hearing.

11 I have no objection to this
12 testimony being marked now. But if it's
13 easier to keep it all together from an
14 organizational perspective, that's our plan.

15 MR. IACOPINO: The immediate
16 problem for the Committee is if you're going
17 to be reading something, we don't have it up
18 here right now, and we probably don't want to
19 make 30 copies right now either. So --

20 MR. ROTH: No. I'll just
21 proceed, and we'll see how we can do with
22 this.

23 BY MR. ROTH:

24 Q. I'm reading from her testimony, which was

1 filed on July 31st. And I know that you said
2 you haven't seen it already.

3 A. May I ask who the person is?

4 Q. Frances Von Mertens resides at 234 Elm Hill
5 Road, Peterborough, New Hampshire. She's a
6 former trustee and honorary trustee of the
7 Audubon Society and current member of the
8 ASNH Sanctuaries and Land Management
9 Committee.

10 And based upon what she says on the
11 first page of her testimony, she's been very
12 deeply involved in Audubon Society and Harris
13 Center activities, fundraising, volunteers,
14 et cetera. Does that answer your question?

15 A. Yes. Thank you.

16 Q. Now, in her testimony she says -- the
17 question was posed: Please describe visitor
18 usage of Willard Pond. And she says, boats
19 tend to be canoes, kayaks, and the boat
20 launch is busy on hot summer weekends. She
21 says weekday usage picks up when nature
22 campers from the Harris Center, the Wells
23 School and the New Hampshire Audubon, among
24 others, visit the sanctuary. She talks about

1 meeting a canoeist. She talks about
2 encountering several kayakers that were
3 fishing in Willard Pond. She talks about a
4 chapter of Trout Unlimited indicating --

5 MS. GEIGER: I'm going to
6 object to this. Mr. Roth is just reading
7 Ms. Von Mertens' testimony into the record.
8 And if he has a question, I won't object to
9 that, but I just don't think it's necessary
10 for him to keep reading her testimony.

11 MR. ROTH: There is a
12 question. And if we had the testimony in
13 front of him, I could ask him to read it and
14 that would probably be acceptable. But if
15 you'll allow me, I have just a little bit
16 more of this reading of -- I'm not reading
17 the whole thing. I'm just picking out a few
18 things to point out. And there will be a
19 question momentarily.

20 MS. BAILEY: Can you get to
21 the question?

22 MR. ROTH: I promise you.

23 MS. BAILEY: Now?

24 BY MR. ROTH:

1 Q. She also describes a network of trails that
2 circle Willard Pond, and marked trails draw
3 hikers year-round.

4 Now, given what I just read and
5 described from Ms. Von Mertens' testimony,
6 which includes fishing, hiking, school
7 groups, day users, all year-round users, do
8 you think that the Willard Pond and the
9 wildlife sanctuary sound to you that they
10 share some of the characteristics of a state
11 park?

12 A. But it's not a state park.

13 Q. Okay. I understand it's not a state park.
14 I'm just asking you whether you agree that
15 the way I described it, it sounds like it
16 shares some of the characteristics of a state
17 park.

18 A. My local lake has got the same sort of
19 programs, and it's just a lake.

20 Q. You're arguing with me. But I just want you
21 to answer the question.

22 Does it sound like it shares the
23 characteristics of a state park?

24 A. I can't answer that.

1 Q. Okay.

2 A. I have not had a chance to review her
3 testimony, verify the accuracy of her
4 statements or anything. So I can't render an
5 opinion.

6 Q. Okay. If that's the way you want to answer
7 it, that's your choice.

8 If the wildlife sanctuary and Willard
9 Pond were a state park, would it change your
10 opinion about whether it should be given more
11 weight in your analysis?

12 A. State resources funded by state parks do
13 take -- shall I say, climb up the ladder
14 higher than not-for-profits. But additional
15 analysis would need to be reviewed on it.

16 Q. Okay. Thank you. Now, you had -- I believe
17 it was in your supplemental testimony. You
18 talked about, again, the lattice towers and
19 the advertisements, that is some form of
20 mitigation.

21 And the question is this: Are you aware
22 of any commercial wind park on this side of
23 the country, or anywhere that you've seen in
24 your career outside of California, that uses

1 lattice towers for wind turbines?

2 A. Smaller turbines, yes.

3 Q. In an industrial commercial wind park?

4 A. I'm trying to think. In terms of an
5 industrial wind park, turbines this size,
6 probably not.

7 Q. Okay. You may not know the answer to this,
8 but I'll give you a try. Do you think that a
9 lattice tower could support a 3-megawatt wind
10 turbine?

11 A. Believe it or not, I have seen turbines that
12 are extremely tall supporting large -- I've
13 seen lattice wind turbines that are extremely
14 tall, however not in the United States, and I
15 don't know the size of them.

16 Q. Okay. Have you ever seen in the United
17 States advertising on a wind turbine, on the
18 tower or up on the nacelle, other than
19 perhaps, you know, the identification of the
20 company's logo?

21 A. That's exactly what we're asking not to have
22 happen. And yes, I have seen that.

23 Q. Okay. So you've probably seen pictures of --
24 from Paris in the 1940s when they put the big

1 lights that said "Citroën" up and down the
2 Eiffel Tower; right?

3 A. Yes.

4 Q. Have you ever seen anything like that on a
5 wind turbine?

6 A. No.

7 Q. No? Okay.

8 Now, you said that, in response to a
9 question I believe by Attorney Reimers -- he
10 asked you, So is this 95-percent analysis all
11 of your analysis upon which you based your
12 finding on? And I think the answer that you
13 gave him was no.

14 What else did you base your findings on,
15 if not on the 95 percent?

16 A. In terms of what finding?

17 Q. Your conclusion that the project would not
18 have an unreasonable adverse effect on
19 aesthetics.

20 A. It is -- I had mentioned to him there were
21 various different factors that were taken
22 into consideration. The rural nature of the
23 area, town of Antrim, according to the 2010
24 census, only had 2,367 individuals, according

1 to the 2010 census. The area is highly
2 vegetated. I did mention visibility, based
3 on the vegetated viewshed map, shows
4 95 percent of the area will have screening.
5 So that's just a repeat.

6 There are no specific views to be
7 preserved, identified in the Town master plan
8 or conservation plan. So there is no
9 preservation of any sorts of views. There
10 are a few designated resources statewide or
11 of national significance within the study
12 area. And that's the original study area.
13 And we considered the entire study after,
14 trying to give some sort of balance,
15 understanding that there could be impacts
16 perceived by folks.

17 So we looked at the entire area, not
18 just a few locations.

19 Q. Okay. So you looked at it, I guess for want
20 of a better term, en gross, but you didn't
21 look at any of the specific resources within
22 the study area. Is that fair to say?

23 A. I'm sorry. What?

24 Q. You looked at the -- you looked at it en

1 gross, but you did not look at any of the
2 specific resources within your study area; is
3 that fair to say?

4 A. Well, the locations that we did simulations
5 from, obviously we were there. We did do,
6 you know, some surface review. We did note
7 some of the recreational opportunities. We
8 didn't look at every single 71 receptors, no.

9 Q. Okay.

10 A. However, those that we did do simulations,
11 obviously we have knowledge of it.

12 Q. Okay. But in your report, you already
13 acknowledged that you didn't provide any
14 analysis or description of any of those
15 specific resources that you did. But now
16 you're saying that it is in there somewhere?

17 A. No. We did not write a description of each
18 location like Ms. Vissering did.

19 Q. Okay.

20 A. That's just part of our desktop analysis that
21 we come across this information and
22 understanding of the resource.

23 Q. So you're relying on your Table 2; is that
24 correct?

1 A. Relying on Table 2 for what?

2 Q. For your assessment of the resources, the
3 specific resources.

4 A. And firsthand knowledge of those resources,
5 of the ones that we had visited, yes.

6 Q. But your firsthand knowledge, whatever that
7 is, isn't expressed anywhere in your report
8 or in your testimony, is it?

9 A. No.

10 Q. Okay.

11 A. I mean, if I could add one thing to that,
12 though? On that table, obviously we had to
13 understand the types of people using it, the
14 landscape character and stuff like that. So,
15 you know, there is some recognition of it.
16 We just didn't fully describe.

17 Q. Okay. So, yeah, that's an excellent point.

18 Isn't it fair to say that on your
19 Table 2, you didn't describe or discuss
20 hiking, cross-country skiing, snowmobiling,
21 boating, fishing, bird watching, napping,
22 tree hugging, none of that stuff; right?

23 (Witness reviews document.)

24 A. As part of table 2, in great detail, no.

1 However, what I would point out is, for
2 instance, we did list viewer groups for each
3 location -- for instance, recreation. And on
4 Page 12, there is a description of a user
5 called "Recreational User and Tourists." It
6 doesn't describe tree hugging and roasting
7 chestnuts and stuff like that. But it does,
8 you know, state some of -- it acknowledges
9 that a lot of these locations would have
10 recreational users and gives a description of
11 them.

12 So there is information like that that
13 has been associated with these locations.

14 Q. But no real analysis of what their
15 expectations of the particular resource might
16 be; correct?

17 A. Specifically, no. However, reading through
18 all the information, you learn more
19 information in terms of what some of the
20 expectations may be. For instance: Under
21 Recreational Users and Tourists on Page 12 of
22 the Visual, it says, "The sensitivity of
23 recreational users to visual quality is
24 variable. But to many, visual quality is an

1 important and integral part," et cetera, et
2 cetera. So we do provide some of that
3 information.

4 Q. But because there are no state parks there,
5 you don't provide any weight to it; isn't
6 that fair to say?

7 A. I'm sorry?

8 Q. Because there are -- you're not analyzing any
9 state parks there, you don't seem to provide
10 any particular weight to that, do you?

11 A. I guess, can you rephrase the question?

12 Q. Well, tell me what about it you don't
13 understand. If you -- the question was: If
14 these users, these recreational users, aren't
15 at a state park, you don't seem to give any
16 particular weight to their expectation of the
17 experience, do you?

18 A. No, there's no weight given on this. No.

19 Q. Okay. I'm looking at Page 10 of your report,
20 and you have Inventory Criteria and
21 Designated Resources. Now, looking at these,
22 I see you describe recreation areas including
23 playgrounds, fishing access and the like,
24 significant publicly accessible areas devoted

1 to conservation and preservation, bicycling,
2 hiking, ski touring, snowmobiling and the
3 like.

4 I mean, given these criteria, why do you
5 have -- why do you place so much importance
6 on, you know, things like where governmental
7 resources or state parks are at stake? Don't
8 these criteria give you a much broader way to
9 inventory resources?

10 A. Well, right. That's the purpose of this is
11 to inventory as many resources as possible,
12 given the rural nature.

13 However, there is a hierarchy when
14 looking at things. You can't say Local Road
15 252 is going to be the same impact as, just
16 because we've been talking about it, Willard
17 Pond. So as you go through the process,
18 there will be resources that rise to the top,
19 depending on what they are.

20 Typically, as even Ms. Vissering has
21 stated before, the importance of, shall I
22 say, statewide significance, and I'm
23 paraphrasing a little bit here, tends to be a
24 little bit more important because of the

1 money that's spent. It's law. It's
2 preserved by a legislative body.

3 So, yes, that would take more precedence
4 over, unfortunately, a not-for-profit
5 organization. It's your and mine money,
6 taxpayer dollars, that's paying for that.

7 Q. Is it possible for a resource owned by a
8 conservation organization or even a private
9 property to have statewide significance?

10 A. Not that I've ever come across.

11 Q. If somebody came along and said, I want to
12 paint an advertisement for Absolut vodka on
13 the side of the Empire State Building, do you
14 think that that would be something that would
15 have a resource of statewide significance?

16 MS. GEIGER: I'm going to
17 object to the question. I don't know how
18 that's relevant to our discussion about
19 what's going on in Antrim, New Hampshire.

20 MS. BAILEY: I think it's a
21 fair question. Maybe you could come up with
22 a more local example.

23 BY MR. ROTH:

24 Q. Well, I would like to use -- let's talk about

1 the Old Man of the Mountain. Are you
2 familiar with the Old Man of the Mountain?

3 A. Let's try something else. I'm not that old.

4 Q. So you're not familiar with the Old Man of
5 the Mountain that used to be up in Franconia
6 Notch, New Hampshire?

7 A. No. Sorry.

8 Q. Okay. Well, it was a fairly significant
9 statewide resource for a time there. I guess
10 I don't see the reason to find something more
11 local.

12 You know, let's go with a hypothetical.
13 Somebody wants to paint an Absolut vodka
14 advertisement on the side of the Empire State
15 Building. Don't you think that that is --
16 that the Empire State Building and whether it
17 would have that kind of a visual impact on it
18 would be a statewide significance, at least
19 in New York, if not maybe in the entire
20 world?

21 MS. GEIGER: I think the
22 question's unfair. I'm going to object to
23 it. It seems to me that there are other laws
24 and other considerations that the witness

1 would need to consider, like outdoor
2 advertising.

3 MS. BAILEY: Maybe you can
4 answer it subjectively.

5 A. Well, I think if somebody painted an Absolut
6 vodka on any building, there would be laws
7 broken.

8 BY MR. ROTH:

9 Q. That doesn't answer the question. Whether it
10 breaks the law or not isn't the question.
11 The question is: Would the Empire State
12 Building be considered a statewide resource
13 even though it's private property?

14 A. Not necessarily.

15 Q. Really? Okay.

16 A. Statue of Liberty would be a statewide
17 resource.

18 Q. All right. That's public property. So you
19 really draw the distinction that if it's
20 private property, no matter how visually
21 important it is, that that cannot have
22 statewide significance? That's what you're
23 saying?

24 A. Well, the definition of "statewide

1 significance" is it's owned by the State.
2 It's the law. It's preserved by the
3 legislative body.

4 Q. Have you ever been to Barbados?

5 A. Yes, I have.

6 Q. Okay.

7 A. Just recently.

8 Q. Just recently. It's a beautiful place. I've
9 been there a couple of times myself, and I
10 really love it.

11 AUDIENCE MEMBER: Could we
12 move on?

13 BY MR. ROTH:

14 Q. Whether this is subjective or objective, the
15 question that I have for you is: Would your
16 view of blue water and palm trees be --

17 [Laughter]

18 (Court Reporter interjects.)

19 BY MR. ROTH:

20 Q. Would your view of the blue water and the
21 palm trees on Barbados be impaired by a row
22 of ten 500-foot tall wind turbines in the
23 foreground or mid-range?

24 A. Well, honestly, I haven't studied it. And

1 I'd have to study it and I'd love to study
2 it, so if you find me somebody to work with.
3 I can tell you that offshore projects, you
4 know, that's a whole other nature.

5 Q. I didn't say that they would be offshore. I
6 said that they would be in the foreground or
7 the mid-range.

8 A. Well, foreground to me could still be in the
9 water. So --

10 Q. True. Are you a golfer?

11 MS. BAILEY: All right. Come
12 on. Let's move on.

13 MR. ROTH: No, this is
14 actually a real question, and it's my last
15 one.

16 A. I try to be.

17 BY MR. ROTH:

18 Q. Okay. Let's take you back to Barbados.
19 You're on the Sandy Lane golf course, and the
20 sun -- you probably have observed this
21 phenomenon. The sun passes behind a cloud.
22 And you can see the shadow of the cloud
23 coming across the ground from some distance;
24 correct?

1 A. Hmm-hmm.

2 Q. And this is really just educational for me.
3 Could you see shadow flicker from a distance
4 as well? So I'm hypothesizing that you're
5 standing outside that line of demarcation
6 that you posited, and you're looking towards
7 the shadow-flicker zone, if you will. Would
8 you be able -- while you're standing there,
9 would you be able to see that shadow flicker
10 occurring in the distance?

11 A. Would I be able to see the shadow?

12 Q. The shadow flicker occurring?

13 A. The shadow flicker only occurs inside
14 structures. So if I'm standing outside
15 looking towards that study area, would I be
16 able to see the shadow sweep across the land?
17 I couldn't see why I wouldn't.

18 Q. Okay.

19 A. Unless there's something blocking my view.

20 Q. Just one moment.

21 (Pause in proceedings)

22 Q. My last question. Is there anywhere in New
23 Hampshire law or policy that you're aware of
24 that defines "statewide significance"?

1 A. Not in New Hampshire. Many other states,
2 though.

3 MR. ROTH: Okay. Thank you.
4 That's all the questions I have.

5 MS. BAILEY: Okay. Committee
6 questions? Mr. Dupee.

7 MR. DUPEE: Thank you, Madam
8 Chair. Still thank you, Madam Chair.

9 INTERROGATORIES BY MR. DUPEE:

10 Q. And good afternoon, Mr. Guariglia. Pleased
11 to meet you.

12 A. Same here.

13 Q. My word processor kept trying to change your
14 name for --

15 (Court Reporter interjects.)

16 BY MR. DUPEE:

17 Q. So you've been asked a lot of hypotheticals
18 this afternoon, which are obviously difficult
19 to answer. So I'm going to shift gears a bit
20 and start coming more from the process, if
21 that's okay.

22 So, just to review a couple things, we
23 heard earlier on from Attorney Geiger. She
24 focused on facts and conclusions of law,

1 which is really what this Committee is meant
2 to do. And eventually we'll take all the
3 testimony and hopefully come up with
4 something along those lines.

5 A. Sure.

6 Q. And you've heard that part of the reasons --
7 part of the ways we make the determination is
8 figuring out whether or not there is
9 unreasonable adverse impact on aesthetics.

10 A. Sure.

11 Q. I think you know that because your conclusion
12 on Page 17 of your initial testimony speaks
13 to that point.

14 Okay. So I'm assuming that you're here
15 not just to tell us that you've drawn a
16 conclusion of no, which is the first part of
17 your final statement, but you got here by a
18 process that this Committee could understand
19 and learn from and be able to apply in this
20 circumstance, and perhaps it could apply in
21 other circumstances. So when the Committee
22 does its work, it's doing it in a way that's
23 sort of consistent and can be followed and
24 can be somewhat similar from case to case.

1 Yes?

2 A. Okay.

3 Q. So could you tell me a bit about the process
4 that you followed to get to the conclusion
5 you got to.

6 A. Okay. Should I start with the process of
7 completing the visual analysis, too?

8 Q. Yeah, if you wouldn't mind going to Page 4, I
9 think it is.

10 MS. BAILEY: Page 4 of his
11 testimony?

12 BY MR. DUPEE:

13 Q. Actually, the bottom of Page 3 of your
14 prefiled January 31st testimony, because I
15 think there you talk about having created a
16 practical guide, which kind of caught my
17 attention.

18 A. Yes. So when we complete these visual impact
19 analyses, resource assessments, whatever you
20 want to call it, we follow a specific
21 methodology that seems to work, and numerous
22 locations obviously customized for each
23 individual project. But there is the basis.

24 The methodology itself, like on Page 1,

1 describes -- of the visual resource
2 assessment describes the steps in which case
3 the VIA is developed. We review the existing
4 land -- I'm just going to paraphrase a little
5 bit here. And if you'd like to, I can get
6 into a little more detail.

7 Q. Just a second. Page 4 of your testimony
8 where it talks about how you use the
9 following steps, is that where you are?

10 A. I'm actually referring now to the visual
11 study on Page 1. It might be a little more
12 informative.

13 Q. I guess since I sort of prepared my thoughts
14 around --

15 A. Sure. Sure.

16 Q. -- if you wouldn't mind. Help me follow
17 along a little better, that's all.

18 A. Yeah, okay.

19 So we follow particular steps that has
20 been developed over many, many years and
21 adjusted based on conversations with folks
22 such as yourself. So we follow these general
23 steps. I mean, obviously, there's more
24 detail in each step. But we provide an

1 overview of the existing landscape. We
2 review all sorts of material that we can
3 find, aerial photographs. We drive the area
4 to get a feeling of what the landscape is.
5 And we try to come up with descriptions of
6 the study area, and we include that in the
7 visual report. So that ends up being like
8 your baseline sort of scenario.

9 We also then conduct a visibility
10 analysis, which is simply a viewshed mapping.
11 We create a topo only, then we complete the
12 topo with vegetation. And we look at it and
13 say, all right, well, how much visibility is
14 in the project area? We kind of set that
15 aside, because the important thing on that
16 is, when we start looking at resources -- and
17 they can be statewide-significant -- and
18 because of this rural area, we didn't
19 strictly keep with just what we refer to as
20 "statewide-significant resources." We tried
21 to get into the community, what's important
22 to the community. I think we even listed the
23 schools, so that way the community itself
24 could understand how might the school be

1 impacted as well or have visibility.

2 So we make this big laundry list of
3 that, and then we map it on the viewshed map.
4 And from there we're able to determine, all
5 right, do the structures have potential
6 visibility or these resources have potential
7 visibility?

8 Once you make that determination, it's
9 all GIS-based. We can run all sorts of
10 analysis on it just to figure out potential
11 visibility. That's when we go out in the
12 field again and actually drive around to
13 those locations that we have determined have
14 visibility. As long as they're accessible
15 and we see that there's visibility, we'll
16 take pictures towards the project site.

17 Now, in order for us not to get
18 confused, we actually bring GPS locations out
19 there with all the turbines mapped in our
20 GPS, and we can orientate ourselves to
21 specific turbines. So we always know we're
22 looking towards the project.

23 That kind of leads into the next step of
24 once we do that field work, we take a look at

1 the pictures. We create a list. In this
2 case, the list was helped developed by a
3 couple of local organizations, and they had
4 the input in terms of where we went, as well
5 as what simulations that they would like to
6 see. So then we create the simulations. And
7 that's a GIS. It's AutoCAD and a Photoshop
8 sort of exercise, all based on models.

9 Q. All done to scale, I presume?

10 A. All done to scale. We get the regional
11 terrain. We build each individual little
12 turbine. We place them in the appropriate
13 spots. We'll import features as we need to.
14 For instance: If we're looking down the road
15 and we know there's five houses down along
16 the road, we'll grab GPS, or we'll use high-
17 resolution aerial photographs, so that way we
18 can include those in our model to help us
19 with the photo simulations. This way it
20 helps our accuracy. We'll include roadways
21 as we need to as well, just so that way we
22 have a high level of accuracy.

23 So during that whole process, we'll
24 create simulations. We'll review them.

1 We'll tweak them, run them through a QA/QC
2 process to make sure that they're all
3 reasonable and they're as accurate as humanly
4 possible.

5 Then, once that information is gathered,
6 part of our report deals with how might these
7 turbines look in the landscape. For
8 instance: There was some reference about the
9 character of the landscape. In our
10 descriptions we might say the line of the
11 landscape, which would be the curvilinear
12 form, if you will, of the terrains, the
13 turbines would be sticking above the terrain.
14 So there would be vertical elements that
15 would be visible from select locations.

16 And there's a lot of other analysis,
17 like we have mentioned numerous times. Table
18 2 in our report, that's got different factors
19 that affect visibility. And that's all
20 described in our report as well. So that way
21 people can understand, what is contrast? You
22 know, if you have the sun to your back and
23 it's a white sky, you know, the turbines may
24 blend in more to the white sky because

1 there's lack of contrast between the turbines
2 and the sky.

3 The reverse would be the same, too; that
4 if the sun is behind the turbines and it's a
5 bright day, the front of the turbine is going
6 to be very dark because it's in the shadow,
7 and they're going to stick out more.

8 So the entire report goes through that
9 just to describe the potential scenarios and
10 how things could be affected. And then we
11 wrap up with our summary. So it's a lot of
12 information. It's a step-by-step process
13 that we go through.

14 Q. Thank you for that. So a couple thoughts on
15 that. So would this sort of process you
16 described to me --

17 (Court Reporter interjects.)

18 BY MR. DUPEE:

19 Q. So the process you just described to me in
20 detail, is this something that you can apply
21 essentially to any facility that you're asked
22 to evaluate, not just to a wind turbine farm?

23 A. Yes. As I mentioned before, each project is
24 different. The same methodology may be used.

1 It's proven to work. There may be little
2 tweaks based on different locations,
3 different project types.

4 Q. So that being the case, if I continue down
5 your testimony, it comes to the next -- I
6 won't call it bullet. It has a little dash
7 in front of it, and it says, "evaluated
8 aesthetic effects of the visual change." So
9 I'm assuming that's where the specificity
10 comes in that separates this from any other
11 generic facility evaluation you might do; is
12 that right?

13 A. Right. Exactly. Like I had mentioned,
14 there's some of those descriptions in there.
15 And we talk about, you know, the -- just
16 paraphrasing what might be in the report --
17 but, you know, the tapered turbines, ten of
18 them sticking above the landscape. So that
19 would obviously be different than, let's say,
20 a power plant that is lower profile with a
21 200- or 300-foot stack.

22 Q. Makes sense. And I think your last little
23 point or bullet on that page, or that part of
24 the page, talks about identified

1 opportunities for effective mitigation. So
2 it sounds like that's when you sort of pull
3 everything together that you've done to date,
4 figure out if there's a need for mitigation,
5 what options might be available to those who
6 have to do the mitigation; is that correct?

7 A. That's what we try, yes. You know, these are
8 large structures.

9 Q. So the key question for you then is: Would
10 you think that mitigation at some point might
11 involve not siting a facility at a certain
12 place? The reason I ask this question is
13 very important, because if we say you could
14 always site, that kind of begs the question:
15 Why are you worried about aesthetics?

16 So there has to be an option there of
17 being able to say in some cases, yes, we site
18 it because it meets the criteria; some cases,
19 no matter what level of mitigation we try to
20 do, it simply wouldn't meet an aesthetic
21 standard. Does that make sense to you?

22 A. I think so. But I think that goes to your
23 regulations.

24 Q. Correct. Which is why I'm sort of looking

1 for sort of the arguments that we can use
2 along these lines. Okay. So, thank you.

3 So, moving along, I think on Page 10 of
4 your prefiled you talk about visibility. And
5 I think -- go down to Page 10 again, to Line
6 14, 15. In there you talk about visibility,
7 about how common it is. And it essentially
8 mentions common --

9 (Court Reporter interjects.)

10 Q. -- cleared agricultural lands and water
11 bodies. And obviously, one of the water
12 bodies we talked about this afternoon is
13 Willard Pond.

14 A. Uh-huh.

15 Q. And that was one of the water bodies that you
16 went through this possess you described to
17 me. You modeled it and prepared a copy of
18 it, which I think I want to look at next,
19 which is, I think, Exhibit 8, A8B, which for
20 the record is a -- called photo simulation of
21 what Willard Pond would look like should this
22 facility be sited as it's been proposed;
23 correct?

24 A. Correct.

1 Q. And because this was done with very well-
2 developed, sophisticated techniques, GIS, et
3 cetera, that this is a very accurate
4 representation of what actually would be
5 seen?

6 A. Yes.

7 Q. So you would -- I believe I counted nine
8 turbines on this picture. Is that correct?

9 A. It appears to be correct.

10 Q. Okay. And they might vary from being hardly
11 visible, maybe the second one over from the
12 right, to -- I know this is a scaled map --
13 to maybe how visible, something along those
14 lines.

15 MS. BAILEY: Mr. Dupee, could
16 you maybe move your microphone closer to the
17 edge of the desk?

18 MR. DUPEE: Certainly.

19 MS. BAILEY: Thank you.

20 BY MR. DUPEE:

21 Q. And it sounds like -- also, we've heard this
22 afternoon a lot about Willard Pond. And I
23 have to admit, I didn't know a lot about
24 Willard Pond myself before this whole process

1 began. But we learned that it is a sanctuary
2 and involves a number of acres of land, I
3 think thousands of acres of land. I went and
4 visited their web site to learn that fact.

5 We also heard, I believe -- I'm not sure
6 we raised the point -- but under state law in
7 New Hampshire, it's called a "Great Pond," a
8 water body 10 or greater acres, not owned by
9 any individual. It's owned by the State for
10 state purposes. And I think you mentioned
11 fishing being one example how that might be
12 used. But any legitimate use, of course, by
13 the public is allowed.

14 So I think we also heard a question --
15 and I was going to ask you this, but you may
16 have been already been asked it and answered
17 which is: Would it be reasonable to believe
18 that individuals who choose to visit a remote
19 wildlife sanctuary, such as Willard Pond,
20 where there are no other anthropogenic
21 structures or houses or whatever, would be
22 more prone to wishing to experience a
23 completely natural outdoors experience?

24 A. Is it a question on --

1 Q. Yes.

2 A. -- whether they want to experience or --

3 Q. Right. This would be an individual who would
4 be prone to come to a wildlife sanctuary.

5 A. Sure. Yeah. See, now, that's a question I
6 think we kind of talked about earlier. But
7 talking about it further, an individual going
8 to the sanctuary, you know, is still going to
9 have a natural sanctuary. There are going to
10 be views of the project. There's no denying
11 that. However, there's much more to the
12 sanctuary than these locations. I know, for
13 instance, I hiked some of the trails on the
14 southern end of the project. Walking around
15 the pond, you may not see the turbines the
16 entire way around. So it really depends on
17 sites specific in Willard Pond. Yes, there
18 is visibility, but there's also areas that
19 don't have visibility.

20 So to me, going there for the resource
21 itself, I would think that I would still see
22 a natural setting. I would see turbines on
23 privately held land outside of the sanctuary,
24 yes, but I would still be able to enjoy a

1 very nice sanctuary.

2 Q. And I think this picture was taken -- and I
3 mean, did you take it?

4 A. This one here?

5 Q. Yes.

6 A. I believe I did, yes.

7 Q. Is that taken from the landing area?

8 A. That -- there were two of us out there. I
9 believe this one was mine. It was actually
10 taken a little further east of the dam.

11 Q. Okay. So, looking down the pond; is that
12 correct?

13 A. Yeah. I had to look down and across in order
14 to get a more open view. Now, mind you, the
15 goal of this was to find that nice open view.

16 Q. Hmm-hmm. I appreciate that. I appreciate
17 the point you made. I think it was
18 95 percent of the area that might be impacted
19 would not maybe have this degree of visual
20 experience.

21 A. Exactly.

22 Q. So I understand your point on that.

23 So what I'd like to do -- all these
24 questions are sort of precursors to my main

1 question, which is now jumping back to what
2 we talked about earlier, which is evaluating
3 aesthetic effects. So we talked about fact.
4 We talked about how the facility would look
5 if it were built. And we talked about the
6 conclusion that you reached on Page 17, which
7 was there would be no impact -- unreasonable
8 adverse impact. And you mentioned that
9 certain parts of your process are pretty
10 generic; they're facility-general. But
11 there's a certain point where you went
12 through and evaluated the aesthetic affects.
13 So I want to just sort of explore that. We
14 talked a lot earlier this afternoon about,
15 you know, specific suggestions, ideas. But I
16 really want to know about the process.

17 What could I take from your testimony
18 that would give me a way to say I can apply a
19 reasonable set of principles and guidelines
20 that would allow me to distinguish between an
21 unreasonable adverse effect between a
22 reasonable one for this particular site,
23 recognizing you can't speak to the
24 Committee's broader authority?

1 A. Well, I think that there is no true
2 definition for where you go from no adverse
3 effect to, you know, an impact. What we
4 tried to do is, after we looked at
5 everything, we tried to look at it and say,
6 all right, we may have some areas that have
7 impact, but we also have a lot of resources
8 that are used by the community that may be
9 just as nice resources possibly, you know, in
10 other people's minds, that have no impact.
11 So there has to be a balance there.

12 Knowing that there was only a few
13 locations that had the potential to have like
14 some sort of impact, we looked at it as more
15 of a global picture. We didn't get down to,
16 all right, we're looking at three locations.
17 These three locations have significant
18 impact; so therefore, the entire area, you
19 know, has an impact. We didn't do that sort
20 of thing. We tried to look at it
21 holistically. And that's -- some of the
22 methodologies that -- or the categories that
23 I had mentioned earlier, the number of people
24 that are in the area, the fewer people,

1 there's less for an impact or people to see
2 the project; the fact that we're looking at a
3 hundred square miles of area versus just a
4 few locations.

5 There's all those lists that we had
6 done. It is almost a case-by-case basis
7 because each project is different. These, as
8 we were reading the report and going through
9 the process, jumped out at us immediately in
10 terms of these things. And, again, I know
11 there's discussions about statewide
12 significant resources. But that's a very
13 real thing.

14 Every project that we've worked on,
15 there's always that sort of criteria. And
16 there's a hierarchy in regards to that. So,
17 knowing that there isn't a whole lot of
18 statewide-significant resources, that also
19 kind of led us down the path of, there is no
20 adverse impact.

21 So it was that entire list that I had
22 provided, trying to be more objective than
23 subjective, looking at some of the facts
24 rather than just feelings.

1 Q. Can you reference me back to that list?

2 A. Yes. I'm hoping that made sense.

3 Q. It did.

4 A. So as I had mentioned earlier, we came up
5 with some of these locations or criteria that
6 we considered as part of, you know, coming up
7 with that final conclusion. We feel that the
8 area is rural, as I had mentioned, less than
9 2,400 people within the town of Antrim;
10 highly vegetated. I mean, that's clearly
11 evident just driving through the study area
12 and the town and neighboring towns itself.

13 We did look at the vegetated viewshed
14 map. Ninety-five percent of the vegetated
15 viewshed map shows screening towards the
16 project.

17 Importantly, there are no specific views
18 to be preserved, identified in either the
19 Town master plan or their open-space
20 conservation plan. So that was really
21 important, too. There's no documentation of
22 specific views to be preserved.

23 There are also, as I had mentioned, few
24 designated resources of what we consider

1 statewide or national significance.

2 And then the other thing, as I had
3 mentioned, is we considered the whole area, a
4 hundred square miles versus just a few
5 locations, recognizing the fact that some
6 people may say that some of these areas are
7 an impact, but how -- sometimes you have to
8 draw the line of how can a few locations
9 dictate a hundred square miles where there
10 may be just as important resources to people.

11 Q. Thank you.

12 Could you envision here -- an example
13 before us of wind turbines. Could you think
14 of another type of structure or facility that
15 might be on that ridgeline that you would
16 think that sort of crosses the aesthetics
17 line, that no matter what kind of mitigation
18 one were to apply to it, it really doesn't
19 belong there?

20 A. Well, I'd be hypothesizing, but the worst
21 case would be mountaintop removal or mining.

22 Q. So, that would be taking away a structure?

23 A. Yeah, taking away the mountain.

24 Q. That would be --

1 A. That would be worst case.

2 Q. Thank you very much. No further questions.

3 A. Thank you.

4 MS. BAILEY: Dr. Boisvert.

5 INTERROGATORIES BY DR. BOISVERT:

6 Q. You made a strong argument that state-owned
7 properties become state-level significant and
8 therefore more are worthy of consideration as
9 opposed to privately owned properties. That
10 position is untenable.

11 My reason for saying that, and I can
12 document it easily, is that there are 22
13 national historic landmarks in New Hampshire.
14 These are national level, not state. I just
15 ran through a list of them. I can find three
16 that are publicly owned: U.S.S. Albacore,
17 which is a submarine; the Robert Frost Home
18 owned by the State; and Saint-Gaudens -- it's
19 a national park in Cornish. He's the fellow
20 who made the statute of Lincoln at Lincoln
21 Memorial.

22 Going through the list, I can quickly
23 identify eight of the national historic
24 landmarks that are owned by private

1 non-profits. These would include places like
2 the MacDowell Colony.

3 What else do we have here? A number of
4 historic houses, including the house of one
5 of the signers of the Declaration of
6 Independence, the John Paul Jones House.
7 These are owned by private non-profits.

8 There's privately owned properties on
9 here, such as the Mount Washington Hotel,
10 which is a national historic landmark listed
11 in part because it was the site of the 1944
12 Bretton Woods Monetary National Conference,
13 something that economists all recognize. And
14 that property, among others, is -- has
15 importance for aesthetics, such as --

16 A. I'm sorry. What was the last part?

17 Q. It has importance that derive from its
18 setting and aesthetics --

19 A. Sure.

20 Q. -- such that, recently when they wished to
21 put in some cell towers -- co-location in the
22 jargon -- on the property, they were required
23 to do it in such a way as not to interfere
24 with the aesthetics of that property.

1 A. Sure.

2 Q. And in fact, there have been some older cell
3 towers there. And they're actually sort of
4 improving the looks, as it were.

5 So the idea that publicly owned property
6 is more significant than privately owned or
7 private non profit owned does not apply in
8 the historic preservation world. And in that
9 world, aesthetics are considered to be a very
10 important part. I don't know if you were
11 present earlier in the day when we were
12 speaking with the historic preservation and
13 cultural resources management professionals,
14 and they were placing a great deal of
15 importance on the setting of the property, as
16 to whether or not that would be an adverse
17 affect.

18 So my perspective here is that the issue
19 of "significance" is independent of
20 ownership, and ownership does not necessarily
21 confer additional importance.

22 You may not be as aware as some of us in
23 the room of, shall we say, the high fiscal
24 conservatism of our state legislature and

1 their interest in spending money to acquire
2 various kinds of properties, no matter what
3 they might be.

4 MS. BAILEY: Dr. Boisvert.

5 DR. BOISVERT: Yes.

6 MS. BAILEY: Excuse me. Can
7 you get to the question?

8 BY DR. BOISVERT:

9 Q. Does this information change your opinion
10 about whether or not properties must be
11 state-owned in order to be considered
12 statewide-significant?

13 A. Well, you brought up national or
14 state-registered historic places. I run into
15 that on many projects. Yes, many of them are
16 privately owned. But they have a
17 designation, a historic designation, and
18 that's what puts them into a
19 statewide-significant. They're spoken for.
20 They went through a process. I know in New
21 York, in order to -- and I believe there's a
22 similar process here in New Hampshire. But
23 in order for a house to become "historic,"
24 you have to go through applications, and the

1 state organization pretty much has to approve
2 it.

3 So, while they may be privately owned,
4 they have a state or a national designation,
5 so that's why those can be considered
6 statewide-significant.

7 But you also hit on a very important
8 part. When we look at historic houses or
9 structures or districts, one of the things
10 that we look at when we're evaluating impact
11 or helping the cultural resource people, is
12 why is it historic? And as you mentioned,
13 sometimes it's because of the type of facade
14 it is or the owner or the landscape.

15 And as you mentioned with that one
16 location about the cell tower, we've had that
17 issue in another project as well, another
18 cell tower.

19 So the fact that historic homes are --
20 or structures may be privately owned and not
21 always the case, they still fall into the
22 statewide-significant because of the
23 designation that it has. There's no other
24 way to get that designation except for

1 getting it approved by the State.

2 Q. You're in error in detail, but not
3 substantially. The designation is made by
4 the keeper of the National Register in
5 Washington. It's not made by the State. We
6 make recommendations. But we'll give you
7 that.

8 But my observation that I feel that
9 you've made an error in judgment is the error
10 of causality. The designation by the keeper
11 of the register or agreement by the state
12 historic preservation officer -- and I'm the
13 deputy historic preservation officer -- it's
14 a matter of recognition. It doesn't cause it
15 to be historic. It was historic before it
16 was so defined. It's a matter of recognizing
17 it. And ownership is not considered to be in
18 any way, shape or form causing it to be
19 historic, to be significant.

20 A. Right.

21 Q. And that is where I would ask that you change
22 your opinion. And clearly you're not of that
23 opinion, but --

24 MS. BAILEY: Do you have

1 another question, Dr. Boisvert?

2 DR. BOISVERT: No, that pretty
3 well covers it.

4 MS. BAILEY: Okay. Thank you.

5 Mr. Simpkins.

6 INTERROGATORIES BY DIR. SIMPKINS:

7 Q. Just a quick question on determining state
8 significance.

9 You talked about if it's owned by the
10 government. I was curious. What about
11 privately owned lands that have an easement
12 on them held by the State?

13 A. Well, if the easement is owned by the State,
14 then that would level some sort of look at.
15 It all depends on what it is.

16 Q. Well, in particular, I'm thinking of
17 conservation easements that are held by the
18 State of New Hampshire, but the ownership is
19 still in private hands.

20 A. That could be -- I know we've considered
21 stuff like that. Quite honestly, in our
22 experience, a lot of times it has to do with
23 hunting, you know, where the State goes in to
24 a farm and says -- you know, they make a deal

1 and then they open it up to hunting. So it
2 depends on the specifics.

3 Q. Okay. Are you familiar with the Federal
4 Forest Legacy Program by the U.S. Forest
5 Service? The reason I ask is because it's
6 not for one specific purpose. There's a
7 whole judging criteria that we have to go
8 through, both with the state ranking level,
9 and then it gets ranked by the team at the
10 federal level. And it's for multiple uses.
11 So I was just curious if you were aware of
12 that.

13 A. I'm aware of the concept. I didn't know the
14 specific name of the legacy. Again, as you
15 mentioned, there's ranking. So that's
16 something that we'd look at, too.

17 Q. And that's based on wildlife, habitat,
18 aesthetics, rare, threatened or endangered,
19 all those types of things.

20 So is that an example of something that
21 may rise to the level of state significance?

22 A. Again, the easement is owned by the State, so
23 it would be considered a statewide. Again,
24 you know, there is, as you mentioned -- why

1 is it owned by the State? Is it because of
2 wildlife or habitat? You know, that may be
3 different than if it's owned for aesthetics,
4 and within there it says these views have to
5 be preserved. So it really depends on also
6 the rationale behind that. But it would at
7 least warrant an additional look.

8 Q. Okay. Do you remember -- did you find any of
9 those when you were reviewing this area?

10 A. From my recollection, all the easements that
11 I remember were more of not-for-profits. Or
12 there may have even been like Boston
13 University or Boston College had some sort of
14 easement, too. I don't remember seeing that
15 come across.

16 DIR. SIMPKINS: Okay. Thank
17 you. No further questions.

18 MS. BAILEY: Ms. Lyons.

19 INTERROGATORIES BY MS. LYONS:

20 Q. I'm looking at Section 4.0 of the report,
21 which is Page 21, about mitigation. And I'll
22 wait for you.

23 A. Thanks.

24 Q. I'm looking at the mitigation program. And

1 they seem kind of boilerplate to me. And I
2 was just wondering if there's anything in
3 here that was specifically asked by the
4 community to include.

5 A. There was nothing that was provided to us
6 that the community had requested stuff. One
7 of the things, though -- so that way it is --
8 it does seem a little boilerplate. You know,
9 we work with Antrim Wind. We do know that
10 they looked at different scenarios even
11 before we came onboard, because we do ask
12 those probing questions. It already seemed
13 like there was some mitigation, in terms of
14 potential views to locations already
15 completed.

16 Q. So in your experience, have you ever had a
17 community-requested mitigation be included?

18 A. Yes.

19 Q. Could you give an example?

20 A. An example? I recently had a project where,
21 as part of the wind project, they wanted the
22 substation screened. I've had it where
23 they've wanted the substation enclosed in a
24 structure. I've had it where a project --

1 where they didn't want just a typical
2 cinderblock O & M building. So they came up
3 with a nicely architecturally detailed
4 structure, so that way it blended in with the
5 landscape.

6 So they are asked. That usually occurs
7 during this process, in terms of some of the
8 requests. And that's discussed further. And
9 they have to be practicable.

10 MS. LYONS: Thank you.

11 MS. BAILEY: Chairman
12 Ignatius.

13 CHAIRMAN IGNATIUS: Thank you.

14 INTERROGATORIES BY CHAIRMAN IGNATIUS:

15 Q. Mr. Guariglia, the issue of public versus
16 private and statewide significance, we've
17 been through a lot, so I won't re-tread that
18 ground.

19 But one of the locations that's been
20 particularly of concern that we've heard
21 about, and that as we review the materials I
22 can tell you I have concerns about, is Gregg
23 Lake. And that includes a public town beach;
24 does it not?

1 A. Yes, it does.

2 Q. So do you draw a distinction between
3 government meaning the state, and government
4 meaning the locality, as a difference in the
5 ranking and importance you put on those
6 things, or is it public versus private?

7 A. The Town-owned facility would probably be
8 more looked at than a privately held
9 facility, depending on -- I mean, it all
10 depends on scenarios. I can tell you Gregg
11 Lake did intrigue me because of its location
12 and its resource, you know, its recreation,
13 because there were people there. It was very
14 active. And that's one of the things that we
15 also look at, is where are the folks going,
16 you know, where are they congregating.

17 In terms of Gregg Lake, though, I have
18 been involved in various projects where
19 turbines are near recreation resources such
20 as Gregg Lake. And while people may think,
21 wow, those turbines are really close, I
22 looked at the beach, at the town park, and
23 it's all oriented away from the turbines. So
24 if somebody -- I believe it looked like it

1 was kind of like looking in a
2 west/southwesterly direction. I could be
3 wrong. But people are active, in terms of
4 being in the water. So they're playing in
5 the water. They're sunbathing. They're not
6 looking at the turbines. They may be boating
7 down the lake, going west, away from the
8 turbines. So it's a very active area where
9 the visibility of the turbines should be
10 further lessened.

11 Q. Well, it's also -- there's a picnic area.

12 A. Yeah.

13 Q. There's places to gather --

14 A. Exactly.

15 Q. -- community center, in all directions.

16 A. Yeah. Places for volleyball and some of the
17 other stuff, yeah.

18 Q. And so I don't think you're saying that
19 people's backs would be to the turbines the
20 entire time.

21 A. No, no. Just saying that it's an active
22 area.

23 Q. As opposed to a quiet, contemplative sort of
24 place --

1 A. Exactly.

2 Q. -- which is more of what the Willard Pond
3 situation is.

4 A. Could be, yes.

5 Q. And so active places are of more importance
6 or of less importance? How does that factor
7 into --

8 A. No. It just factors into how the people may
9 experience it as well.

10 Q. Where do all these hierarchies and standards
11 in how you rank things come from? Is there
12 some guidance that you work off of?

13 A. Generally, yes. You know, it's generally
14 accepted that there are resources of
15 statewide significance, you know, someplace
16 where the State has an interest for the
17 better of its citizens.

18 Q. You may have already said this, and I
19 apologize if I missed it. Where does that
20 come from? You said it wasn't a New
21 Hampshire standard, but some states use it.
22 Is there some --

23 A. Well, I can tell you it's in New York. But
24 it also -- I use that, and it's accepted in

1 other states, as well as other states, if
2 they don't have a guideline, recognize the
3 importance. However, what we do is we
4 don't -- just don't rely on that, in terms of
5 our analysis. Unlike some other folks, we'll
6 go to the community sort of resources, like
7 Gregg town lake or Gregg town park. We'll
8 also go to local sort of resources, and that
9 may be local roads. So it's an
10 all-inclusive. And if you will, that kind of
11 starts setting up some of the hierarchy.

12 Q. Well, I'm getting confused, because this
13 morning, or whenever we started this, you
14 said that because Greenfield State Park was
15 the only state-owned property that gave rise
16 to statewide significance, you effectively
17 were discounting impacts at Gregg Lake; and
18 yet just now it seems --

19 A. No, no.

20 Q. -- to me you're saying the opposite.

21 A. No, no. The state-owned park would be, shall
22 I say, a higher up on the chain than the
23 Gregg town park. It's not discounting. It's
24 just saying, because the state park is owned

1 by the State and every citizen within the
2 State, it gets a little further weight.

3 Q. Fair enough.

4 You said that in your analysis you
5 didn't do any impact rating and impact
6 ranking -- were two different phrases you
7 used -- for particular locations; is that
8 right?

9 A. Yes.

10 Q. Are there instances where you do do that sort
11 of analysis for clients?

12 A. I have not done one in about seven years.

13 Q. Were you not asked to do that in this case?

14 A. I was not asked to do that.

15 Q. If you do do an individual impact ranking or
16 rating, what are the tests you put to reach a
17 real analysis of the impact rather than this
18 sort of overall community-based analysis?

19 A. You have to be careful about impacts. I have
20 seen them. As you can see here, it almost
21 becomes a he said/she said sort of situation,
22 where if I did a ranking on a number and I
23 came up with a four, or let's say five,
24 somebody else could come up with a five. And

1 then you spend hours debating what's the
2 difference between four and five; where is
3 the threshold for mitigation.

4 There really is no good process that has
5 been vetted in New Hampshire and numerous
6 states that, to me, is acceptable. Because I
7 could come up with some sort of rating
8 system. That would be my professional
9 opinion. But it may not be Ms. Vissering's
10 professional opinion.

11 Q. Well, I'm asking you. You said you've done
12 it, though not for seven years. When you
13 have to do it, what sort of analysis do you
14 use to reach a number? I don't care whether
15 it's a three or a four. If it's easier to
16 talk about major or minor or moderate or
17 significant, just some sort of ball park,
18 'cause then I'm going to apply it to a
19 particular situation. So you tell me what
20 you look at first.

21 A. Well, let me back up. The analysis that I'm
22 thinking of is no longer used, because it was
23 the Army Corps of Engineers' methodology.
24 And Army Corps doesn't even use it, because

1 they recognize the fact that it just causes
2 issues later on.

3 Q. So do you not have expertise in making those
4 kinds of individual assessments?

5 A. I have reviewed many sorts of different firms
6 that make their own assessment. I usually
7 find problems with them because they don't
8 necessarily look at everything that I would.

9 Some of the things that I would look at
10 has been stated in the prefiled testimony or
11 the file testimony of, you know, users and
12 activities, et cetera. Then the question is
13 going to become: How do you assign a value
14 to that? And that's where it starts getting
15 tricky. That's something that would have to
16 be approved, I would think, by numerous
17 people, so that way everybody's on the same
18 page. And that usually does not occur.

19 Q. I didn't follow that.

20 A. Well, like I said before, I can come up with
21 a methodology, because there is no standard
22 methodology that I'm aware of. Pretty much
23 anywhere in the country that's accepted by
24 everybody.

1 So I can come up with a methodology for
2 this. But I would need to have the buy-in
3 from folks from yourself. I would need to
4 have the buy-in from, like, Ms. Vissering,
5 that, yes, this is appropriate, if she's
6 going to be reviewing it, so that way there's
7 less arguments later on.

8 Q. Well, we know there are arguments, because
9 this is a contested matter. And we've got to
10 make a decision. And we're listening to you
11 because you've been presented to us as an
12 expert on the area of visual impacts
13 analysis. And you've given an opinion that
14 you find no undue adverse effect on
15 aesthetics; and yet, when probed what that is
16 based on, it's a very broad, community-based
17 analysis. And I'm asking you about
18 particular locations.

19 You said there's no way to make any sort
20 of analysis that we could all agree on. I'm
21 not asking what we all agree on. I'm asking
22 what you what you believe, based on your
23 expertise, in this area. You've done these.
24 Take a look at your Figure 10B in the final

1 report, which is in Appendix 9A, the final
2 visual analysis. And that's a Gregg Lake
3 picture. How would you rank that? Is it a
4 moderate? Is it a minor, is it a major
5 impact? Whatever kind of terminology you
6 think is fair.

7 A. Unfortunately, I didn't analyze that, so to
8 render an opinion wouldn't be appropriate.

9 Q. All right. Let me ask you about shadow
10 flicker for just a moment.

11 On your Exhibit 11 -- and I can't
12 remember if that was attached to your
13 testimony. It's Document 21. Is it part of
14 the Application itself? It's the shadow
15 flicker, sort of butterfly chart.

16 MR. IACOPINO: That is
17 Appendix 13B. And that is in Exhibit --

18 MS. GEIGER: Three.

19 MR. IACOPINO: -- 3. Thank
20 you. And it's electronic Document 26 in that
21 exhibit. Oh, I guess it's 21.

22 MR. FROLING: Could you keep
23 your voice up when you're giving the exhibit
24 numbers, please.

1 CHAIRMAN IGNATIUS: Yeah,
2 we're still trying to find the exhibit. I
3 have it as Document 21.

4 MR. IACOPINO: So you're
5 not -- right. You're looking at a map.
6 You're not looking at the full report. So,
7 okay.

8 So she's looking at the map
9 that's JWG 11. Attachment JWG 11,
10 Mr. Guariglia.

11 CHAIRMAN IGNATIUS: Thank you.

12 And I don't know if we have a
13 blow-up of that one. We may not. If there
14 is, it would be good to put it up.

15 Do you know, Ms. Geiger, if
16 there is a blow-up of that?

17 MS. GEIGER: No.

18 MR. IACOPINO: For everybody,
19 this is also AWE 9. Electronically, it's
20 Document 21. It's a map with some contours
21 on it.

22 BY CHAIRMAN IGNATIUS:

23 Q. So as I look at it, you see the butterfly
24 shape of shadow patterns for a number of

1 turbines. This one happens to be Turbine 2,
2 but they're all similar. Are residences
3 superimposed on this?

4 A. No. The purpose of this was just to show the
5 pattern. There are no residences. If you
6 wanted to see the -- where the residences
7 are, it's Figure 2 in the shadow-flicker
8 report. Again, this was just an exhibit.
9 There was no analysis done from it. It's
10 just to illustrate what the pattern looks
11 like.

12 Q. All right. So let's stick with this for just
13 a moment before we go to look at the other
14 one.

15 You have multiple gradations of how much
16 is likely to be seen, how many hours over the
17 course of a year. The closest in to the
18 turbine is greater than 40 hours. And how
19 much greater does one get to if you're in
20 that greater than 40? Could it be -- is it
21 40 or 50, or is it, you know, 100 hours?
22 What are we talking about here?

23 A. You know, it could be a variety of things. I
24 don't know, in particular, this project --

1 each one of them are different. Could be 45.
2 Could be much higher than that.

3 Q. Like what? What's "much higher"? What are
4 the outer bounds that you might see?

5 (Witness reviews document.)

6 A. Let's see. Yeah, I was just scanning just to
7 make sure I didn't have something with me.

8 Yeah, you know, right next to the
9 turbine, you could be up to 100 hours.

10 Q. And so if we wanted to look at residences as
11 they relate to this map, which did you -- I
12 mean, this effect, which document did you say
13 is the right one to go to?

14 A. On the shadow analysis, Figure 2.

15 MR. IACOPINO: Is that
16 Appendix 13B?

17 THE WITNESS: It might be.
18 Sorry.

19 MS. GEIGER: Yes, it's in the
20 shadow-flicker report. It's just a couple
21 pages over.

22 DIR. STEWART: Page 15 of
23 Document 26 in the digital version, Appendix
24 13B.

1 MR. ROTH: Page 9 of the one
2 in the book.

3 (Discussion among Committee members.)

4 CHAIRMAN IGNATIUS: Do we have
5 a blow-up of this one?

6 MS. GEIGER: We do not.

7 BY CHAIRMAN IGNATIUS:

8 Q. So to be able to see -- this is -- this
9 multi-colored amoeba thing, we see the
10 turbines in the center with 1 through 10.
11 And then the residences, are they the smaller
12 numbers ringed around the top?

13 A. Yes, kind of in the northeast section, and
14 then in the north, and then Mrs. Longgood's
15 just to the west of Turbine 5.

16 Q. So is her house the sole block you see on
17 that western side?

18 A. Yes.

19 Q. So if I'm reading this right -- and this is
20 helpful to see. And I apologize. I hadn't
21 found this before -- the residences fall
22 outside of the greater than 40 and the 30 to
23 40. I think they all fall outside of the 20
24 to 30 hours and begin to be picked up in the

1 10 to 20 and the 2 to 10.

2 A. You know, on Page 7 of the report there's
3 actually a chart with all those houses so you
4 can kind of see the potential shadow-flicker
5 hours.

6 Q. Okay. And you helped explain a number of
7 these questions with Ms. Longgood -- the time
8 of day and the time of year impacts when it's
9 likely to be the most likely to occur, as
10 well as the orientation of the house and the
11 windows; correct?

12 A. Yes. You know, speaking of Ms. Longgood's
13 house, there is a page here that shows her
14 house and the general time frame when she may
15 have shadow flicker.

16 This illustrates, you know, what the
17 other houses may experience as well. It's
18 just to show, you know, it's not an all-day
19 occurrence, not every day, you know, that
20 sort of thing.

21 Q. Is there any way you can describe or give any
22 examples that would help someone who's never
23 seen this to sort of feel what it would --
24 what it's like when it's occurring?

1 A. I have never experienced it myself. However,
2 I've seen the many videos that float around,
3 and it's actually just a flickering coming
4 through your window. Some people describe it
5 as a light being turned on and off, you know,
6 just a consistent pattern.

7 Q. How often? What's the frequency?

8 A. Well, it depends on your alignment with the
9 turbine. However, we model the Acciona, and
10 I think it says here it's based on
11 approximately 13 RPMs, revolutions per
12 minute. So that's the frequency that one
13 might be able to expect, in simplistic terms.

14 Q. When we were talking yesterday about the
15 sound of the turbine moving, and it could be
16 a once per second was the testimony yesterday
17 of the movement of the blade, is that the
18 same frequency?

19 (Witness reviews document.)

20 A. Not one per second. It says -- I just
21 happened to find a reference at a different
22 location. It's 12.3 revolutions per minute,
23 or approximately one revolution every four to
24 five seconds. So that's one blade going

1 around every four to five seconds. So if you
2 have three in there, it's one and a half, two
3 seconds. I remember it's a very short period
4 of time. I mean, you could have shadow
5 flicker for like a minute on a given day or,
6 you know, a little bit longer. So it does
7 vary. So it's important to remember it's not
8 a consistent sort of thing.

9 Q. And are there people who have trouble with
10 that, react poorly to that light on-and-off
11 sensation?

12 A. I have -- generally when I see that, that
13 sort of thing, I'm thinking that it's usually
14 not confirmed by medical professions.

15 Q. So you're saying you've heard it described,
16 but you're not sure it's reliable?

17 A. Exactly.

18 Q. And I know personally I can't be in places
19 with strobe lights. Is it in any way related
20 to that sort of reaction?

21 A. Well, I guess it could be kind of an analogy,
22 kind of like a strobe or flickering sort of
23 thing. Strobe lights can flicker, too.

24 There's no evidence of, you know, like severe

1 issues. Like people mentioned epilepsy. As
2 far as I know, that's been unfounded.

3 CHAIRMAN IGNATIUS: That's it
4 for me. Thank you very much.

5 MS. BAILEY: Mr. Green.

6 MR. GREEN: Thank you.

7 INTERROGATORIES BY MR. GREEN:

8 Q. It's getting late and I might have missed
9 something that you said. I apologize.

10 But in your opinion as a landscape
11 architect, are there any ways to minimize or
12 reduce or even eliminate the visual of the
13 turbine from these different locations that
14 you studied?

15 A. Well, the project, you know, as analyzed, I
16 mean, these are tall structures. There are
17 possible ways to possibly further screen from
18 select locations using vegetation. It's not
19 appropriate in every location. But if
20 there's a particular historic house or
21 something like that that needed to be
22 screened, they could plant some sort of
23 buffer, probably some sort of deciduous -- or
24 not deciduous, but an evergreen sort of

1 buffer would probably be the best, just for
2 simplistic terms.

3 Q. There aren't any other ways than just -- just
4 the --

5 A. In terms of seeing it -- these are
6 undoubtedly large structures, trees. You
7 know, people don't want to put shades in
8 their houses, so that way they can't see it,
9 you know, that sort of thing. But there are
10 minimal ways to screen a turbine.

11 Q. Do you know if the firm would be willing to
12 do that for the Town in certain places if
13 they asked for it?

14 A. If the Town contacted us, we'd have to go
15 from there.

16 Q. All right. That's it.

17 MS. BAILEY: Mr. Iacopino.

18 MR. IACOPINO: Thank you.

19 INTERROGATORIES BY MR. IACOPINO:

20 Q. Let me ask you a question about shadow
21 flicker first. You defined "shadow flicker"
22 as only occurring indoors; correct?

23 A. Yes.

24 Q. Why do you discount the effect of the shadow

1 in the outdoors?

2 A. I don't think we totally discount it. We do
3 mention that you'll see shadows sweeping
4 across the landscape. The issue, though,
5 that most folks have is the flicker effect.

6 Q. Well --

7 A. So that's why -- you know, I mean, that's a
8 shadow-flicker analysis. So that way you
9 want to look at the houses with people
10 inside. That's where it's mostly noticed.
11 The sweeping effect is much less of an issue.
12 However, I would mention that it's not
13 totally discounted, because on here you can
14 definitely see where the shadows are going to
15 occur.

16 Q. And what are you referring to?

17 A. Oh, I'm sorry. Yes. This is Figure 2 of the
18 shadow-flicker report.

19 Q. So that shows a shadow passing?

20 A. Yes. So this shows where the shadows will be
21 passing. So it's not totally discounted.

22 Q. You realize that people in the outdoors can
23 be disturbed by that? For instance: My wife
24 and two daughters might want to sunbathe out

1 next to our pool, and a shadow passing from a
2 wind turbine could be a real inconvenience.

3 A. Well, depending on when it is, where you are,
4 the shadow may only occur at 7:00 to 8:00 in
5 the morning, and I doubt folks would be
6 out -- or it could even occur -- who knows.
7 But it could also occur anywhere from 8:00 to
8 9:00 p.m., too. So, you know, it depends on
9 the location and the use. So, sunbathing at
10 high noon shouldn't be too much of an issue,
11 depending on where you are.

12 Q. What is it that one experiences when outdoors
13 as opposed to indoors?

14 A. Normally it's just a sweeping effect. You
15 just see the shadow just sweep across your
16 property.

17 Q. Okay. You mentioned a couple of times that
18 these are tall, very tall structures. Have
19 you done any analysis as to how they compare
20 with other structures either in the general
21 vicinity of Antrim or within the state of New
22 Hampshire?

23 A. I have not done -- but I've heard that
24 they'll be some of the larger ones.

1 Q. All right. Have you been to Manchester, New
2 Hampshire at all?

3 A. No, I have not.

4 Q. Okay. All right. I want to jump off of
5 something that Chairman Ignatius asked you
6 about. Is there some textbook or reference
7 paper where one could go in order to find
8 sort of this definition of "statewide
9 significance" that you use, or is this from
10 some statute somewhere?

11 A. Well, you know, I see a fairly consistent
12 definition. I actually wrote it down last
13 night, in terms of a designated scenic
14 resource or a statewide significant resource.
15 The definition was, "a location with scenic
16 and aesthetic values and is protected by law
17 or a legislative body."

18 Q. What book or paper does that come from?
19 What's the citation for that?

20 A. Generally, this sort of definition -- and I
21 looked at one other that was extremely
22 similar. This one was from the State of
23 Maine. And another one that was extremely
24 similar was New York State DEC policy.

1 Q. Okay. Let's stick with the state of Maine
2 one for the moment. Do you know, is it a --
3 do you have like a reference to it? Is there
4 a Maine statute or a Maine regulation?

5 A. Oh, you know, I did not write that down.
6 However, it was some sort of guidance
7 procedure.

8 Q. And what about the one from New York?

9 A. That's the New York State Visual DEC Policy.

10 Q. Is that their Department of Environmental
11 Control?

12 A. Yes. Department of Environmental
13 Conservation.

14 Q. And it's called DEC Visual Policy?

15 A. Yeah, 2000. Let's see. Might be able to
16 give you... let's see. Visual policy, DEP
17 [sic]-00-2, title, "Assessing and Mitigating
18 Visual Impacts."

19 Q. Okay. DEC Policy 00 -- I'm sorry.

20 A. I'm sorry. I'm talking fast. I'm sorry.

21 Q. 00-2?

22 A. Yeah, DEP [sic]-00-2.

23 There's been other similar definitions.

24 I just -- those were the two that I had.

1 Q. I'm going to now switch gears again, and I'm
2 going to talk a little bit about -- similar
3 to what Mr. Dupee asked you about.

4 You went through with him very carefully
5 the steps that you and your company took in
6 preparing your visual impact report. And I
7 think it was the third step was the one where
8 it indicated that you evaluated the aesthetic
9 effects of the visual change resulting from
10 the project construction, completion and
11 operation. And I think, actually, you even
12 referred to that in parentheses as a
13 "qualitative analysis." Do you recall? It's
14 on Page 4 of your visual impact statement
15 report.

16 A. Of my Visual Impact Assessment, Page 4?

17 Q. Yes, I believe it's Page 4.

18 A. Are you talking about my prefiled?

19 Q. Yes.

20 A. Oh, okay.

21 Q. I think I'm actually talking about -- I'll
22 tell you in a second.

23 (Pause in proceedings)

24

1 Q. Okay. Maybe it was in your testimony.

2 All right. In your testimony -- I'm
3 sorry -- I think it's basically the third
4 step that you went through.

5 MR. FROLING: Page 4, Lines 10
6 and 11.

7 A. Which one was it again?

8 BY MR. IACOPINO:

9 Q. Page 4, Lines 10 and 11.

10 A. Ten and 11. Yup.

11 Q. Okay. Now, you actually reference what you
12 did as a "qualitative analysis"; is that
13 correct?

14 A. That's how it's mentioned, yes.

15 Q. I just want -- for me, I'm looking at this
16 and I'm saying, when I look at the report
17 that you did, you seem to provide a very
18 broad view, and you come to a conclusion,
19 primarily, it seems to me, based upon your
20 95-percent determination, that 95 percent of
21 the project area is not within the viewshed.
22 That seems to be the strongest point of your
23 conclusion. Would I be correct in saying
24 that, and that's why that --

1 A. I don't think so. I think that's part of it.

2 Q. Would you agree with me that the report
3 prepared by Ms. Vissering really doubles down
4 on evaluating aesthetic effects of the visual
5 changes?

6 (Witness reviews document.)

7 A. I think she approaches it, to be perfectly
8 honest.

9 Q. Well, she seems to accept your visual -- your
10 visibility analysis.

11 A. Exactly.

12 Q. And then it seems to me she goes one step
13 further and takes these nine or ten different
14 places and actually does sort of a more
15 qualitative assessment on it.

16 A. She does. She takes some of these locations,
17 takes it to the next step. I think, based on
18 the information, if I can jump ahead here, in
19 order to come up with a significant impact,
20 there needs to be more. She brings it quite
21 far, but I think there needs to be more
22 detail because --

23 Q. I'm not asking you to critique hers right
24 now. I'm just trying to make sure I -- that

1 the differences is in the record. Okay?

2 A. Sure.

3 Q. So she -- is it fair to characterize them as
4 two different approaches?

5 A. Sure. Yes.

6 Q. Okay. So my question is -- because you're
7 the witness right now and Ms. Vissering will
8 get a similar question -- is under your
9 approach, is it ever possible that the visual
10 impact at one particular place could be so
11 great as to render the project to be -- to
12 render the project to have an unreasonable
13 adverse effect?

14 A. I've never seen it happen. So I would say
15 no.

16 MR. IACOPINO: Okay. I have
17 no further questions.

18 MS. BAILEY: Thank you.

19 Redirect, Ms. Patch?

20 [Laughter]

21 MS. BAILEY: You looked at me
22 like you knew who I was talking about.

23 MR. IACOPINO: We always see
24 you together.

1 MS. GEIGER: I know, 30 years.

2 MS. BAILEY: I'm sorry.

3 Ms. Geiger.

4 REDIRECT EXAMINATION

5 BY MS. GEIGER:

6 Q. Mr. Guariglia, I'm going to try to be brief
7 here. On the subject of mitigation, I think
8 you heard some questions about that this
9 afternoon. Do you understand -- or are you
10 aware that the project has an agreement with
11 the Town of Antrim on many different topics?

12 A. Yes, I understand there are some agreements
13 with the Town of Antrim.

14 Q. Do you know whether in that agreement or
15 otherwise, whether the Town of Antrim has
16 asked this project to provide mitigation for
17 aesthetic impacts?

18 A. I have not heard such --

19 Q. So, to your knowledge, there has been no
20 request made by the Town of Antrim for
21 mitigation?

22 A. Not to my knowledge.

23 Q. Do you know whether, before the final turbine
24 selections were made for this project,

1 whether Antrim Wind had considered putting
2 turbines closer to Willard Pond than the
3 current configuration shows?

4 A. That is my understanding, yes.

5 Q. Okay. So would you view their adjustment of
6 the turbines to move or remove some that were
7 closer to Willard than the ones that are now
8 proposed to be a form of mitigation?

9 A. Yes, I would.

10 Q. Okay. Now, with respect to the
11 radar-activated lighting system, I think we
12 heard testimony -- you provided testimony
13 that that would be installed once it's
14 approved by the FAA; is that correct?

15 A. It would be activated once -- yes.

16 Q. Okay. So, currently, though, at existing
17 wind farms in New Hampshire that are
18 operational, what type of --

19 MR. ROTH: I'm going to object
20 to this line of questioning. This is not
21 anything that came up in the
22 cross-examination of this witness. There was
23 some questioning about whether he had any
24 knowledge of sort of the frequency of

1 airplanes, but there was no questions asked
2 about whether he had knowledge of the sort of
3 device employed at any other facility.

4 MS. BAILEY: She hasn't asked
5 the question yet.

6 MS. GEIGER: I'm just going to
7 ask a question generally about
8 radar-activated lighting systems. I believe
9 there was testimony about that during the
10 examination; correct?

11 MR. ROTH: Well, I think my
12 objection is that the question should be
13 limited to what was brought up in cross, and
14 there weren't general questions about radar
15 lighting. There were questions about whether
16 the Applicant had done any -- had any
17 information about the number of flights and
18 the frequency of the lights coming on, and he
19 couldn't have an answer for that. If she
20 wants to ask about that, that would be
21 appropriate. But a general discussion about
22 it is already provided in his prefiled
23 testimony.

24 MS. BAILEY: Okay. Could I

1 just hear the question, please.

2 MS. GEIGER: Actually, can I
3 ask another question about mitigation,
4 because there has been questions about
5 mitigation. Would everybody agree -- would
6 you agree with that, Mr. Roth? There have
7 been questions about mitigation this
8 afternoon?

9 MS. BAILEY: All right. Come
10 on --

11 MR. ROTH: Yes.

12 MS. BAILEY: Let's move on.

13 BY MS. GEIGER:

14 Q. Okay. So would you consider the commitment
15 to use a radar-activated lighting system to
16 reduce the amount of night lighting at a wind
17 project to be a form of mitigation?

18 A. I most certainly would.

19 Q. Okay. Now, I think you indicated in your
20 response to a question on cross that -- or
21 from the Bench maybe -- that there had been
22 some input by some groups into the locations
23 at which you conducted visual simulations.
24 Is that correct?

1 A. Yes.

2 Q. And what types of groups were you talking
3 about?

4 A. I understand that the Antrim Historic
5 Society, as well as the Antrim Conservation
6 Commission was involved in those selections.

7 Q. So they actually helped you decide which
8 location to take photographs at?

9 A. Yes. They provided recommendations, and
10 ultimately they were also part of the
11 decision to complete the simulation.

12 Q. Okay. Thank you.

13 This might be one of my last questions.
14 I just want to make sure that we round out
15 the picture on shadow flicker, if you will.
16 And I believe that you answered a lot of
17 questions about your shadow-flicker report,
18 more specifically about your expectations
19 about shadow flicker at Ms. Longgood's
20 residence; is that correct?

21 A. Right.

22 Q. And what did -- I believe you indicated that
23 you would expect that the duration or the
24 amount of shadow flicker at her residence to

1 be between 20 and 30 hours per year; is that
2 correct?

3 A. Yeah. I believe it was about 23.

4 Q. Are there any standards, either in the United
5 States or Europe, about what is considered to
6 be an acceptable level of shadow flicker
7 throughout a year?

8 A. In the United States there are general rules
9 of thumb, but not any guidelines.

10 Q. How about Europe?

11 A. Europe tends towards the 30 hours per year.

12 Q. So at Ms. Longgood's residence, if you've
13 expected that the shadow duration would be
14 between 20 and 30 hours per year, she'd be at
15 or below that standard?

16 MR. ROTH: I'm going to object
17 to this on the line of relevance. This is
18 not Europe. So the standards in Europe don't
19 apply; therefore, whether Europe has a
20 standard is not relevant to this proceeding.

21 MS. BAILEY: I'm going to
22 allow the question, and we'll give it the
23 weight that it's due.

24 MR. ROTH: Okay.

1 BY MS. GEIGER:

2 Q. And that would be on Page 10 of your report,
3 is that correct, where you cite those
4 standards in the visual impact report?

5 A. Yes.

6 Q. Okay.

7 MS. GEIGER: And I just want
8 to note for the record, Attorney Patch has
9 informed me that Mr. Tocci, one of the expert
10 witnesses for Public Counsel, is citing
11 standards from Europe in his testimony. So I
12 just want to make that clear. And I would
13 object to the objection on that basis.

14 MR. ROTH: And I fully expect
15 an objection from Attorney Geiger in that
16 respect --

17 MS. BAILEY: All right. Let's
18 move on, please.

19 MS. GEIGER: I have no further
20 questions. Thank you very much for your
21 patience and attention and the thoughtful
22 questioning from the Bench.

23 MS. BAILEY: Thank you for
24 your testimony, Mr. Guariglia. You are

1 excused.

2 Okay. It's 25 minutes to six,
3 and I will leave it up to the Applicant.
4 Would you like to start Mr. High's testimony?
5 We are going to complete at six tonight.

6 MS. GEIGER: I think it all
7 depends on how many questions everybody
8 thinks they have.

9 MS. BAILEY: Ms. Linowes, how
10 much cross do you have for Mr. High?

11 MS. LINOWES: I have -- Madam
12 Chair, am I the only person asking questions?

13 MR. IACOPINO: I doubt it.

14 MS. BAILEY: No, I just was
15 thinking --

16 MR. IACOPINO: She was 90
17 minutes.

18 MS. BAILEY: Yeah, you were
19 like 90 minutes or something.

20 MS. LINOWES: I don't think
21 it's 90 minutes, but it's more than a half an
22 hour.

23 MS. BAILEY: Okay. Mr. Roth?

24 MR. ROTH: Well, I only

1 anticipate actually one question. But
2 oftentimes the cross-examination of others
3 provokes me to have more. And so I think I
4 indicated 10 or 15 minutes for him. I'm
5 hoping it would be less than that, but you
6 never know.

7 MS. BAILEY: Mr. Block.

8 MR. BLOCK: At the moment, I
9 think none.

10 MS. BAILEY: Is there anybody
11 else here?

12 MR. IACOPINO: The Audubon
13 Society indicated that they were going to
14 question Mr. High as well. At least at the
15 prehearing conference they did.

16 MR. HOWE: I don't have any
17 questions.

18 MR. ROTH: But Attorney
19 Manzelli may.

20 MR. IACOPINO: David, do you
21 think that Ms. Manzelli may have questions
22 for him?

23 MR. HOWE: I did not have the
24 impression that she did. I think she may

1 have made an initial estimate last week, but
2 I don't think she anticipated any.

3 MS. BAILEY: Is there anybody
4 else in the room who I haven't asked?

5 Ms. Pinello?

6 MS. PINELLO: No.

7 MS. BAILEY: No? Okay. Would
8 you like to get -- Mr. Guariglia, you can go
9 relax.

10 Should we go off the record
11 for a minute or --

12 MS. GEIGER: Rather than
13 fragment the presentation, because I believe
14 we'll be coming back much later, it may not
15 make sense to start with Mr. High. I think
16 we should do him whenever we come back.

17 MR. ROTH: I agree with that.

18 MS. BAILEY: We're going to
19 start with -- you agree with that?

20 MR. ROTH: Yes.

21 MS. BAILEY: Oh, awesome.

22 Okay.

23 MS. GEIGER: That's great.

24 Unbelievable.

1 MS. BAILEY: We're going to
2 start with Mr. High on the next day that we
3 resume these proceedings, which I believe
4 right now is November 27th.

5 I'm going to close the
6 hearings for today -- oh, no?

7 MR. IACOPINO: Just going to
8 go off the record.

9 MS. BAILEY: Oh, all right.
10 We're going to go off the record and come
11 back and announce the next day.

12 (Discussion among Committee Members off
13 the record.)

14 MS. BAILEY: Back on the
15 record. We have decided that we will
16 reconvene the proceedings on November 27th
17 and that Mr. Iacopino will send a memo to
18 everybody with a start time. I don't know
19 for sure that we can get in this room at 9:00
20 on Tuesday morning. I just want to
21 double-check. I would assume we can, but I
22 don't know.

23 But with that, we will close
24 the proceedings for today, and we will see

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

you on November 27th.

MR. ROTH: Thank you, Madam
Chairman and Members of the Committee.

MS. GEIGER: Thank you.

(WHEREUPON, DAY 5 AFTERNOON SESSION
adjourned at 5:55 p.m.)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

C E R T I F I C A T E

I, Susan J. Robidas, a Licensed
Shorthand Court Reporter and Notary Public
of the State of New Hampshire, do hereby
certify that the foregoing is a true and
accurate transcript of my stenographic
notes of these proceedings taken at the
place and on the date hereinbefore set
forth, to the best of my skill and ability
under the conditions present at the time.

I further certify that I am neither
attorney or counsel for, nor related to or
employed by any of the parties to the
action; and further, that I am not a
relative or employee of any attorney or
counsel employed in this case, nor am I
financially interested in this action.

Susan J. Robidas, LCR/RPR
Licensed Shorthand Court Reporter
Registered Professional Reporter
N.H. LCR No. 44 (RSA 310-A:173)

DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
 SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS

<p>[</p> <p>[Laughter] (3) 83:13;142:17; 202:20</p> <p>[sic] (1) 30:9</p> <p>[sic]-00-2 (2) 198:17,22</p>	<p>accurate (6) 13:17;14:20;15:10; 91:22;152:3;157:3</p> <p>accustomed (2) 114:17;115:7</p> <p>acknowledged (1) 134:13</p> <p>acknowledges (1) 136:8</p> <p>acquire (1) 169:1</p>	<p>214:6</p> <p>adjusted (1) 148:21</p> <p>adjustment (1) 204:5</p> <p>admit (1) 157:23</p> <p>admitted (1) 126:4</p> <p>adverse (21) 9:4;30:3,13;58:18; 59:3;60:2;62:20; 117:8,22;118:6; 119:5;122:22; 132:18;146:9;161:8, 21;162:2;163:20; 168:16;184:14; 202:13</p>	<p>again (44) 13:18;20:10;21:6, 18,20;22:10,12,24; 30:23;41:12,20; 43:14;44:19;54:17; 59:19;64:12;68:10; 70:10,23;72:21; 75:15;79:6;82:22; 88:2;96:7;98:3,18; 99:8;101:15;103:18; 104:8;106:22; 112:14;123:21; 130:18;150:12; 156:5;163:10; 173:14,22,23;187:8; 199:1;200:7</p>	<p>all-day (1) 190:18</p> <p>all-inclusive (1) 180:10</p> <p>allow (4) 17:18;128:15; 161:20;208:22</p> <p>allowed (1) 158:13</p> <p>almost (7) 26:11;54:23;94:4; 96:24;120:5;163:6; 181:20</p>
<p>A</p> <p>A1 (1) 74:16</p> <p>A4B (2) 73:12;74:14</p> <p>A8B (1) 156:19</p> <p>able (13) 8:22;74:21;144:8, 9,11,16;146:19; 150:4;155:17; 159:24;189:8; 191:13;198:15</p> <p>above (4) 68:19;70:1;152:13; 154:18</p> <p>Absolut (3) 139:12;140:13; 141:5</p> <p>absolutely (1) 79:8</p> <p>accept (3) 27:21;28:1;201:9</p> <p>acceptable (3) 128:14;182:6; 208:6</p> <p>acceptance (1) 108:10</p> <p>accepted (8) 27:16;107:19; 114:19;115:12; 121:19;179:14,24; 183:23</p> <p>access (9) 40:16;42:2,9; 52:15;53:10,12; 111:21;113:9;137:23</p> <p>accessible (2) 137:24;150:14</p> <p>Acciona (1) 191:9</p> <p>According (8) 9:24;10:21;68:16; 89:6;99:5;104:8; 132:23,24</p> <p>account (3) 30:11;90:10; 117:20</p> <p>accuracy (7) 12:20;13:6;90:13, 21;130:3;151:20,22</p>	<p>acres (3) 158:2,3,8</p> <p>across (10) 36:21;79:2;134:21; 139:10;143:23; 144:16;160:13; 174:15;195:4;196:15</p> <p>activated (2) 28:20;204:15</p> <p>active (5) 177:14;178:3,8,21; 179:5</p> <p>activities (11) 37:8,9;40:16,21; 41:11,18,22;42:9,16; 127:13;183:12</p> <p>activity (2) 35:6;36:17</p> <p>actual (1) 14:7</p> <p>actually (43) 9:13;11:3;16:4; 17:24;22:18;34:7; 35:19;36:18;41:3,7; 47:1;50:8;54:24; 74:18;77:13;90:12; 92:9;93:17;94:7; 98:22;107:14; 111:22;112:8;114:8; 126:1;143:14; 147:13;148:10; 150:12,18;157:4; 160:9;168:3;190:3; 191:3;197:12; 199:11,21;200:11; 201:14;206:2;207:7; 211:1</p> <p>add (2) 93:10;135:11</p> <p>adding (1) 89:4</p> <p>addition (1) 55:1</p> <p>additional (8) 9:1,23;64:3; 116:22;118:4; 130:14;168:21;174:7</p> <p>address (4) 5:1,2;17:20;26:21</p> <p>addressed (1) 71:6</p> <p>adjourned (1)</p>	<p>aerial (3) 91:1;149:3;151:17</p> <p>aerials (1) 91:5</p> <p>aesthetic (15) 51:15,20;54:5; 83:24;86:13;87:20; 108:21;154:8; 155:20;161:3,12; 197:16;199:8;201:4; 203:17</p> <p>aesthetically (1) 52:1</p> <p>aesthetics (21) 9:4;30:13;86:20, 21,23;108:16,18; 117:23;118:7; 122:22;132:19; 146:9;155:15; 165:16;167:15,18,24; 168:9;173:18;174:3; 184:15</p> <p>affect (8) 36:10;42:20;70:20; 75:20;93:21;111:4; 152:19;168:17</p> <p>affected (6) 9:1;22:3;30:9; 35:6;70:13;153:10</p> <p>affecting (1) 37:12</p> <p>affects (1) 161:12</p> <p>afternoon (13) 4:24;17:3,4;71:10; 116:19;145:10,18; 156:12;157:22; 161:14;203:9;206:8; 214:5</p>	<p>against (4) 58:4;91:3;108:4,5</p> <p>age (4) 94:16,18,21,23</p> <p>agency (4) 51:16,19,24;53:4</p> <p>ago (4) 73:12;87:24;96:11; 120:5</p> <p>agree (26) 33:3;39:14;48:5; 49:15,20;56:15; 57:14;61:6,10;66:20; 81:19;88:10;115:21; 118:1,15;122:19; 125:9,12;129:14; 184:20,21;201:2; 206:5,6;212:17,19</p> <p>Agreed (2) 48:8;118:3</p> <p>agreement (4) 7:19;171:11; 203:10,14</p> <p>agreements (1) 203:12</p> <p>agricultural (1) 156:10</p> <p>ahead (2) 72:16;201:18</p> <p>aim (1) 34:14</p> <p>air (1) 80:2</p> <p>aircraft (1) 8:13</p> <p>airplane (3) 79:16,20;80:2</p> <p>airplanes (1) 205:1</p> <p>Airport (1) 29:3</p> <p>airports (1) 29:2</p> <p>Albacore (1) 166:16</p> <p>alignment (1) 191:8</p>	<p>alter (1) 80:6</p> <p>although (1) 74:21</p> <p>always (8) 27:4;108:4;113:2; 150:21;155:14; 163:15;170:21; 202:23</p> <p>ambient (3) 69:7,9;79:9</p> <p>amoeba (1) 189:9</p> <p>among (4) 127:23;167:14; 189:3;213:12</p> <p>amount (3) 42:16;206:16; 207:24</p> <p>analogy (1) 192:21</p> <p>analyses (1) 147:19</p> <p>Analysis (50) 6:11;8:19,24;17:8, 13;24:22;28:18; 38:19;66:7;78:7; 81:24;95:7;98:18; 118:10,20;119:24; 120:10;121:4; 122:13;123:17; 124:17;130:11,15; 132:10,11;134:14,20; 136:14;147:7; 149:10;150:10; 152:16;180:5;181:4, 11,17,18;182:13,21; 184:13,17,20;185:2; 187:9;188:14;195:8; 196:19;199:13; 200:12;201:10</p> <p>analyze (7) 23:8;24:5;33:13; 59:20;68:5;87:3; 185:7</p>

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>analyzed (4) 24:7;25:7;59:8; 193:15</p> <p>analyzing (2) 121:12;137:8</p> <p>and/or (1) 92:14</p> <p>angle (1) 56:10</p> <p>animals (2) 70:21;71:1</p> <p>announce (1) 213:11</p> <p>annoyed (1) 114:20</p> <p>annual (2) 45:12,14</p> <p>answered (6) 33:18,24;49:5; 123:13;158:16; 207:16</p> <p>anthropogenic (1) 158:20</p> <p>anticipate (1) 211:1</p> <p>anticipated (1) 212:2</p> <p>Antrim (24) 6:6;8:2,9,13;9:5; 30:14;56:1,19;90:8; 93:15;117:23; 119:23;132:23; 139:19;164:9;175:9; 196:21;203:11,13,15, 20;204:1;207:4,5</p> <p>Anyplace (2) 83:4;116:9</p> <p>anywheres (1) 97:3</p> <p>apologies (2) 53:14;78:2</p> <p>apologize (5) 72:10;76:7;179:19; 189:20;193:9</p> <p>appeal (2) 108:16;109:1</p> <p>appealing (1) 54:4</p> <p>appear (4) 14:3,4;57:21;109:1</p> <p>appears (3) 13:24;45:17;157:9</p> <p>Appendix (10) 25:5;67:17;73:21; 80:16;119:21,22; 185:1,17;188:16,23</p> <p>applicable (1) 45:7</p> <p>Applicant (5) 15:6;54:10;85:4; 205:16;210:3</p> <p>Applicant's (1) 7:18</p>	<p>Application (5) 17:14;24:20;53:18; 119:23;185:14</p> <p>applications (1) 169:24</p> <p>applied (1) 122:20</p> <p>apply (8) 146:19,20;153:20; 161:18;165:18; 168:7;182:18;208:19</p> <p>appreciate (4) 110:11;123:14; 160:16,16</p> <p>approach (2) 125:8;202:9</p> <p>approaches (2) 201:7;202:4</p> <p>appropriate (7) 14:14,18;151:12; 184:5;185:8;193:19; 205:21</p> <p>approve (1) 170:1</p> <p>approved (5) 8:11;79:12;171:1; 183:16;204:14</p> <p>approximately (5) 14:1;103:13,20; 191:11,23</p> <p>architect (5) 5:16,24;120:24; 121:2;193:11</p> <p>architecturally (1) 176:3</p> <p>architecture (1) 5:21</p> <p>area (83) 9:2;10:12;11:8,15; 12:3;13:11;20:24; 23:15;24:6;30:10,12; 31:3,4,8;40:21; 47:22;52:21;58:21; 59:1,4;60:6,22,24; 61:7,11,15,20;67:5; 69:18;70:12,13,15, 24;71:3,5;78:5;79:1, 10;90:7;91:2;92:3, 12;94:14,21;95:15; 96:5;103:19;108:14; 111:4,6;117:19,21; 118:18;120:12; 121:10;132:23; 133:1,4,12,12,17,22; 134:2;144:15;149:3, 6,14,18;160:7,18; 162:18,24;163:3; 164:8,11;165:3; 174:9;178:8,11,22; 184:12,23;200:21</p> <p>areas (14) 13:9;61:1,6,7; 62:23;97:14,16;</p>	<p>99:20,21;137:22,24; 159:18;162:6;165:6</p> <p>arguing (1) 129:20</p> <p>argument (2) 59:5;166:6</p> <p>arguments (3) 156:1;184:7,8</p> <p>Army (2) 182:23,24</p> <p>around (17) 9:5;11:18;16:17; 23:19;29:18;35:13, 20;56:13;70:2;92:23; 148:14;150:12; 159:14,16;189:12; 191:2;192:1</p> <p>arrived (1) 88:23</p> <p>arts (2) 86:21;108:21</p> <p>aside (1) 149:15</p> <p>ASNH (2) 126:1;127:8</p> <p>aspects (1) 61:21</p> <p>assess (2) 17:15;116:22</p> <p>assessing (7) 40:2,4,5;59:10; 119:12,13;198:17</p> <p>Assessment (24) 6:10;17:7;34:8,9; 80:15;87:14;94:23; 119:21;120:2,2,16, 16;121:3,7,9;122:1,2; 123:2;124:18;135:2; 148:2;183:6;199:16; 201:15</p> <p>assessments (3) 6:3;147:19;183:4</p> <p>assign (1) 183:13</p> <p>associated (1) 136:13</p> <p>Associates (3) 5:15;10:10;67:9</p> <p>Associates' (1) 24:21</p> <p>assorted (1) 66:18</p> <p>Assume (8) 17:18;89:12;94:17; 99:6,7,13;100:7; 213:21</p> <p>assumed (1) 69:21</p> <p>Assuming (10) 28:4;46:16;47:12, 19;68:11;69:12; 92:16;103:1;146:14; 154:9</p>	<p>assumption (3) 19:21;68:6;70:11</p> <p>assumptions (1) 93:7</p> <p>assure (5) 105:11,14,18,20; 106:7</p> <p>atmospheric (1) 58:10</p> <p>attached (1) 185:12</p> <p>Attachment (5) 17:14;24:20;53:18; 116:2;186:9</p> <p>attention (5) 10:2;53:21;116:1; 147:17;209:21</p> <p>Attorney (7) 32:7;85:3;132:9; 145:23;209:8,15; 211:18</p> <p>attributes (1) 59:18</p> <p>audience (2) 15:19;142:11</p> <p>Audubon (9) 17:6;18:23;19:8; 126:7,8;127:7,12,23; 211:12</p> <p>Audubon's (1) 48:9</p> <p>authored (2) 6:7;67:9</p> <p>authority (1) 161:24</p> <p>AutoCAD (1) 151:7</p> <p>available (7) 15:1;40:17;42:3,9; 44:23;45:24;155:5</p> <p>aware (17) 23:24;29:6,7,14; 48:8;52:9,14,19,24; 53:9;130:21;144:23; 168:22;173:11,13; 183:22;203:10</p> <p>away (14) 55:19;57:7,9,9,23; 61:12;65:20;94:9; 97:24;104:15; 165:22,23;177:23; 178:7</p> <p>AWE (8) 6:19;7:3;24:23; 25:4;67:17;73:21; 88:18;186:19</p> <p>awesome (1) 212:21</p> <p>awkwardly (1) 41:15</p>	<p>back (29) 4:4;14:19;18:15; 25:14;33:11;40:6; 43:17;50:6;54:15; 58:12;76:20;77:24; 92:7;105:7,13,17; 106:6;109:19; 110:20;111:17; 143:18;152:22; 161:1;164:1;182:21; 212:14,16;213:11,14</p> <p>backed (1) 88:8</p> <p>background (1) 58:7</p> <p>backs (1) 178:19</p> <p>BAILEY (83) 4:4,12,17;15:2,13, 16,20,23;16:3,7,13, 20;32:10;33:19;49:7, 10;51:8,10;71:22; 72:2,11,15;76:17,20; 77:16,21,24;80:9; 86:7,14;88:4;90:16; 106:23;107:2,8,10; 109:17;110:1,16,20, 23;114:12;128:20, 23;139:20;141:3; 143:11;145:5; 147:10;157:15,19; 166:4;169:4,6; 171:24;172:4; 174:18;176:11; 193:5;194:17; 202:18,21;203:2; 205:4,24;206:9,12; 208:21;209:17,23; 210:9,14,18,23; 211:7,10;212:3,7,18, 21;213:1,9,14</p> <p>balance (3) 93:11;133:14; 162:11</p> <p>Bald (18) 18:11;20:13,16,18, 19;21:5;27:21;31:10; 35:16;38:3,5,13; 42:13;43:2,45;23; 48:11;50:16;124:7</p> <p>ball (1) 182:17</p> <p>Barbados (4) 83:6;142:4,21; 143:18</p> <p>base (3) 13:14;42:10; 132:14</p> <p>based (36) 9:10;13:20;14:3; 17:11;20:12;31:5; 41:19;45:20;47:6; 50:19;60:4;62:6;</p>
B				

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

74:16;78:3,17;82:20; 93:7;95:21;98:21; 113:1,4;115:13; 117:24;118:11; 127:10;132:11; 133:2;148:21;151:8; 154:2;173:17; 184:16,22;191:10; 200:19;201:17	206:21;209:22 benefit (4) 51:17;105:11,18; 106:8 besides (1) 29:15 best (4) 8:14;15:4;111:11; 194:1 better (4) 113:10;133:20; 148:17;179:17 beyond (7) 20:5,9;78:11; 102:1;103:9,22; 104:19 bicycling (1) 138:1 big (4) 83:5;85:7;131:24; 150:2 biking (1) 37:1 binder (1) 7:3 bird (1) 135:21 bit (13) 58:3;89:11;102:5; 107:4;111:17; 128:15;138:23,24; 145:19;147:3;148:5; 192:6;199:2 bits (1) 125:16 blade (3) 66:6;191:17,24 blades (1) 66:4 blanketing (1) 94:13 blend (1) 152:24 blended (1) 176:4 Block (28) 10:7,11;14:11; 16:3,4;72:3,4;80:10, 12;85:12,18;86:1,7, 11,16;87:23;91:8; 106:12,23,24;107:6, 9,12,13;109:15; 189:16;211:7,8 blocking (1) 144:19 Block's (2) 10:3;12:14 blow (1) 53:15 blow-up (4) 116:5;186:13,16; 189:5 Blue (5)	83:9;86:4,9; 142:16,20 Blueberry (4) 10:12,18;11:1;98:3 boat (1) 127:19 boating (7) 38:1,2;48:13; 49:17,19;135:21; 178:6 boats (1) 127:18 bodies (3) 156:11,12,15 body (7) 52:4;121:20; 122:12;139:2;142:3; 158:8;197:17 boilerplate (2) 175:1,8 Boisvert (7) 166:4,5;169:4,5,8; 172:1,2 book (2) 189:2;197:18 books (3) 48:12,18,19 border (1) 11:18 Boston (2) 174:12,13 both (6) 40:1;49:17;56:5, 18;90:7;173:8 bottom (9) 23:19;42:6;53:21; 63:7;64:7;88:21; 105:6,24;147:13 bounds (1) 188:4 break (3) 4:2;71:24;109:19 breaks (1) 141:10 Bretton (1) 167:12 brief (2) 5:18;203:6 bright (1) 153:5 brightness (1) 79:22 bring (3) 15:6;121:5;150:18 brings (1) 201:20 broad (2) 184:16;200:18 broader (2) 138:8;161:24 broken (1) 141:7 Brook (6)	72:23;73:3,14; 76:12;77:1,2 brought (2) 169:13;205:13 buffer (2) 193:23;194:1 build (1) 151:11 Building (6) 139:13;140:15,16; 141:6,12;176:2 buildings (1) 36:12 built (2) 27:24;161:5 bullet (2) 154:6,23 bulleted (1) 63:8 business (2) 5:2;120:23 busy (1) 127:20 butterfly (2) 185:15;186:23 button (1) 5:7 buy-in (2) 184:2,4	22;79:9;80:17,17,22; 81:2,7;82:22,24; 86:22;88:4,11,12; 89:11;91:18;92:15; 97:12,16;98:3,5,16; 100:1;101:13; 104:20;105:22; 108:11;115:2;117:9; 121:6,22;122:6; 124:22,24;126:21; 128:20;137:11; 141:3;143:3,22; 146:23,24;148:5; 149:2,17;150:9,20; 151:18;152:21; 153:20;156:1; 161:18;164:1;165:8; 166:11,15,22;169:6; 170:5;176:22; 177:10;179:23; 181:20;183:20; 184:1;190:4,21; 192:23;195:13,22; 201:18;206:2;212:8; 213:19,21 canoeist (1) 128:1 canoes (1) 127:19 canopy (6) 68:19;69:13,14,15, 17;94:6 capacity (1) 5:14 car (1) 92:18 care (2) 10:16;182:14 career (1) 130:24 careful (1) 181:19 carefully (2) 124:3;199:4 Caribbean (2) 83:5;86:9 cars (1) 29:18 case (13) 102:6,22;113:3; 122:20;146:24,24; 148:2;151:2;154:4; 165:21;166:1; 170:21;181:13 case-by-case (1) 163:6 cases (2) 155:17,18 casting (1) 114:2 categorically (1) 51:18 categories (1)
			C	
				cadets (1) 43:4 California (1) 130:24 call (3) 100:7;147:20; 154:6 called (7) 10:12,18;78:18; 136:5;156:20;158:7; 198:14 came (8) 33:5;76:1;139:11; 164:4;175:11;176:2; 181:23;204:21 campers (1) 127:22 campground (5) 43:19;44:4;46:13; 47:14,21 campgrounds (5) 43:23;44:6,8,16,22 camping (2) 44:22;47:13 can (97) 5:6;8:14,15;11:6; 13:5;14:9;15:6,16; 24:10;28:3;34:11,16; 49:10;52:17;59:16; 64:11;65:8;72:11; 75:9,10,13,18;76:17,

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

162:22 categorized (1) 120:9 categorizes (1) 61:23 category (1) 108:21 catered (1) 4:13 caught (1) 147:16 causality (1) 171:10 cause (3) 78:15;171:14; 182:18 causes (1) 183:1 causing (1) 171:18 cautioned (1) 4:19 celebrate (1) 35:18 cell (4) 167:21;168:2; 170:16,18 cells (3) 89:5;94:9,11 census (2) 132:24;133:1 Center (4) 127:13,22;178:15; 189:10 certain (8) 18:7;50:11;80:1; 85:21;155:11;161:9, 11;194:12 certainly (4) 80:5,6;157:18; 206:18 cetera (6) 58:11;127:14; 137:1,2;157:3; 183:12 chain (1) 180:22 Chair (4) 87:8;145:8,8; 210:12 Chairman (12) 4:7;176:11,13,14; 186:1,11,22;189:4,7; 193:3;197:5;214:3 challenge (1) 87:11 chance (2) 116:5;130:2 chances (1) 75:11 change (11) 27:2;100:14,20,21; 110:10;130:9;	145:13;154:8;169:9; 171:21;199:9 changes (1) 201:5 chapter (1) 128:4 character (2) 135:14;152:9 characteristics (10) 14:9;100:15,22; 124:8,10,11;125:4; 129:10,16,23 characterize (2) 48:14;202:3 characterized (1) 20:17 characterizing (1) 18:16 chart (2) 185:15;190:3 check (2) 91:5;92:16 checking (3) 91:14,19;99:6 chestnuts (1) 136:7 choice (1) 130:7 choose (3) 28:3;47:23;158:18 chopping (2) 78:14,21 cinderblock (1) 176:2 circle (1) 129:2 circumstance (1) 146:20 circumstances (1) 146:21 citation (1) 197:19 cite (1) 209:3 cited (1) 35:7 citing (1) 209:10 citizen (1) 181:1 citizens (2) 51:17;179:17 Citroën (1) 132:1 clarification (1) 101:3 clarify (1) 53:8 clear (4) 27:2;33:4;118:24; 209:12 cleared (1) 156:10	clearest (1) 53:2 clearing (1) 13:19 clearly (13) 4:9;55:1,8,12,14, 20;57:23;58:1,3,9; 93:3;164:10;171:22 clients (1) 181:11 climb (1) 130:13 close (14) 5:24;8:13;15:10; 29:2;72:24;75:8,19; 79:20,21;92:23; 101:19;177:21; 213:5,23 closed (1) 42:23 closer (4) 56:9;157:16;204:2, 7 closest (1) 187:17 cloud (3) 102:10;143:21,22 clouds (1) 102:11 cloudy (1) 112:20 coated (2) 11:21,24 cocktails (1) 83:11 coding (3) 97:14;99:24;100:2 collect (1) 82:1 collective (3) 30:10;32:3,24 collectively (1) 33:10 College (2) 5:21;174:13 co-location (1) 167:21 Colony (1) 167:2 color (4) 97:14;98:5;99:24; 100:2 colored (1) 90:24 colors (3) 97:11,13,15 column (1) 37:17 combined (1) 88:19 coming (8) 101:15;112:5; 143:23;145:20;	164:6;191:3;205:18; 212:14 comment (2) 10:16;59:9 comments (2) 12:13,22 commercial (2) 130:22;131:3 Commission (1) 207:6 commitment (2) 8:9;206:14 Committee (18) 5:18;16:14;24:10; 25:3,9;34:16;87:7; 125:1,19;126:16; 127:9;145:5;146:1, 18,21;189:3;213:12; 214:3 Committee's (3) 6:17;7:1;161:24 common (3) 121:13;156:7,8 communicate (1) 84:18 communities (1) 114:19 community (11) 10:23;115:12; 123:7;149:21,22,23; 162:8;175:4,6; 178:15;180:6 community-based (2) 181:18;184:16 community-requested (1) 175:17 community-type (1) 67:6 company (1) 199:5 company's (1) 131:20 compare (1) 196:19 compared (1) 67:7 comparison (5) 28:22;44:9,21; 45:3,6 compass (1) 57:15 compatibility (1) 53:19 complaining (1) 32:7 complete (7) 98:18;105:14,20; 147:18;149:11; 207:11;210:5 completed (4) 47:7;120:11;122:8; 175:15 completely (3)	106:12,12;158:23 completing (1) 147:7 completion (2) 6:8;199:10 comprehend (1) 57:4 conceivably (1) 118:2 concept (1) 173:13 concern (2) 79:5;176:20 concerns (1) 176:22 conclude (1) 91:9 concluded (3) 30:2;58:17;59:2 concludes (1) 18:18 concluding (1) 50:21 conclusion (19) 9:3,10,20;18:6; 42:14;50:11;58:21; 60:4;82:16;87:19; 107:16;132:17; 146:11,16;147:4; 161:6;164:7;200:18, 23 conclusions (7) 50:17;65:15;66:16; 81:21;87:4,17; 145:24 condition (2) 18:14,20 conditions (2) 58:11;75:5 conduct (1) 149:9 conducted (2) 125:2;206:23 cone (1) 74:17 confer (1) 168:21 Conference (2) 167:12;211:15 confident (3) 92:22;93:5,8 configuration (1) 204:3 confirmed (1) 192:14 confused (2) 150:18;180:12 congregating (1) 177:16 conservation (10) 10:20;51:23;100:5; 133:8;138:1;139:8; 164:20;172:17;
--	---	--	---	--

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

198:13;207:5 conservatism (1) 168:24 conservative (1) 113:15 conservatively (1) 69:21 conserve (1) 52:20 consider (20) 18:8;25:18,22; 26:3;35:3;50:13; 54:10;57:17;62:2; 67:1,4;81:12;83:14, 17;86:12;106:19; 108:24;141:1; 164:24;206:14 consideration (3) 37:9;132:22;166:8 considerations (2) 61:5;140:24 considered (19) 34:21;39:24;40:11; 64:4;66:22;108:15; 120:21;133:13; 141:12;164:6;165:3; 168:9;169:11;170:5; 171:17;172:20; 173:23;204:1;208:5 considering (1) 87:13 consistency (1) 91:3 consistent (6) 91:10;98:14; 146:23;191:6;192:8; 197:11 consistently (1) 95:16 constantly (1) 28:24 constitutes (2) 57:16;60:2 constructed (1) 122:4 construction (1) 199:10 contacted (1) 194:14 contain (2) 51:5;124:16 contained (1) 7:2 containing (1) 124:13 contemplative (1) 178:23 contested (1) 184:9 continue (1) 154:4 continues (2) 64:7;108:10	continuing (2) 45:21;91:6 contours (1) 186:20 contradicted (1) 14:17 contrast (6) 43:19;54:3;58:6,8; 152:21;153:1 contrasted (1) 23:12 control (2) 8:2;198:11 controlling (1) 21:20 conversations (1) 148:21 cookie (1) 4:10 copies (1) 126:19 copy (1) 156:17 corner (1) 11:13 Cornish (1) 166:19 Corps (2) 182:23,24 corrections (1) 7:5 correctly (4) 7:22;79:11;119:11, 11 cough (1) 53:14 counsel (2) 125:18;209:10 counted (1) 157:7 counting (1) 98:10 country (3) 45:7;130:23; 183:23 countryside (1) 108:15 couple (11) 33:17;80:14;90:5; 122:6;124:22;142:9; 145:22;151:3; 153:14;188:20; 196:17 course (7) 40:19;44:1,18; 111:14;143:19; 158:12;187:17 Court (7) 4:19;11:5;65:9; 142:18;145:15; 153:17;156:9 covered (2) 63:4,12	covering (2) 63:11;92:2 covers (1) 172:3 create (7) 14:7;115:20;118:5; 149:11;151:1,6,24 created (3) 118:9,10;147:15 criteria (11) 60:7;94:7,14; 118:23;137:20; 138:4,8;155:18; 163:15;164:5;173:7 criticized (2) 116:20;123:15 critique (2) 40:8;201:23 critiqued (1) 50:14 cross (7) 15:3,5,18,24; 205:13;206:20; 210:10 cross-country (10) 35:8;36:8,9,11,18; 37:4;41:1,4,8;135:20 cross-countrying (1) 36:21 crosses (1) 165:16 cross-examination (13) 15:1;17:1;32:8; 64:13;72:5,19;80:11; 87:11;110:7;114:14; 119:18;204:22;211:2 cross-sections (4) 12:16,24;13:2,7 Crotched (1) 79:10 cultural (2) 168:13;170:11 cumulative (6) 56:2,4,7,12;57:16, 18 curious (6) 74:2;96:22;104:7; 108:11;172:10; 173:11 current (3) 22:15;127:7;204:3 currently (6) 18:21;19:15;28:5; 29:6;71:14;204:16 curvilinear (1) 152:11 customized (1) 147:22 cut-and-paste (1) 14:6 cut-off (4) 104:1,2,5,6	D	deeply (1) 127:12 define (1) 80:18 defined (5) 68:24;69:2;108:19; 171:16;194:21 defines (2) 108:13;144:24 defining (1) 64:5 definitely (1) 195:14 definition (8) 52:3;56:4;141:24; 162:2;197:8,12,15,20 definitions (1) 198:23 degree (2) 5:20;160:19 degrees (2) 56:8,15 delivered (1) 4:10 DEM (2) 89:5,7 demarcation (1) 144:5 demonstrate (1) 10:8 dense (2) 68:3;94:6 denying (1) 159:10 DEP (2) 198:16,22 Department (3) 52:24;198:10,12 depend (3) 16:8;27:11,15 depending (4) 138:19;177:9; 196:3,11 depends (14) 58:6,10;95:12; 101:9;106:22;121:5; 159:16;172:15; 173:2;174:5;177:10; 191:8;196:8;210:7 dePierrefeu-Willard (1) 20:20 deputy (1) 171:13 derive (1) 167:17 describe (15) 66:9;80:23;83:7; 97:13;98:6;101:8,14; 127:17;135:16,19; 136:6;137:22;153:9; 190:21;191:4 described (9) 80:24;122:2;129:5,
---	---	--	----------	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

15;152:20;153:16, 19;156:16;192:15 describes (4) 47:5;129:1;148:1,2 description (14) 39:7,10,15;50:15; 62:8;120:24;124:4,7, 9,13;134:14,17; 136:4,10 descriptions (4) 37:15;149:5; 152:10;154:14 designated (7) 23:15;31:9;46:4; 133:10;137:21; 164:24;197:13 designation (7) 169:17,17;170:4, 23,24;171:3,10 desk (1) 157:17 desktop (1) 134:20 detail (9) 59:13,17;125:7; 135:24;148:6,24; 153:20;171:2;201:22 detailed (4) 38:19;39:6,15; 176:3 determination (8) 24:10;34:13,16; 63:21;81:11;146:7; 150:8;200:20 determine (6) 59:23;90:14,21; 118:3,16;150:4 determined (5) 8:4;13:1;65:8; 68:24;150:13 determining (6) 60:1;62:19,22; 64:5;86:20;172:7 developed (7) 12:24;21:12;81:22; 148:3,20;151:2; 157:2 development (6) 18:21;19:2;21:1, 16,20;90:23 device (1) 205:3 devoted (1) 137:24 diameter (9) 78:9;101:21,24; 102:6;103:3;104:10, 12,16,22 diameters (6) 78:12;101:5,6,13; 102:20;103:11 dictate (1) 165:9	dictionary (1) 108:13 differ (1) 31:23 difference (5) 39:17;59:21; 120:13;177:4;182:2 differences (2) 121:6;202:1 different (39) 21:21;23:7;31:13; 36:13;37:1,16;52:2; 61:20;66:5;69:10; 78:3;79:19;94:7,14; 96:8,9;97:15;112:13; 114:6,7;120:10; 121:3;132:21; 152:18;153:24; 154:2,3,19;163:7; 174:3;175:10;181:6; 183:5;188:1;191:21; 193:13;201:13; 202:4;203:11 differentiate (2) 99:15,22 differentiation (1) 100:10 differing (2) 34:23;111:4 difficult (1) 145:18 diffused (2) 68:22;78:13 Digital (3) 89:7;90:24;188:23 DIR (3) 172:6;174:16; 188:22 DIRECT (5) 4:22;73:8;92:8; 105:5;106:3 direction (2) 56:21;178:2 directions (2) 57:15;178:15 directly (5) 22:12;87:15,16,22; 102:16 disagreement (1) 60:15 discount (3) 102:24;194:24; 195:2 discounted (2) 195:13,21 discounting (2) 180:17,23 discrepancies (1) 91:7 discrete (1) 38:14 discuss (5) 24:12;53:19;57:19;	84:24;135:19 discussed (1) 176:8 Discussion (11) 72:1;76:19;77:23; 87:5;110:18;122:16; 125:3;139:18;189:3; 205:21;213:12 discussions (1) 163:11 dislike (2) 114:20;115:11 distance (6) 55:6;101:20; 103:10;143:23; 144:3,10 distances (1) 102:3 distant (1) 97:12 distinct (1) 93:2 distinction (2) 141:19;177:2 distinguish (1) 161:20 districts (1) 170:9 disturbed (1) 195:23 docket (3) 6:14,22;7:13 document (35) 19:5;23:21;25:5; 33:1;34:6;37:10; 38:7,21;44:12;46:24; 49:1;54:6,21;62:5; 67:8,19;73:6,22; 82:12;89:19;100:3; 120:3,6;124:20; 135:23;166:12; 185:13,20;186:3,20; 188:5,12,23;191:19; 201:6 documentation (2) 104:18;164:21 documentations (2) 104:9,20 documents (4) 12:16;17:11;31:11; 104:24 dollars (1) 139:6 done (20) 16:16;26:24;27:4; 66:8;104:21;121:19, 23,24;151:9,10; 155:3;157:1;163:6; 181:12;182:11; 184:23;187:9; 196:19,23;205:16 double (2) 15:8;115:20	double-check (1) 213:21 doubles (1) 201:3 doubt (2) 196:5;210:13 down (23) 11:6;23:19;76:23; 83:6;93:16;97:7; 98:12;99:10;119:11; 122:10;132:1; 151:14,15;154:4; 156:5;160:11,13; 162:15;163:19; 178:7;197:12;198:5; 201:3 dozens (2) 116:16;118:4 Dr (7) 166:4,5;169:4,5,8; 172:1,2 draw (6) 53:20;87:4;129:2; 141:19;165:8;177:2 drawing (2) 50:17;66:15 drawn (1) 146:15 draws (1) 65:15 drive (3) 92:17;149:3; 150:12 driving (2) 92:22;164:11 drove (1) 91:20 due (1) 208:23 duly (1) 4:19 Dupee (10) 145:6,7,9,16; 147:12;153:18; 157:15,18,20;199:3 duration (4) 37:14,17;207:23; 208:13 during (11) 37:8;40:17,18; 42:3,9,19;44:1,18; 151:23;176:7;205:9	14;162:23;164:4; 168:11 early (2) 71:9;113:5 easement (4) 172:11,13;173:22; 174:14 easements (4) 10:21;17:18; 172:17;174:10 easier (3) 126:5,13;182:15 easily (1) 166:12 east (9) 11:16;56:24;77:2; 97:7,8,8;101:22; 103:1;160:10 economic (1) 90:8 economists (1) 167:13 edge (1) 157:17 educational (1) 144:2 effect (25) 30:19;68:23,23; 89:3;100:21;101:7,7, 14;102:21;103:4; 106:21;117:8;118:6; 119:6;122:22; 132:18;161:21; 162:3;184:14; 188:12;194:24; 195:5,11;196:14; 202:13 effective (1) 155:1 effectively (1) 180:16 effects (7) 54:15;71:13;93:13; 154:8;161:3;199:9; 201:4 efficiency (1) 88:15 eg (2) 40:15;107:21 Eiffel (1) 132:2 eight (2) 77:9;166:23 either (10) 7:6;37:18;77:20; 81:16;115:4;125:14; 126:19;164:18; 196:20;208:4 electronic (4) 25:4;67:18;73:22; 185:20 electronically (2) 88:20;186:19
		E		
		eardrums (1) 53:16 earlier (17) 50:10;80:16;97:24; 98:1;107:18;113:14; 114:16;115:18; 116:19;119:17; 145:23;159:6;161:2,		

DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
 SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS

element (1) 115:19	121:10;133:13,17; 140:19;153:8;	26:10	28:2	extremely (4) 131:12,13;197:21, 23
elements (1) 152:14	159:16;162:18; 163:21;178:20	eventually (2) 108:1;146:2	existing (11) 18:14,20;55:1; 93:1;105:12,19; 106:8,11;148:3; 149:1;204:16	eyes (1) 57:3
Elevation (1) 89:8	entirely (2) 18:20;49:22	evergreen (1) 193:24	exists (2) 56:20;82:7	F
elevations (1) 13:2	entirety (1) 58:14	everybody (8) 15:4;67:14;84:10; 183:24;186:18; 206:5;210:7;213:18	Expanded (3) 8:18,23;9:2	FAA (2) 8:4;204:14
eliminate (2) 8:12;193:12	Environmental (4) 5:22;53:1;198:10, 12	everybody's (2) 123:3;183:17	expect (12) 19:11,22;20:1,3; 21:2,4,15;47:14,23; 191:13;207:23; 209:14	facade (1) 170:13
Elm (1) 127:4	envision (1) 165:12	everyday (2) 112:14,22	expectation (8) 18:24;19:17;20:1, 22;21:3;22:14;50:22; 137:16	face (1) 85:7
else (8) 84:18;99:21; 132:14;140:3;167:3; 181:24;211:11;212:4	epilepsy (1) 193:1	everywhere (1) 94:4	expectations (3) 136:15,20;207:18	facility (9) 153:21;154:11; 155:11;156:22; 161:4;165:14;177:7, 9;205:3
emphasis (1) 60:20	equivalent (1) 81:12	evidence (1) 192:24	expected (1) 208:13	facility-general (1) 161:10
emphasized (1) 60:10	error (3) 171:2,9,9	evident (1) 164:11	experiencing (1) 19:20	fact (10) 10:23;60:4;122:14; 158:4;161:3;163:2; 165:5;168:2;170:19; 183:1
Empire (4) 139:13;140:14,16; 141:11	escape (1) 21:12	exactly (9) 14:15;93:24; 131:21;154:13; 160:21;178:14; 179:1;192:17;201:11	experience (22) 19:1;27:5,6,7; 36:23;47:10;49:23, 24;67:5;78:18;80:7; 110:10;112:9; 137:17;158:22,23; 159:2;160:20; 172:22;175:16; 179:9;190:17	factor (4) 90:8;94:18,22; 179:6
employed (4) 5:13,14,15;205:3	especially (1) 71:9	exaggerate (1) 14:2	experiences (1) 196:12	factors (13) 18:9;37:12,16; 39:21,23;50:14;58:2; 64:20;112:15,24; 132:21;152:18;179:8
en (2) 133:20,24	essentially (12) 8:11,15;88:23; 92:18;94:3,24;96:23; 97:1,4;113:15; 153:21;156:7	EXAMINATION (4) 4:22;39:13;203:4; 205:10	expert (2) 184:12;209:9	facts (9) 9:19,21;19:9;87:3; 88:9,10;123:6; 145:24;163:23
enclosed (1) 175:23	established (2) 47:14,21	examine (1) 59:12	expertise (2) 183:3;184:23	factual (2) 65:2,11
encounter (2) 19:18;20:11	estimate (4) 15:4;16:1;72:12; 212:1	example (8) 66:1;85:19;139:22; 158:11;165:12; 173:20;175:19,20	explain (5) 60:15;75:13;80:18; 110:9;190:6	failing (1) 123:16
encountered (1) 20:8	estimated (1) 16:10	Examples (2) 64:3;190:22	explaining (1) 114:11	fair (9) 64:14;133:22; 134:3;135:18;137:6; 139:21;181:3;185:6; 202:3
encountering (1) 128:2	et (6) 58:11;127:14; 137:1,1;157:2; 183:12	excellent (1) 135:17	explanation (1) 111:5	fairly (5) 93:8;95:16,24; 140:8;197:11
end (5) 56:11;78:24;82:6; 107:14;159:14	Europe (7) 208:5,10,11,18,18, 19;209:11	except (4) 8:12;38:2;97:1; 170:24	explore (1) 161:13	fall (3) 170:21;189:21,23
endangered (1) 173:18	evaluate (3) 67:21,24;153:22	excerpt (1) 51:6	expressed (1) 135:7	familiar (3) 140:2,4;173:3
ends (1) 149:7	evaluated (5) 65:17,18;154:7; 161:12;199:8	excludable (1) 63:13	extend (1) 101:20	fan (1) 83:5
energy (2) 6:4;119:23	evaluating (4) 125:5;161:2; 170:10;201:4	Excuse (3) 72:6;90:16;169:6	extended (1) 91:23	far (8) 46:1;54:11;55:9; 87:18;97:21,24; 193:2;201:21
Engineers' (1) 182:23	evaluation (1) 154:11	excused (1) 210:1	extensive (1) 91:18	Farm (13) 11:17;55:1,3,7,19; 56:19,21;57:1,14,22;
England (2) 59:6,6	Even (23) 7:20;29:2;44:22; 45:21;63:4;66:2; 71:13;87:18;96:5; 98:10;101:20;112:3; 117:6;138:20;139:8; 141:13;149:22; 174:12;175:10; 182:24;193:12; 196:6;199:11	exercise (1) 151:8	extent (1) 16:9	
enjoy (4) 61:13,21;83:2; 159:24	event (1)	exhibits (3) 6:8;82:2;126:8	extra (1) 104:15	
enjoys (1) 85:20		existence (1)		
enough (2) 68:22;181:3				
enter (2) 114:3,4				
entering (1) 78:14				
entire (19) 30:11;31:4;44:1, 18;58:21;64:8;66:6; 69:16;75:16;117:21;				

DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
 SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS

122:10;153:22; 172:24 farms (4) 56:19;114:17,19; 204:17 fast (2) 96:7;198:20 faulting (1) 35:2 fear (1) 75:15 feature (1) 93:2 featured (1) 48:12 features (2) 108:14;151:13 federal (6) 52:19,22;89:14,24; 173:3,10 feel (3) 31:1;33:7;86:17; 164:7;171:8;190:23 feeling (1) 149:4 feelings (2) 88:13;163:24 feet (12) 14:1;74:24;77:9; 89:4;95:5,10;103:11, 15,20,24;104:15,19 fellow (1) 166:19 few (13) 33:9;39:21;48:14; 95:14;98:15;128:17; 133:10,18;162:12; 163:4;164:23;165:4, 8 fewer (3) 40:18;123:9; 162:24 field (7) 91:13,19;92:16; 98:3;99:6;150:12,24 field-check (1) 90:2 Fields (3) 10:12,18;11:1 Figure (14) 24:13,15;26:7; 74:11,14,16;78:6; 111:10;150:10; 155:4;184:24;187:7; 188:14;195:17 figuring (1) 146:8 file (1) 183:11 filed (2) 7:12;127:1 files (1) 12:20	filtered (1) 38:15 final (5) 146:17;164:7; 184:24;185:1;203:23 finally (1) 89:7 find (17) 25:3;45:19;63:16, 16;80:24;115:5; 140:10;143:2;149:3; 160:15;166:15; 174:8;183:7;184:14; 186:2;191:21;197:7 finding (2) 132:12,16 findings (2) 60:16;132:14 fine (4) 77:17,22;88:7; 108:20 fingers (1) 57:5 firm (1) 194:11 firms (1) 183:5 First (11) 10:17;23:11;68:15; 81:5;105:10;106:1,6; 127:11;146:16; 182:20;194:21 firsthand (2) 135:4,6 fiscal (1) 168:23 Fish (4) 52:14,18;53:9,12 fishing (9) 41:24;43:12;52:11, 13;128:3;129:6; 135:21;137:23; 158:11 five (8) 6:3;107:11;151:15; 181:23,24;182:2; 191:24;192:1 flash (2) 79:16,23 flashing (3) 29:7,12,15 flaws (1) 14:21 Flicker (54) 6:11;67:10,22,24; 68:2,7,23,23;69:2,19; 70:3,4,17,20,20;71:8, 13;75:14,19;78:6,8, 10,16,19;101:1,18, 23;103:23;111:13,16, 19,23;112:10,17,19, 21;114:2,6;144:3,9, 12,13;185:10,15;	190:15;192:5,23; 194:21,21;195:5; 207:15,19,24;208:6 flickering (4) 103:3,16;191:3; 192:22 flickers (1) 68:20 flight (1) 28:17 flights (1) 205:17 float (1) 191:2 flying (1) 28:24 focus (1) 59:14 focused (3) 6:2;35:5;145:24 focusing (1) 17:7 folks (14) 21:4;31:1;41:7; 43:7;72:21;81:10; 84:11;133:16; 148:21;177:15; 180:5;184:3;195:5; 196:5 follow (5) 147:20;148:16,19, 22;183:19 followed (3) 122:5;146:23; 147:4 following (2) 64:6;148:9 follow-up (1) 83:23 foreground (3) 142:23;143:6,8 forest (15) 60:24;68:1,8,12,14, 19;70:5,7;75:1; 94:16,18,21;95:10; 173:4,4 forested (5) 61:4,7,10,15;89:6 forester (3) 95:8,13;96:7 Forestry (2) 5:22;96:16 forests (1) 95:20 forever (1) 22:15 form (8) 22:15;54:4,8; 130:19;152:12; 171:18;204:8;206:17 former (1) 127:6 found (5)	10:19;12:3;112:23; 118:11;189:21 four (11) 57:15;66:2;72:24; 98:7,8;99:4;181:23; 182:2,15;191:23; 192:1 fragment (1) 212:13 frame (2) 54:2;190:14 frames (3) 111:18;112:4; 113:11 Frances (2) 125:23;127:4 Francie (2) 48:22;49:3 Franconia (1) 140:5 frankly (1) 12:2 frequency (5) 191:7,12,18; 204:24;205:18 frequent (1) 90:6 Froling (4) 15:11,12;185:22; 200:5 front (4) 114:3;128:13; 153:5;154:7 Frost (1) 166:17 frozen (3) 36:22;37:4;83:11 full (7) 16:19;68:19;69:13, 14,15,16;186:6 fully (3) 65:16;135:16; 209:14 funded (1) 130:12 fundraising (1) 127:13 further (15) 64:4;71:19;87:6; 102:5;159:7;160:10; 166:2;174:17;176:8; 178:10;181:2; 193:17;201:13; 202:17;209:19	60:3;62:21;63:22; 64:15 gather (3) 59:11,15;178:13 gathered (2) 81:21;152:5 gave (4) 34:17;64:24; 132:13;180:15 geared (1) 24:8 gears (2) 145:19;199:1 GEIGER (44) 4:15,23;6:16,20, 24;7:4;11:23;14:24; 31:19;32:7;33:15; 49:4;51:1;63:2,24; 73:7;75:24;76:4,9; 85:15;87:1;128:5; 139:16;140:21; 145:23;185:18; 186:15,17;188:19; 189:6;203:1,3,5; 205:6;206:2,13; 209:1,7,15,19;210:6; 212:12,23;214:4 general (15) 44:9;58:24;80:14, 14;95:11;106:12; 111:18;114:22; 121:9;148:22; 190:14;196:20; 205:14,21;208:8 Generally (12) 40:22;56:14;61:7, 10,15;82:22;111:23; 179:13,13;192:12; 197:20;205:7 generic (4) 45:2,6;154:11; 161:10 germane (1) 87:15 gets (4) 79:20,24;173:9; 181:2 GIS (2) 151:7;157:2 GIS-based (1) 150:9 given (9) 30:8;125:8;129:4; 130:10;137:18; 138:4,12;184:13; 192:5 gives (5) 39:10,14;79:5; 113:10;136:10 giving (1) 185:23 glass (1) 113:16
		G		
		gain (1) 64:11 gained (1) 65:6 Game (7) 52:15;53:9,12;		

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

global (1) 162:15	114:19	105:10,14	help (12) 16:16;69:9;80:17; 90:14,21;93:10; 111:15;113:22; 125:19;148:16; 151:18;190:22	10;168:8,12;169:14, 17,23;170:8,12,19; 171:12,13,15,15,19; 193:20;207:4
goal (1) 160:15	grid (2) 89:5;94:8	Hampshire (25) 8:6;17:6;27:6,8; 44:20;45:8;48:13; 50:2;53:1,3;127:5, 23;139:19;140:6; 144:23;145:1;158:7; 166:13;169:22; 172:18;179:21; 182:5;196:22;197:2; 204:17	helped (3) 151:2;190:6;207:7	history (1) 20:12
goes (8) 14:18;16:23;79:16; 87:19;153:8;155:22; 172:23;201:12	gross (2) 133:20;134:1	ground (6) 63:4,11;68:21; 70:1;143:23;176:18	helpful (2) 76:1;189:20	hit (1) 170:7
golf (1) 143:19	group (1) 37:14	group (4) 129:7;136:2; 206:22;207:2	helping (1) 170:11	Hmm-hmm (4) 30:17;53:23;144:1; 160:16
golfer (1) 143:10	grow (5) 27:21;96:8,9; 108:10;114:17	grown (1) 115:11	helps (1) 151:20	hold (3) 15:7;50:7;88:12
Good (13) 4:24;16:20;17:3,4; 83:12;84:12;95:22; 110:14;111:14; 123:1;145:10;182:4; 186:14	grow (5) 27:21;96:8,9; 108:10;114:17	grown (1) 115:11	Here's (3) 76:11;102:18,19	holding (1) 57:5
Goodhue (2) 43:10;124:9	guarantees (1) 104:18	Guariglia (22) 4:6,18,21;5:2,5,13; 6:5,12;11:5;17:3; 67:21;71:20;73:17; 76:5;114:16;117:17; 145:10;176:15; 186:10;203:6; 209:24;212:8	Hey (1) 9:11	holistically (1) 162:21
gotcha (1) 84:21	guaranties (1) 104:18	Guariglia's (3) 6:17;7:1;24:21	hierarchies (1) 179:10	home (6) 73:1;74:24;79:7; 80:7;110:4;166:17
government (6) 51:19;89:14,24; 172:10;177:3,3	guess (20) 44:17;71:4;88:22; 89:17;90:14;92:7; 99:9;111:11;118:24; 119:17;120:18,21; 125:9;126:3;133:19; 137:11;140:9; 148:13;185:21; 192:21	Guariglia's (3) 6:17;7:1;24:21	hierarchy (4) 52:6;138:13; 163:16;180:11	homes (2) 17:21;170:19
governmental (2) 51:16;138:6	guidance (2) 179:12;198:6	guess (20) 44:17;71:4;88:22; 89:17;90:14;92:7; 99:9;111:11;118:24; 119:17;120:18,21; 125:9;126:3;133:19; 137:11;140:9; 148:13;185:21; 192:21	high (12) 10:8;11:19,20; 16:12;98:4;151:22; 168:23;196:10; 210:10;211:14; 212:15;213:2	honest (1) 201:8
GPS (4) 10:24;150:18,20; 151:16	guide (3) 34:11;81:7;147:16	Guariglia's (3) 6:17;7:1;24:21	highly (9) 18:7;20:15;50:12; 61:2,17;91:10;123:8; 133:1;164:10	honestly (5) 9:18;75:4;125:16; 142:24;172:21
grab (2) 88:12;151:16	guideline (1) 180:2	Guariglia's (3) 6:17;7:1;24:21	high- (1) 151:16	honoring (1) 127:6
graceful (1) 115:6	guidelines (2) 161:19;208:9	guess (20) 44:17;71:4;88:22; 89:17;90:14;92:7; 99:9;111:11;118:24; 119:17;120:18,21; 125:9;126:3;133:19; 137:11;140:9; 148:13;185:21; 192:21	higher (5) 101:16;130:14; 180:22;188:2,3	hook (1) 84:20
gradations (1) 187:15	guides (1) 48:12	guidance (2) 179:12;198:6	highlighted (1) 40:23	hope (1) 88:1
Granite (1) 10:21	guy (1) 46:22	guide (3) 34:11;81:7;147:16	highly (9) 18:7;20:15;50:12; 61:2,17;91:10;123:8; 133:1;164:10	hopefully (1) 146:3
graph (1) 111:22	guys (2) 46:12,21	guideline (1) 180:2	High's (1) 210:4	hoping (2) 164:2;211:5
Great (7) 52:9;101:20; 135:24;158:7; 168:14;202:11; 212:23	habitat (2) 173:17;174:2	guidelines (2) 161:19;208:9	hike (3) 43:2,5,9	hot (1) 127:20
greater (10) 51:15,20;101:6,13; 102:20;158:8; 187:18,19,20;189:22	half (8) 16:2,5,10;71:23; 105:17;106:7;192:2; 210:21	guides (1) 48:12	hiked (1) 159:13	Hotel (1) 167:9
green (6) 99:14,19;100:5; 193:5,6,7	half-mile (2)	guy (1) 46:22	hikers (2) 38:15;129:3	hour (5) 16:6,10;71:23; 112:2;210:22
Greenfield (10) 44:3,10;46:9,13; 47:2,6,12,19;48:7; 180:14		guys (2) 46:12,21	hiking (11) 27:20;35:8,23; 38:1,2;48:12;49:17, 18;129:6;135:20; 138:2	hours (14) 16:2,14,19;111:13; 182:1;187:16,18,21; 188:9;189:24;190:5; 208:1,11,14
Gregg (19) 29:8,9,12,15,18; 41:9,14,17,23; 124:10;176:22; 177:10,17,20;180:7, 7,17,23;185:2			Hill (9) 43:10;58:8;90:7; 93:4;98:12,24;99:1; 124:9;127:4	house (25) 69:11;70:2;72:23; 75:5;78:11,15;103:4; 110:12;111:12,19,23; 113:16,16,23,24; 114:2,4;167:4,6; 169:23;189:16; 190:10,13,14;193:20
grew (1)			Hills (1) 92:20	houses (11) 17:19;29:18;93:16; 151:15;158:21; 167:4;170:8;190:3,
	H		himself (2) 14:17;87:10	
		hearings (1) 213:6	historic (19) 166:13,23;167:4,	
		hedgerows (1) 93:20		
		height (4) 89:5;95:2,2,3		
		held (4) 159:23;172:12,17; 177:8		

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>17;194:8;195:9 HOWE (2) 211:16,23 hugging (2) 135:22;136:6 humanly (1) 152:3 hundred (5) 13:17;77:9;163:3; 165:4,9 hundreds (1) 96:1 hunting (2) 172:23;173:1 huts (1) 43:15 hybrid (3) 120:15,22;121:24 hypothesis (5) 82:6,7,9,11,16 hypothesizing (2) 144:4;165:20 hypothetical (1) 140:12 hypotheticals (1) 145:17</p>	<p>75:14 ignore (1) 60:12 ignores (2) 60:21;66:16 illustrate (1) 187:10 illustrates (1) 190:16 imagery (3) 90:3,4;91:1 imagine (2) 43:4;96:10 immediate (3) 57:1,1;126:15 immediately (1) 163:9 impact (99) 6:2,10;9:4,13;17:8, 13,15,21;23:5,6,8,9; 24:6,11,22;25:8; 27:11,14;29:20;30:1, 3,10,13,21,23;31:2, 17;32:4,13,20,22,24; 33:13,23;34:4,9,12, 17,18;40:2,5;45:16; 57:16,18;58:15,18; 59:3,23;60:2;62:16, 20;64:6;65:21;66:13; 67:21,24;75:16; 80:15;81:8;87:20; 108:17;116:24; 117:22;118:14,16,21; 119:13,24;120:2,9; 121:7,9;138:15; 140:17;146:9; 147:18;161:7,8; 162:3,7,10,14,18,19; 163:1,20;165:7; 170:10;181:5,5,15, 17;185:5;199:6,14, 16;201:19;202:10; 209:4 impacted (8) 22:12,12,17,19,22; 124:18;150:1;160:18 impacts (24) 7:22;30:7;32:3; 33:5,8;43:22;56:2,5, 7;59:10,21;62:22; 87:13;120:16;121:4; 122:1;123:2;133:15; 180:17;181:19; 184:12;190:8; 198:18;203:17 impaired (1) 142:21 implemented (1) 106:5 implying (1) 107:23 import (1) 151:13</p>	<p>importance (12) 10:23;52:5;138:5, 21;167:15,17;168:15, 21;177:5;179:5,6; 180:3 important (16) 36:7,16,23;59:12; 67:4;137:1;138:24; 141:21;149:15,21; 155:13;164:21; 165:10;168:10; 170:7;192:7 Importantly (1) 164:17 imposed (1) 98:11 impossible (1) 51:22 impression (1) 211:24 improving (1) 168:4 inaccuracy (1) 10:8 include (16) 13:7,16;14:8; 37:12;60:19;62:9; 93:13,18,20;95:6; 119:4;149:6;151:18, 20;167:1;175:4 included (3) 46:23;92:16; 175:17 includes (3) 37:13;129:6; 176:23 including (3) 8:5;137:22;167:4 inconsistencies (1) 91:12 inconvenience (1) 196:2 incorporated (1) 89:4 incorrect (1) 38:17 Independence (1) 167:6 independent (1) 168:19 indicate (2) 42:23;44:15 indicated (6) 42:2;199:8;206:19; 207:22;211:4,13 indicates (2) 10:13,15 indicating (1) 128:4 individual (15) 9:14;27:12,15; 32:1;34:22;35:4; 40:10;64:22;147:23;</p>	<p>151:11;158:9;159:3, 7;181:15;183:4 individuals (2) 132:24;158:18 indoors (2) 194:22;196:13 industrial (4) 36:14;108:24; 131:3,5 industry (1) 121:16 influence (2) 4:9;112:16 information (27) 24:9;25:8;34:15; 41:2;46:22;63:13; 65:2,6,11;78:3;81:10, 21;82:2;84:4;94:15; 114:10;115:13; 134:21;136:12,18,19; 137:3;152:5;153:12; 169:9;201:18;205:17 information-gathering (1) 82:21 informative (1) 148:12 informed (1) 209:9 infrared (1) 91:1 infrastructure (1) 107:21 initial (2) 146:12;212:1 initially (1) 115:12 input (2) 151:4;206:22 inquiring (1) 82:24 inside (5) 69:10;78:10;103:4; 144:13;195:10 installed (1) 204:13 instance (15) 40:15;42:7;61:18; 85:18;95:1;112:9; 114:1;121:6;136:2,3, 20;151:14;152:8; 159:13;195:23 instances (3) 114:18;115:9; 181:10 Instead (3) 32:23;54:1,8 integral (5) 27:17;35:23;36:1; 107:19;137:1 intensity (5) 78:15;79:3;80:1; 101:24;102:7 interest (4)</p>	<p>67:3;84:12;169:1; 179:16 interesting (1) 108:20 interfere (1) 167:23 interjects (5) 65:9;142:18; 145:15;153:17;156:9 interpret (1) 94:2 INTERROGATORIES (7) 145:9;166:5;172:6; 174:19;176:14; 193:7;194:19 interrupt (1) 45:4 intersect (1) 73:4 intervening (1) 92:14 into (27) 5:11;28:17;30:11; 31:14;37:1,9;53:14; 58:2;63:10;71:15; 74:24;86:17;90:10; 101:2;117:20; 122:18;128:7; 132:22;148:6; 149:21;150:23; 169:14,18;170:21; 179:7,8;206:22 intrigue (1) 177:11 introduce (1) 4:8 introduced (1) 87:11 Inventory (3) 137:20;138:9,11 invests (1) 52:19 involve (1) 155:11 involved (3) 127:12;177:18; 207:6 involves (1) 158:2 issue (17) 7:9;41:6;43:8; 56:12;57:13;68:17; 70:9;71:16,18;87:14; 93:20;168:18; 170:17;176:15; 195:4,11;196:10 issues (4) 68:16;102:1;183:2; 193:1 item (2) 8:7;14:11 items (4) 12:18;26:21;58:22;</p>
I				
<p>IACOPINO (34) 11:11;24:17,23; 25:2;67:13,16;73:17, 20;74:7,11,15;76:14; 85:6;117:13;125:20, 24;126:15;185:16, 19;186:4,18;188:15; 194:17,18,19;200:8; 202:16,23;210:13,16; 211:12,20;213:7,17 ice (2) 41:24;43:12 idea (6) 46:19;74:22;91:18; 95:9;113:10;168:5 ideas (1) 161:15 identification (2) 8:24;131:19 identified (12) 8:23;12:22;43:21; 66:21,24;99:13; 111:7;119:16;120:7; 133:7;154:24;164:18 identify (5) 11:12;12:4,6; 120:19;166:23 ie (1) 92:12 Ignatius (10) 176:12,13,14; 186:1,11,22;189:4,7; 193:3;197:5 ignorance (1)</p>				

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

63:8	169:2;183:4	larger (1) 196:24	32:9;158:12	17;204:20;208:17
J	knew (2) 53:6;202:22	largest (1) 48:9	Lempster (5) 55:5,7,24;57:10,18	line-of-sight (1) 13:4
January (5) 6:13;112:11; 119:24;124:15; 147:14	knowing (4) 36:18;113:22; 162:12;163:17	last (16) 6:1;7:10;8:16; 14:11;81:5;90:5; 95:14;96:6;107:16; 143:14;144:22; 154:22;167:16; 197:12;207:13;212:1	less (13) 46:2;56:16,17; 83:8;108:6,7;112:2; 163:1;164:8;179:6; 184:7;195:11;211:5	lines (13) 36:13;44:14;62:4; 63:1;73:4;107:22; 108:6,7;146:4;156:2; 157:14;200:5,9
jargon (1) 167:22	knowledge (8) 114:23;134:11; 135:4,6;203:19,22; 204:24;205:2	late (3) 71:10;72:7;193:8	lessened (1) 178:10	Linowes (3) 210:9,11,20
Jason (1) 17:5	knows (1) 196:6	later (4) 126:9;183:2;184:7; 212:14	lesser (1) 42:18	list (10) 38:5;62:11;136:2; 150:2;151:1,2; 163:21;164:1; 166:15,22
Jean (1) 119:12	L	lattice (7) 54:2,9,10;130:18; 131:1,9,13	level (13) 23:9;27:10,14; 47:8;121:5;151:22; 155:19;166:14; 172:14;173:8,10,21; 208:6	listed (4) 105:10;106:6; 149:22;167:10
JOHN (5) 4:18,21;5:2;6:12; 167:6	lack (1) 153:1	launch (1) 127:20	Liberty (2) 11:17;141:16	listen (1) 84:11
Jones (1) 167:6	ladder (1) 130:13	laundry (2) 62:11;150:2	licensed (1) 5:23	listening (1) 184:10
judging (1) 173:7	Lake (21) 29:8,9,12,15,18; 41:9,14,17,23;52:10; 124:11;129:18,19; 176:23;177:11,17,20; 178:7;180:7,17; 185:2	law (9) 52:4;87:4;139:1; 141:10;142:2; 144:23;145:24; 158:6;197:16	life (1) 75:17	lists (1) 163:5
judgment (3) 50:18,24;171:9	lakes (1) 53:3	laws (2) 140:23;141:6	light (17) 8:10;14:8;28:8,9; 68:8,9;69:7,9;70:6; 79:8,9,15,21;102:7; 117:6;191:5;192:10	literature (1) 41:20
July (2) 125:23;127:1	land (22) 21:21;26:15,19; 49:22;52:8,20;61:4; 79:2;99:13,16,23; 100:11,14,19,22; 108:15;127:8; 144:16;148:4;158:2, 3;159:23	layer (1) 94:4	lighter (1) 79:24	little (30) 13:10;58:3;78:2, 23;89:11;93:19;97:8, 22;101:3;102:5; 107:4;111:17; 113:10;116:10; 128:15;138:23,24; 148:4,6,11,17; 151:11;154:1,6,22; 160:10;175:8;181:2; 192:6;199:2
jump (2) 197:4;201:18	Land-Covered (2) 89:10,12	layperson's (1) 75:21	lighting (9) 7:19,21;8:12;79:6; 204:11;205:8,15; 206:15,16	live (2) 75:4;79:7
jumped (1) 163:9	landform (1) 92:14	leads (1) 150:23	lights (17) 8:2,5;28:5,11,19; 29:7,8,10,12,14,15, 16;79:12;132:1; 192:19,23;205:18	lives (1) 76:24
jumping (1) 161:1	landing (1) 160:7	learn (3) 136:18;146:19; 158:4	liked (1) 115:1	local (7) 129:18;138:14; 139:22;140:11; 151:3;180:8,9
JWG (3) 116:3;186:9,9	landmark (1) 167:10	learned (1) 158:1	likely (6) 46:1;71:9;75:7; 187:16;190:9,9	locality (1) 177:4
K	landmarks (2) 166:13,24	learning (2) 80:6;114:10	likes (1) 85:19	locate (1) 76:12
kayakers (1) 128:2	lands (3) 100:5;156:10; 172:11	least (7) 27:5;81:14;93:2; 119:14;140:18; 174:7;211:14	limit (2) 114:5,8	located (3) 72:23;101:9,10
kayaks (1) 127:19	landscape (27) 5:16,20,23;27:18; 37:13;53:20;102:8; 107:20,22;108:9,11, 12;109:2,8;120:23; 121:2;135:14;149:1, 4;152:7,9,11;154:18; 170:14;176:5; 193:10;195:4	leave (2) 105:4;210:3	limited (11) 30:7;40:16,21; 42:8;43:15;46:1; 58:20;59:1;60:11,20; 205:13	location (25) 10:17,19,24;11:2; 12:9,11;20:20;38:22; 59:11;66:10;74:19, 22;79:4;98:21; 105:23;118:17; 134:18;136:3; 170:16;177:11; 191:22;193:19; 196:9;197:15;207:8
keep (5) 52:22;126:13; 128:10;149:19; 185:22	lands (3) 100:5;156:10; 172:11	leaves (1) 80:2	Lincoln (2) 166:20,20	locations (41) 9:23;10:1;13:13;
keeper (2) 171:4,10	landmark (1) 167:10	led (1) 163:19	Line (20) 23:19;40:14;42:5; 43:20;44:23;45:14; 50:17;51:13;54:24; 60:17;64:1;92:11; 117:20;144:5; 152:10;156:5;165:8,	
kept (1) 145:13	landmarks (2) 166:13,24	left (1) 57:2		
key (1) 155:9	lands (3) 100:5;156:10; 172:11	Legacy (2) 173:4,14		
kind (28) 12:17;14:5,16,18; 21:6;75:5;79:2; 80:14;97:12;102:9; 119:19;120:15; 140:17;147:16; 149:14;150:23; 155:14;159:6; 163:19;165:17; 175:1;178:1;180:10; 185:5;189:13;190:4; 192:21,22	lane (1) 143:19	legislative (4) 52:4;139:2;142:3; 197:17		
kinds (2)	large (6) 16:9;99:14,19; 131:12;155:8;194:6	legislature (1) 168:24		
		legitimate (2)		

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

22:1;33:5,9;38:23; 50:5;66:8;91:21; 92:18;116:11; 120:12;121:8,12; 123:18;133:18; 134:4;136:9,13; 147:22;150:13,18; 152:15;154:2; 159:12;162:13,16,17; 163:4;164:5;165:5,8; 175:14;176:19; 181:7;184:18; 193:13,18;201:16; 206:22 logged (3) 95:15;96:5;97:10 logging (1) 96:20 logo (1) 131:20 long (5) 15:5,23;64:16; 79:3;150:14 longer (2) 182:22;192:6 LONGGOOD (1) 74:8 LONGGOOD (31) 72:6,13,16,17,20; 73:7,10,15;74:1,20; 75:24;76:2,7,11,15, 24;77:3,6,17,18;78:4, 20;110:1,2,8,19,22; 111:1,2,7;190:7 Longgood's (4) 189:14;190:12; 207:19;208:12 look (52) 10:18,24;20:23; 28:16;35:13,20; 42:13;44:8;61:14; 71:14;74:4;92:19; 94:8,10;95:22;96:24; 109:10;113:17; 118:9,23;123:18; 124:3,24;125:14; 133:21;134:1,8; 149:12;150:24; 152:7;156:18,21; 160:13;161:4;162:5, 20;164:13;170:8,10; 172:14;173:16; 174:7;177:15; 182:20;183:8,9; 184:24;186:23; 187:13;188:10; 195:9;200:16 looked (27) 13:22;20:8;31:2,4; 44:7;48:18;54:15; 59:17;74:10;77:14; 108:12;110:5; 120:11;123:7;125:6;	133:17,19,24,24; 162:4,14;175:10; 177:8,22,24;197:21; 202:21 looking (44) 9:14;21:16;22:9; 23:19;27:9;34:19; 43:20;45:10;53:17; 56:24;58:4;59:22; 73:24;75:1;85:3; 88:17,19;92:23;93:4; 99:18;121:8,10; 125:21;137:19,21; 138:14;144:6,15; 149:16;150:22; 151:14;155:24; 160:11;162:16; 163:2,23;174:20,24; 178:1,6;186:5,6,8; 200:15 looks (10) 9:11;11:17;16:14; 74:4,17;78:4;97:2; 98:4;168:4;187:10 lot (21) 31:13;36:13;66:5; 71:17;90:6;112:23; 114:6;115:14; 118:22;136:9; 145:17;152:16; 153:11;157:22,23; 161:14;162:7; 163:17;172:22; 176:17;207:16 love (3) 83:5;142:10;143:1 Loveren (1) 11:16 low (4) 30:11,20;45:17; 102:8 lower (1) 154:20 lunch (1) 4:2 Lyons (3) 174:18,19;176:10	major (3) 75:16;182:16; 185:4 majority (2) 60:22;92:11 makes (2) 50:18;154:22 making (6) 19:21;33:2;63:20; 70:10;87:13;183:3 Man (3) 140:1,2,4 Management (2) 127:8;168:13 Manchester (3) 28:17;29:3;197:1 man-made (1) 109:7 many (35) 13:24;14:21;22:1; 26:3;27:7;41:3;44:8; 46:6;48:2,12,15,18; 50:3,4;62:9,10; 64:23;65:7;82:6; 112:15;120:19; 122:3,9;136:24; 138:11;145:1; 148:20,20;169:15,15; 183:5;187:16;191:2; 203:11;210:7 MANZELLI (3) 126:5;211:19,21 map (51) 10:14;11:1,9,12; 13:8;24:14,16;25:15; 26:9;31:6;72:22; 73:9;75:13;76:1,3, 13;77:15;78:3,6,17; 79:4;88:22;89:1; 91:21;96:23;97:5; 98:4;99:5,12,15,21; 104:4,6;110:5,17; 111:8,9;116:4,15; 117:7;118:10;133:3; 150:3,3;157:12; 164:14,15;186:5,8, 20;188:11 mapped (1) 150:19 mapping (1) 149:10 map-reading (1) 77:19 maps (5) 10:9;24:13;25:14; 99:24;100:4 mark (2) 12:7;126:1 marked (7) 6:19;7:3,14;10:5; 126:8,12;129:2 master (2) 133:7;164:19	material (1) 149:2 materials (1) 176:21 matter (11) 48:3;102:17; 108:22;122:14; 141:20;155:19; 165:17;169:2; 171:14,16;184:9 mature (9) 90:11;94:8,12,17, 22;95:4,9,19,24 maximizes (1) 13:9 maximum (4) 105:11,18;106:7, 11 may (67) 14:14;16:11;32:6; 33:7;35:5,6;38:15, 17;40:24;41:23;43:4; 46:1;48:6;56:11; 78:12,23;79:1,18; 84:7;88:9;93:15,21; 104:13,14;112:2,7,8, 9,16;113:2;114:3,3; 116:16;118:13; 120:8;127:3;131:7; 136:20;152:23; 153:24;154:1; 158:15;159:15; 162:6,8;165:6,10; 168:22;170:3,20; 173:21;174:2,12; 177:20;178:6;179:8, 18;180:9;182:9; 186:13;190:14,17; 196:4;211:19,21,24; 212:14 maybe (26) 16:5,16;45:6; 65:24;72:14;81:1; 82:23;84:14;86:24; 88:11;94:1;97:1; 99:3,3;109:19; 115:10;117:19; 139:21;140:19; 141:3;157:11,13,16; 160:19;200:1;206:21 mean (30) 12:1,7;16:15; 21:15;23:8;32:12; 42:22;63:9;77:8; 80:18;81:24,24;93:9; 95:21,24;100:1; 104:1;109:9;120:4, 17;135:11;138:4; 148:23;160:3; 164:10;177:9; 188:12;192:4; 193:16;195:7 meaning (4)	52:14;55:24;177:3, 4 means (1) 12:8 meant (2) 44:24;146:1 measures (2) 105:9;106:5 medical (1) 192:14 meet (2) 145:11;155:20 meeting (1) 128:1 meets (1) 155:18 member (2) 127:7;142:11 members (4) 15:19;189:3; 213:12;214:3 memo (1) 213:17 Memorandum (1) 67:11 Memorial (1) 166:21 mention (4) 122:10;133:2; 195:3,12 mentioned (33) 20:13;25:7;34:20; 43:18;46:10;58:23; 59:19;60:8;70:10; 71:7,8;80:16;107:17; 109:6;113:14; 132:20;152:17; 153:23;154:13; 158:10;161:8; 162:23;164:4,8,23; 165:3;170:12,15; 173:15,24;193:1; 196:17;200:14 mentions (2) 69:7;156:8 merely (1) 9:11 Mertens (4) 48:23;49:3;125:23; 127:4 Mertens' (4) 125:15;126:2; 128:7;129:5 met (1) 93:1 meter (3) 69:22,23,24 meters (1) 103:19 methodologies (1) 162:22 Methodology (13) 34:8;62:12,15;
	M			
	MacDowell (1) 167:2 Madam (6) 4:7;87:8;145:7,8; 210:11;214:2 main (1) 160:24 Maine (4) 197:23;198:1,4,4 mainly (2) 17:7,11 maintains (2) 52:15;53:10			

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

80:19;81:5;122:5; 147:21,24;153:24; 182:23;183:21,22; 184:1 Michigan (1) 122:7 microphone (5) 5:5,11;53:15; 76:22;157:16 middle (4) 63:7;68:18;112:11, 11 midnight (1) 29:5 mid-range (2) 142:23;143:7 might (33) 14:17;48:4;61:9; 76:1;83:1;94:21; 100:8,8;101:7; 102:23;108:1; 110:10;136:15; 148:11;149:24; 152:6,10;154:11,16; 155:5,10;157:10; 158:11;160:18; 165:15;169:3;188:4, 17;191:13;193:8; 195:24;198:15; 207:13 mile (6) 73:1;77:4,5;105:8, 18;106:7 miles (13) 55:10,19;57:6,9,9, 11,23;65:20;77:7; 102:4;163:3;165:4,9 Mill (2) 11:16;57:20 mind (6) 77:14;82:11;115:5; 147:8;148:16;160:14 minds (1) 162:10 mine (2) 139:5;160:9 minimal (4) 61:24;62:16;63:18; 194:10 minimize (2) 54:2;193:11 mining (1) 165:21 minor (4) 91:7,12;182:16; 185:4 minute (6) 67:14;87:24; 191:12,22;192:5; 212:11 minutes (13) 16:5,11,12;72:4, 14;107:11;109:20;	111:13;210:2,17,19, 21;211:4 misinterpreting (1) 117:19 missed (4) 81:1;117:11; 179:19;193:8 mistake (1) 110:3 mitigate (1) 69:9 mitigating (2) 8:14;198:17 mitigation (23) 105:9;106:4,20; 130:20;155:1,4,6,10, 19;165:17;174:21, 24;175:13,17;182:3; 203:7,16,21;204:8; 206:3,5,7,17 model (4) 14:7;89:8;151:18; 191:9 modeled (2) 111:12;156:17 models (2) 14:4;151:8 moderate (6) 61:24;62:16;63:18; 65:21;182:16;185:4 moment (5) 144:20;185:10; 187:13;198:2;211:8 momentarily (1) 128:19 Monetary (1) 167:12 money (5) 52:20,22;139:1,5; 169:1 monopole (1) 53:24 month (2) 112:13;113:7 months (4) 40:17;42:4,10; 111:24 more (77) 6:4;14:5;19:13; 27:16;33:11;38:18; 39:6,12,15,21;40:5; 52:7;54:3;56:12,16, 17;58:3;59:13;60:3, 24;61:1,8,17;62:7,20; 63:21;64:10;66:7; 77:15;78:3;79:19; 83:19;84:3;88:11; 89:11;93:10;94:11; 100:1;102:2,14; 105:8,10,17;107:19; 109:15;121:8;125:7; 128:16;130:10; 136:18;138:24;	139:3,22;140:10; 145:20;148:6,11,23; 152:24;153:7; 158:22;159:11; 160:14;162:14; 163:22;166:8;168:6; 174:11;177:8;179:2, 5;201:14,20,21; 207:18;210:21;211:3 morning (6) 71:9;113:5;116:19; 180:13;196:5;213:20 most (11) 35:15;40:23,23; 59:6;75:7;82:5;91:4; 115:15;190:9;195:5; 206:18 mostly (2) 60:4;195:10 Mount (1) 167:9 mountain (34) 11:19;18:11;20:13, 16,18;21:5;27:21; 31:10;35:11,16,17; 36:4;38:3,5,13; 42:13;43:3;45:23; 48:11;50:16;54:16; 55:3,7;56:18;79:10; 98:13,17;99:2;124:8, 12;140:1,2,5;165:23 mountains (2) 27:3,5 Mountain's (1) 20:19 mountaintop (2) 55:20;165:21 move (11) 51:9;64:17;88:16; 102:11;109:12; 142:12;143:12; 157:16;204:6; 206:12;209:18 movement (1) 191:17 moving (6) 37:18,20,24;38:20; 156:3;191:15 Mrs (1) 189:14 much (27) 31:2;39:15;56:9; 64:23;65:7;66:10; 71:20;72:18;81:17; 101:2;138:5,8; 149:13;159:11; 166:2;170:1;183:22; 187:15,19;188:2,3; 193:4;195:11; 196:10;209:20; 210:10;212:14 multi-colored (1) 189:9	multiple (3) 112:5;173:10; 187:15 must (2) 9:12;169:10 myself (4) 48:3;142:9;157:24; 191:1 mysteriously (1) 4:10 N nacelle (3) 66:3,6;131:18 name (6) 4:24;17:5;83:1; 122:6;145:14;173:14 napping (1) 135:21 national (14) 46:4;89:10,12; 133:11;165:1; 166:13,14,19,23; 167:10,12;169:13; 170:4;171:4 natural (27) 18:21;19:1,11,15, 18,22;20:1,4,5,8,11, 22,24;21:3,5,24;22:5; 50:20,21,23;108:22; 109:2,10,11;158:23; 159:9,22 nature (6) 32:8;122:18; 127:21;132:22; 138:12;143:4 naysayers (1) 115:14 NB (1) 10:5 near (2) 11:18;177:19 nearby (2) 28:12,14 nearest (1) 77:9 necessarily (12) 23:8;36:2;44:5,24; 45:9;61:3,18;97:5; 112:6;141:14; 168:20;183:8 necessary (1) 128:9 need (14) 4:8;47:1;69:1; 71:24;84:2,3;88:8; 130:15;141:1; 151:13,21;155:4; 184:2,3 needed (1) 193:21 needs (4)	34:21;95:10; 201:20,21 neighboring (1) 164:12 nervous (1) 114:9 network (1) 129:1 nevertheless (1) 19:17 New (36) 5:3;8:6;17:6;27:6, 7;44:20;45:8;48:13; 50:2;53:1,3;59:6,6; 75:15;122:9;127:5, 23;139:19;140:6,19; 144:22;145:1;158:7; 166:13;169:20,22; 172:18;179:20,23; 182:5;196:21;197:1, 24;198:8,9;204:17 next (15) 11:3;15:7;24:3; 62:18;63:7;64:8; 90:12;150:23;154:5; 156:18;188:8;196:1; 201:17;213:2,11 nice (5) 61:19;96:3;160:1, 15;162:9 nicely (1) 176:3 night (7) 7:20;8:12;28:5,22; 41:8;197:13;206:16 nighttime (1) 79:8 nine (2) 157:7;201:13 Ninety-five (1) 164:14 NLCD (11) 89:6,10,20;90:23; 91:3,10;93:12,18; 94:2,8,13 noise (2) 115:15,19 non (1) 168:7 None (4) 43:21;65:3;135:22; 211:9 non-governmental (1) 51:23 non-motorized (1) 49:19 non-paved (2) 47:9,10 non-profits (2) 167:1,7 noon (1) 196:10 norm (1)
--	--	---	---	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>43:6 Normally (1) 196:14 north (10) 55:2;56:11;101:10, 15;102:18,24; 113:23;114:1,4; 189:14 northeast (2) 50:2;189:13 Notch (1) 140:6 note (5) 57:20;69:20;91:7; 134:6;209:8 noted (1) 94:11 not-for-profit (2) 52:7;139:4 not-for-profits (2) 130:14;174:11 noticed (3) 12:19;91:23; 195:10 notwithstanding (1) 119:1 November (4) 112:11;213:4,16; 214:1 nuisance (2) 104:11,13 number (33) 11:12,15;13:13; 30:7;41:5;42:20; 45:12,14,18,20,24; 46:2;49:16;60:11,20; 65:10;67:12;69:6; 73:5;74:2;75:12; 92:17;95:16;98:20; 118:17;158:2; 162:23;167:3; 181:22;182:14; 186:24;190:6;205:17 numbers (9) 43:14;45:22;60:3; 62:21;63:22;73:24; 103:18;185:24; 189:12 numerous (9) 47:11;91:20,20; 122:4,8;147:21; 152:17;182:5;183:16</p> <hr/> <p align="center">O</p> <hr/> <p>object (14) 31:20;33:16;49:5; 51:2;63:3;85:5;87:2; 128:6,8;139:17; 140:22;204:19; 208:16;209:13 objection (5) 32:9;126:11;</p>	<p>205:12;209:13,15 objective (26) 19:3,8,12;62:1,2,9, 21;63:17,19,23; 64:20;65:1,12;83:15, 17;84:4;85:23;86:18, 19;88:8;122:17,23; 123:6,17;142:14; 163:22 objectively (1) 21:2 observation (1) 171:8 observations (1) 45:20 observed (2) 96:19;143:20 Obviously (11) 12:19;38:12;77:19; 134:5,11;135:12; 145:18;147:22; 148:23;154:19; 156:11 occur (13) 68:3,8;70:17;92:6; 102:4;111:24;113:5; 183:18;190:9; 195:15;196:4,6,7 occurred (2) 96:12,16 occurrence (3) 112:15,22;190:19 occurring (5) 126:9;144:10,12; 190:24;194:22 occurs (4) 43:12;78:8;144:13; 176:6 October (3) 6:22;7:12;10:4 off (22) 10:17;22:6,7,13; 61:19;68:15;72:1; 76:17,19;77:23;80:4; 95:16;105:3;110:16, 18;179:12;191:5; 197:4;212:10;213:8, 10,12 offers (2) 49:16,18 officer (2) 171:12,13 offshore (2) 143:3,5 off-site (1) 21:21 often (6) 28:19;65:10;89:22, 23;108:15;191:7 oftentimes (1) 211:2 old (6) 96:1,2;140:1,2,3,4</p>	<p>older (1) 168:2 on-and-off (1) 192:10 onboard (1) 175:11 Once (7) 8:11;150:8,24; 152:5;191:16; 204:13,15 one (90) 12:3;16:2;18:24; 21:10;24:13;31:3; 46:12,20;53:2,21; 56:10;57:10,11,12; 58:22;59:5;60:7; 64:18;66:2,3;67:13; 69:22,23,24;73:1; 74:9;77:14;79:19; 83:1;93:10;97:16; 98:7,8;99:3;105:1, 10;106:6;110:12; 112:6;119:22; 121:20;122:13; 123:12,13;135:11; 143:15;144:20; 156:11,15;157:11; 158:11;160:4,9; 161:22;165:18; 167:4;170:9,15; 173:6;175:6;176:19; 177:14;181:12; 186:13;187:1,14,19; 188:1,13;189:1,5; 191:12,20,23,24; 192:2;196:12;197:7, 21,22,23;198:2,8; 199:7;200:7;201:12; 202:10;207:13; 209:9;211:1 one-foot (1) 90:24 one-half (1) 105:8 one-meter-by-one-meter (1) 69:24 ones (5) 115:15;122:8; 135:5;196:24;204:7 Online (2) 48:19;89:13 only (25) 8:15;11:6;16:5; 28:8,9;29:11;55:17; 60:7;66:3;74:9; 86:18,19;95:5;98:15; 99:2;107:11;132:24; 144:13;149:11; 162:12;180:15; 194:22;196:4; 210:12,24 onto (3) 63:7;64:7;75:1</p>	<p>open (9) 24:1;61:1,6,7,11, 16;160:14,15;173:1 opening (1) 70:5 open-space (1) 164:19 operation (2) 113:4;199:11 operational (1) 204:18 operations (1) 96:17 opinion (42) 32:4;34:17;48:2; 60:18;62:9;83:14,17, 19,22;84:1,5,7,8,10, 14,22;85:13,17;86:3, 8;87:12;88:9;98:20; 109:10;115:8,16,24; 117:6;118:12;119:3; 123:4,5;130:5,10; 169:9;171:22,23; 182:9,10;184:13; 185:8;193:10 opinions (5) 83:24;86:12,19,22; 88:7 opportunities (3) 49:21;134:7;155:1 opportunity (1) 72:8 opposed (3) 166:9;178:23; 196:13 opposite (2) 61:4;180:20 option (2) 27:24;155:16 options (1) 155:5 oral (1) 7:9 order (13) 25:8;27:1;56:8; 62:12;72:9;83:2; 150:17;160:13; 169:11,21,23;197:7; 201:19 organization (5) 51:23;52:7;139:5, 8;170:1 organizational (2) 126:6,14 organizations (1) 151:3 orientate (1) 150:20 orientation (4) 38:16;113:12,24; 190:10 oriented (1) 177:23</p>	<p>original (3) 9:20;92:8;133:12 orthophoto (1) 90:24 others (4) 105:2;127:24; 167:14;211:2 otherwise (1) 203:15 ourselves (1) 150:20 out (40) 9:13;10:19;20:8; 33:5,9;53:15;57:2, 15;63:16,16;72:9; 73:12;74:2;75:1; 79:19;81:23;85:2; 92:18;112:18,18,20; 113:17;116:22; 118:9;122:7;125:19; 128:17,18;136:1; 146:8;150:10,11,18; 153:7;155:4;160:8; 163:9;195:24;196:6; 207:14 out-buildings (2) 47:13,22 outdoor (1) 141:1 outdoors (6) 69:8;71:2;158:23; 195:1,22;196:12 outer (1) 188:4 outlined (1) 39:22 outside (20) 38:14;69:8,10,18; 70:12,14,21,22;71:2, 2;78:5,17;104:12; 111:5;130:24;144:5, 14;159:23;189:22,23 over (16) 11:2;27:15,22; 36:22;57:11,12; 79:16;94:4;107:17, 18;111:13;139:4; 148:20;157:11; 187:16;188:21 overall (2) 58:19;181:18 over-conservative (2) 93:19;112:24 overlaid (1) 90:23 overlay (1) 91:11 overly (1) 113:15 oversaw (1) 6:7 overview (1) 149:1</p>
--	---	--	---	--

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>own (2) 123:4;183:6</p> <p>owned (29) 10:20;23:13;51:22; 52:10,12;53:4;139:7; 142:1;158:8,9;166:9, 16,18,24;167:7,8; 168:5,6,7;169:16; 170:3,20;172:9,11, 13;173:22;174:1,3; 180:24</p> <p>owner (1) 170:14</p> <p>ownership (9) 53:5;100:11,13,18, 18;168:20,20; 171:17;172:18</p> <p>owning (1) 52:8</p>	<p>126:9</p> <p>panoramic (2) 56:14,22</p> <p>paper (5) 81:13,23;82:8; 197:7,18</p> <p>papers (3) 81:17;82:5,7</p> <p>par (1) 77:20</p> <p>paragraph (5) 81:3,5;90:14,15; 91:6</p> <p>paraphrase (1) 148:4</p> <p>paraphrasing (3) 119:14;138:23; 154:16</p> <p>parcel (1) 52:8</p> <p>Pardon (1) 75:14</p> <p>parentheses (1) 199:12</p> <p>Paris (1) 131:24</p> <p>park (31) 42:17;44:4,10,20, 24;46:9,10,13;47:3,6, 12,19;48:7;129:11, 12,13,17,23;130:9, 22;131:3,5;137:15; 166:19;177:22; 180:7,14,21,23,24; 182:17</p> <p>parks (7) 44:22;46:3;47:11; 130:12;137:4,9; 138:7</p> <p>part (43) 21:14,24;22:4; 27:17;28:18;30:6,16; 34:10;35:23,24;36:1, 7,16,23;37:2;44:10, 11;47:3;65:20;88:18; 105:9;107:16,19; 108:9;111:20; 126:10;134:20; 135:24;137:1;146:6, 7,16;152:6;154:23; 164:6;167:11,16; 168:10;170:8; 175:21;185:13; 201:1;207:10</p> <p>partial (2) 106:18,19</p> <p>partially (1) 106:19</p> <p>particular (18) 30:19;31:18;33:6; 44:20,24;87:16; 136:15;137:10,16; 148:19;161:22;</p>	<p>172:16;181:7; 182:19;184:18; 187:24;193:20; 202:10</p> <p>particularly (1) 176:20</p> <p>parts (4) 45:6;66:10;79:9; 161:9</p> <p>passage (1) 9:10</p> <p>passes (1) 143:21</p> <p>passing (6) 68:8;102:10,11; 195:19,21;196:1</p> <p>past (5) 6:3;14:12;20:12; 36:11;78:24</p> <p>patch (3) 98:5;202:19;209:8</p> <p>patches (1) 99:14</p> <p>path (1) 163:19</p> <p>paths (1) 28:17</p> <p>patience (1) 209:21</p> <p>pattern (3) 187:5,10;191:6</p> <p>patterns (3) 53:20;101:18; 186:24</p> <p>Paul (1) 167:6</p> <p>pause (3) 79:5;144:21; 199:23</p> <p>paved (5) 46:17;47:9,10,13, 21</p> <p>paying (1) 139:6</p> <p>PC (3) 7:14;123:20,24</p> <p>penetrate (1) 70:7</p> <p>people (60) 19:11;20:1,7,23; 21:2,11,15;27:19; 33:7;35:5,15,18,18; 36:11;41:3;42:17; 43:2,9;46:6;47:15, 23;48:2,4,6;59:11,15; 61:12,14,21;62:10; 67:5;70:20;71:1; 72:22;84:24;108:4,5; 114:17,24;115:10; 135:13;152:21; 162:23,24;163:1; 164:9;165:6,10; 170:11;177:13,20;</p>	<p>178:3;179:8;183:17; 191:4;192:9;193:1; 194:7;195:9,22</p> <p>people's (3) 38:23;162:10; 178:19</p> <p>per (7) 191:11,16,20,22; 208:1,11,14</p> <p>perceive (1) 57:7</p> <p>perceived (3) 50:19;120:8; 133:16</p> <p>percent (11) 13:17;31:6;60:5; 92:12,24;93:5; 132:15;133:4; 160:18;164:14; 200:20</p> <p>perfectly (2) 88:1;201:7</p> <p>perform (1) 120:1</p> <p>Perhaps (6) 29:5;47:22;93:1; 116:18;131:19; 146:20</p> <p>period (1) 192:3</p> <p>periods (2) 112:1;113:6</p> <p>permitted (3) 26:15,19;72:10</p> <p>person (7) 28:4;37:19;84:14, 16,17;127:3;210:12</p> <p>personal (2) 50:18,23</p> <p>personally (4) 36:10;82:24;91:13; 192:18</p> <p>perspective (2) 126:14;168:18</p> <p>Peterborough (1) 127:5</p> <p>phenomenon (1) 143:21</p> <p>philosophical (2) 86:23;122:18</p> <p>philosophy (1) 87:5</p> <p>photo (4) 11:2;73:11;151:19; 156:20</p> <p>photograph (3) 11:16,22;14:14</p> <p>photographs (5) 65:23;98:9;149:3; 151:17;207:8</p> <p>Photoshop (1) 151:7</p> <p>phrase (1)</p>	<p>51:6</p> <p>phrases (1) 181:6</p> <p>physically (1) 100:23</p> <p>picked (1) 189:24</p> <p>picking (2) 97:10;128:17</p> <p>picks (1) 127:21</p> <p>picnic (2) 35:20;178:11</p> <p>picnics (1) 35:19</p> <p>picture (6) 74:9;157:8;160:2; 162:15;185:3;207:15</p> <p>pictures (3) 131:23;150:16; 151:1</p> <p>piece (4) 100:13,16,19,22</p> <p>Pinello (2) 212:5,6</p> <p>Pitcher (6) 54:16;55:2,6; 56:18;58:8;124:12</p> <p>place (11) 47:16,24;83:1,7; 85:19;138:5;142:8; 151:12;155:12; 178:24;202:10</p> <p>placed (1) 22:18</p> <p>places (19) 39:9;59:12,14; 60:11,19,20;61:11, 11;104:9;116:16; 118:4;167:1;169:14; 178:13,16;179:5; 192:18;194:12; 201:14</p> <p>placing (1) 168:14</p> <p>plan (7) 15:6;126:6,14; 133:7,8;164:19,20</p> <p>plane (1) 28:12</p> <p>planes (1) 28:24</p> <p>planning (1) 31:11</p> <p>plant (2) 154:20;193:22</p> <p>planted (1) 96:10</p> <p>plantings (2) 96:12,15</p> <p>playgrounds (1) 137:23</p> <p>playing (1)</p>
--	--	---	---	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>178:4 Please (19) 4:24;5:11,17;11:8, 11;15:10;42:5;60:14; 73:4,8;75:13,21; 85:9;105:22;110:6; 127:17;185:24; 206:1;209:18 Pleased (1) 145:10 plus (1) 16:14 pm (6) 4:2;109:21,23,24; 196:8;214:6 point (29) 11:19,20;34:4; 39:19;72:8;75:6; 80:4,22;81:2;85:2; 87:9;88:24;94:18; 98:3,4;103:8,23; 107:4;128:18; 135:17;136:1; 146:13;154:23; 155:10;158:6; 160:17,22;161:11; 200:22 pointed (1) 33:9 pointing (2) 11:9;97:5 points (7) 18:7;50:12;66:19, 20,22,23;67:2 poles (1) 108:2 policy (6) 144:23;197:24; 198:9,14,16,19 poll (1) 15:4 Pond (103) 18:10,12,13,19,22; 19:3;20:20;21:12,16, 18,23;22:10,11,16; 23:9,24;24:6;25:16, 24;27:20;28:4,10; 29:21;30:1,19;31:7, 10,15,18,24;32:5,14, 21;33:14;36:19,22; 37:4,22;39:9,16; 40:15,20,20;41:1,4,9, 13,17,19;42:2,3,8,13, 17,23;43:13,19; 45:23;46:16;47:16, 17;48:1,5,8,11;49:15, 20;50:15,16;52:9,12, 16,20;53:2,11;57:20; 58:12,16;59:17,18; 62:23;65:22;66:2; 70:12,14;124:5; 127:18;128:3;129:2, 8;130:9;138:17;</p>	<p>156:13,21;157:22,24; 158:7,19;159:15,17; 160:11;179:2;204:2 ponds (1) 65:19 pool (1) 196:1 poorly (1) 192:10 posed (1) 127:17 posited (1) 144:6 position (1) 166:10 possess (1) 156:16 possible (12) 15:10;68:7;70:3,4; 71:12;85:23;93:22; 138:11;139:7;152:4; 193:17;202:9 possibly (3) 110:9;162:9; 193:17 potential (27) 29:20,24;32:13; 33:8;34:12;58:15; 66:18;78:10;81:8; 98:11;101:18,23; 102:1;104:11; 111:15,19;113:11; 114:5,8;123:9;150:5, 6,10;153:9;162:13; 175:14;190:4 Powder (1) 57:20 power (2) 73:3;154:20 practicable (1) 176:9 practical (3) 34:10;81:6;147:16 practice (1) 121:13 practicing (1) 5:24 precedence (1) 139:3 precursors (1) 160:24 prefer (3) 47:15;48:4,6 preferred (1) 54:7 prefile (1) 119:3 prefiled (34) 6:13,21;7:2,6,6; 8:17;10:3;17:9,10; 18:1;23:11;27:9,9, 13;31:21;39:19; 43:17;63:6;88:17;</p>	<p>92:8;105:1,5;106:3; 107:15;116:18; 117:3,4,16;126:7; 147:14;156:4; 183:10;199:18; 205:22 prehearing (1) 211:15 premature (4) 9:9,17;116:23; 117:2 prepared (3) 148:13;156:17; 201:3 preparing (1) 199:6 present (1) 168:11 presentation (1) 212:13 presented (1) 184:11 preservation (7) 51:16;133:9;138:1; 168:8,12;171:12,13 preserve (7) 18:23;19:8,22; 20:3,5,9;48:9 preserved (8) 31:11;51:19;133:7; 139:2;142:2;164:18, 22;174:5 Press (1) 5:6 presume (1) 151:9 pretty (6) 13:3;91:22;161:9; 170:1;172:2;183:22 previous (1) 115:8 primarily (1) 200:19 primary (1) 21:10 principal (1) 5:16 principles (1) 161:19 prior (3) 34:5;119:18;126:8 Private (18) 20:4;21:21;99:8, 16,22;100:8,11,14, 20;139:8;141:13,20; 166:24;167:7;168:7; 172:19;176:16;177:6 privately (12) 10:20;23:12,13; 159:23;166:9;167:8; 168:6;169:16;170:3, 20;172:11;177:8 probably (20)</p>	<p>16:11;19:13;21:9; 27:3;38:8,10;57:3,7; 97:9;102:2,5;122:9; 126:18;128:14; 131:6,23;143:20; 177:7;193:23;194:1 probed (1) 184:15 probing (1) 175:12 problem (1) 126:16 problems (2) 104:19;183:7 procedure (1) 198:7 proceed (3) 4:5,17;126:21 proceeding (4) 86:10,15;115:19; 208:20 proceedings (5) 144:21;199:23; 213:3,16,24 process (22) 34:10;79:13;81:6; 92:6;138:17;145:20; 146:18;147:3,6; 151:23;152:2; 153:12,15,19;157:24; 161:9,16;163:9; 169:20,22;176:7; 182:4 processor (1) 145:13 professional (3) 84:7;182:8,10 professionals (1) 168:13 professions (1) 192:14 profile (3) 13:4,18;154:20 profit (1) 168:7 Program (2) 173:4;174:24 programs (1) 129:19 prohibited (1) 26:15 Project (75) 6:6;9:1,3;12:5,12; 13:20;18:12,18; 20:23,24;25:13; 29:10;30:2,6,12; 40:3;42:21;43:16,24; 45:17;56:1,1,9;57:17, 18;58:17;59:4,22; 60:5,11,21,23;65:15; 72:24;75:16;87:16; 92:13;108:4;113:13; 115:1,2;116:12;</p>	<p>117:7,21;119:23; 120:20;122:21; 123:10;132:17; 147:23;149:14; 150:16,22;153:23; 154:3;159:10,14; 163:2,7,14;164:16; 170:17;175:20,21,24; 187:24;193:15; 199:10;200:21; 202:11,12;203:10,16, 24;206:17 projects (13) 6:4;8:4,6;28:23; 56:11;107:21;108:8; 121:18;122:3;123:3; 143:3;169:15;177:18 promise (1) 128:22 prone (2) 158:22;159:4 proof (1) 103:9 proper (2) 14:10;120:24 properties (6) 20:4;166:7,9; 167:8;169:2,10 property (17) 19:7,15;22:18,19, 20;99:8;139:9; 141:13,18,20;167:14, 22,24;168:5,15; 180:15;196:16 proposed (4) 20:24;97:2;156:22; 204:8 protected (2) 52:4;197:16 proven (1) 154:1 provide (16) 25:8;34:15;38:18; 54:3;66:1;81:10; 82:1,2;105:22; 134:13;137:2,5,9; 148:24;200:17; 203:16 provided (12) 12:17;28:24;64:10; 105:1,12,19;106:8; 163:22;175:5; 204:12;205:22;207:9 provides (3) 34:10;49:20;81:6 providing (1) 24:9 provokes (1) 211:3 proximity (4) 75:8,19;77:3; 118:17 public (24)</p>
---	--	--	--	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

24:1;43:23;44:6, 16,17,21;52:15; 53:10,11;91:15,16; 99:15,22;100:5,8,11, 14,20;141:18; 158:13;176:15,23; 177:6;209:10 publicly (4) 23:14;137:24; 166:16;168:5 pull (2) 76:23;155:2 pulsating (4) 102:23;103:6,9,16 purple (1) 12:7 purpose (9) 80:20,21;81:1,22; 82:8;87:3;138:10; 173:6;187:4 purposeful (1) 113:20 purposes (2) 126:6;158:10 put (8) 56:23;60:14; 131:24;167:21; 177:5;181:16; 186:14;194:7 puts (2) 90:1;169:18 putting (2) 94:3;204:1	201:20 quote (3) 7:20;35:5;57:21 quoted (1) 119:10 R radar (1) 205:14 radar-activated (7) 7:19;28:8,13; 79:12;204:11;205:8; 206:15 radar-activation (1) 8:10 radius (1) 91:24 raining (2) 112:18,18 raised (3) 13:21;71:18;158:6 ramp (1) 79:22 ran (2) 113:14;166:15 range (1) 110:4 rank (2) 179:11;185:3 ranked (3) 53:2,6;173:9 Ranking (7) 53:7;173:8,15; 177:5;181:6,15,22 rare (1) 173:18 rate (2) 34:18;64:15 rates (1) 96:9 rather (4) 121:10;163:24; 181:17;212:12 rating (5) 39:18,20;181:5,16; 182:7 ratings (1) 32:22 rational (1) 174:6 rays (1) 70:6 reach (5) 68:20;82:6;96:1; 181:16;182:14 reached (2) 82:10;161:6 react (1) 192:10 reaction (1) 192:20 read (18)	7:22;31:16;41:21; 45:13;48:22;49:3; 51:2;58:13;63:10; 69:1;81:18;82:5; 90:15;119:2;124:2; 125:15;128:13;129:4 reading (11) 62:6;105:24; 126:17,24;128:6,10, 16,16;136:17;163:8; 189:19 ready (1) 4:5 real (6) 12:23;136:14; 143:14;163:13; 181:17;196:2 realistic (2) 13:11;22:13 realize (1) 195:22 really (28) 15:9;27:1;32:2; 58:10;68:22;88:8,12; 98:19,22;107:3; 113:7;115:7,16,23; 122:17;141:15,19; 142:10;144:2;146:1; 159:16;161:16; 164:20;165:18; 174:5;177:21;182:4; 201:3 reason (4) 140:10;155:12; 166:11;173:5 reasonable (5) 20:9;152:3;158:17; 161:19,22 reasons (3) 21:11;60:18;146:6 rebuttal (2) 7:10;116:20 recall (1) 199:13 receive (1) 40:18 recent (2) 89:16;91:4 recently (5) 97:10;142:7,8; 167:20;175:20 receptor (6) 9:23;30:1;32:14; 58:16;69:20,22 receptors (5) 9:12;32:1;65:16; 104:18;134:8 recess (1) 109:22 recognition (2) 135:15;171:14 recognize (4) 84:2;167:13;180:2;	183:1 recognized (1) 31:5 recognizing (3) 161:23;165:5; 171:16 recollection (1) 174:10 recommendations (2) 171:6;207:9 reconvene (1) 213:16 record (27) 4:5,11;5:1;13:1; 63:10;64:12;72:1; 76:18,19,21;77:23; 78:1;85:2;110:3,6,16, 18,21;128:7;156:20; 202:1;209:8;212:10; 213:8,10,13,15 recreate (1) 59:11 recreation (8) 23:15;99:13,20; 100:7;136:3;137:22; 177:12,19 recreational (10) 41:11,18;46:10; 49:21;134:7;136:5, 10,21,23;137:14 red (4) 5:6;29:7,12,15 Redirect (2) 202:19;203:4 reduce (2) 193:12;206:16 refer (6) 17:12;18:10;41:21; 113:7;117:9;149:19 reference (11) 6:17;7:1;14:12; 33:2;44:19;152:8; 164:1;191:21;197:6; 198:3;200:11 referenced (2) 48:16,21 references (2) 47:2;104:23 referencing (1) 23:22 referred (1) 199:12 referring (6) 33:3,11;44:3;51:7; 148:10;195:16 reflect (1) 4:11 reflected (1) 110:6 regard (3) 18:11;20:16;98:10 Regarding (1) 80:15	regards (1) 163:16 region (3) 30:14;87:21; 117:23 regional (2) 53:19;151:10 Register (2) 171:4,11 regulation (1) 198:4 regulations (1) 155:23 regulatory (2) 121:20;122:12 Reimers (25) 15:21,22;16:1,18, 22;17:2,5;24:19,24; 25:6;31:23;32:11,15, 17;33:21;49:9,13; 51:9,11;63:15;64:17, 19;67:15,20;132:9 rejected (1) 122:13 relate (2) 86:14;188:11 related (2) 64:18;192:19 relates (1) 87:15 relatively (3) 30:8;102:3;112:1 relax (1) 212:9 relevance (2) 87:2;208:17 relevant (5) 18:9;50:13;87:22; 139:18;208:20 reliable (1) 192:16 relief (1) 113:3 relies (1) 66:17 rely (1) 180:4 relying (2) 134:23;135:1 remember (9) 34:2;93:12;105:3; 174:8,11,14;185:12; 192:3,7 remembers (1) 88:1 remote (1) 158:18 removal (1) 165:21 remove (1) 204:6 removed (4) 17:16,20;25:19;
Q				
QA/QC (1) 152:1 quadrangles (1) 91:1 qualifications (1) 5:19 qualitative (3) 199:13;200:12; 201:15 quality (3) 50:19;136:23,24 quantify (1) 32:20 questionable (1) 20:6 question's (1) 140:22 quick (5) 10:18;12:23;13:23; 74:4;172:7 quickly (1) 166:22 quiet (1) 178:23 quite (7) 8:15;9:18;12:2; 13:12;75:7;172:21;				

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

26:5 render (11) 34:12;66:12; 115:16,23;117:5; 118:12;123:4;130:4; 185:8;202:11,12 rendered (2) 118:20;123:5 rendering (2) 9:18;119:3 Repeat (6) 41:12;47:18;62:14; 99:17;105:16;133:5 repeated (1) 62:13 repeatedly (1) 90:6 repeating (1) 21:6 repetitious (1) 63:13 rephrase (3) 32:11;85:11; 137:11 report (69) 6:7,9;17:20;24:8; 28:16;33:12;34:1,14; 37:7,15;38:18;40:9; 46:23;47:2;53:17; 59:16;66:9;68:6,24; 69:3,20;71:7;80:17; 20,21,23;81:1,9; 85:22;86:2;89:18; 90:18,19;109:6; 111:20,21;113:9; 120:7,18;123:19; 124:15;125:1,2,8,11; 134:12;135:7; 137:19;149:7;152:6; 18,20;153:8;154:16; 163:8;174:20;185:1; 186:6;187:8;188:20; 190:2;195:18;199:6; 15;200:16;201:2; 207:17;209:2,4 Reporter (9) 4:20;11:5;65:9; 71:24;76:15;142:18; 145:15;153:17;156:9 reporter's (1) 107:3 reports (2) 40:1;71:17 represent (1) 17:5 representation (2) 14:20;157:4 represented (1) 108:23 request (1) 203:20 requested (1) 175:6	requests (1) 176:8 required (3) 8:7;71:14;167:22 research (1) 40:22 researched (2) 45:19;71:17 residence (7) 74:24;75:17,20; 111:11;207:20,24; 208:12 residences (6) 187:2,5,6;188:10; 189:11,21 residential (1) 105:7 residents (1) 52:5 resides (1) 127:4 resolution (1) 151:17 resource (38) 9:14,15,16;10:22; 31:9;34:8,22;35:4; 40:10,12,15;42:7; 43:23;51:18,22; 59:23;64:5,21,22; 65:4,5,10;118:19,22; 134:22;136:15; 139:7,15;140:9; 141:12,17;147:19; 148:1;159:20; 170:11;177:12; 197:14,14 resource-by-resource (1) 125:3 resources (43) 9:1;30:8;31:3; 33:6;43:21;45:15; 46:3;51:14;67:3,6,7; 118:11;124:14,17; 125:4,6;130:12; 133:10,21;134:2,15; 135:2,3,4;137:21; 138:7,9,11,18; 149:16,20;150:6; 162:7,9;163:12,18; 164:24;165:10; 168:13;177:19; 179:14;180:6,8 respect (3) 119:9;204:10; 209:16 respond (2) 7:24;9:7 response (8) 7:18;15:15;18:10; 20:14;51:4;58:19; 132:8;206:20 restate (1) 124:23	restating (1) 115:8 result (4) 7:21;30:12;95:20; 117:22 resulting (1) 199:9 results (1) 66:17 resume (1) 213:3 resumed (2) 4:1;109:23 re-tread (1) 176:17 reverse (1) 153:3 review (11) 8:22;13:23;92:6; 119:7;130:2;134:6; 145:22;148:3;149:2; 151:24;176:21 reviewed (7) 12:15;39:2;79:14, 15;91:2;130:15; 183:5 reviewing (2) 174:9;184:6 reviews (23) 19:5;23:21;33:1; 34:6;37:10;38:7,21; 44:12;46:24;49:1; 54:6,21;62:5;73:6; 89:19;100:3;120:3,6; 124:20;135:23; 188:5;191:19;201:6 revolution (1) 191:23 revolutions (2) 191:11,22 Ride (1) 79:10 ridge (10) 11:19;12:3;75:1; 96:4,13;97:4,17,20; 113:17;122:10 ridgeline (5) 17:19,22;75:9; 97:7;165:15 right (63) 11:1,3,3,7,20,21; 12:10;16:22;28:10; 32:15;35:21;38:6; 40:12;43:1;46:11; 51:8;57:1,5;59:3,5; 75:22;76:22;79:4; 82:4;86:2;88:14; 93:2;105:4;110:20; 126:18,19;132:2; 135:22;138:10; 141:18;143:11; 149:13;150:5; 154:12,13;157:12;	159:3;162:6,16; 171:20;181:8;185:9; 186:5;187:12;188:8, 13;189:19;194:16; 197:1,4;200:2; 201:23;202:7;206:9; 207:21;209:17; 213:4,9 right-hand (1) 11:13 ringed (1) 189:12 rise (3) 138:18;173:21; 180:15 Road (20) 11:16,17;72:24; 73:3,4,14;74:19; 75:22,23;76:12;77:1, 2,7;96:13;97:2,21; 127:5;138:14; 151:14,16 roads (9) 46:17;47:9,9,10,10, 13,21;91:20;180:9 roadways (4) 52:23;91:15,16; 151:20 roasting (1) 136:6 Robert (1) 166:17 rock (1) 27:20 role (1) 6:5 room (3) 168:23;212:4; 213:19 rotated (1) 75:2 ROTH (44) 4:7,14;16:7,8;32:6; 85:1,7;87:8;114:12, 13,15;117:14,15,18; 125:18,22;126:3,20, 23;128:6,11,22,24; 139:23;141:8; 142:13,19;143:13,17; 145:3;189:1;204:19; 205:11;206:6,11; 208:16,24;209:14; 210:23,24;211:18; 212:17,20;214:2 rotor (10) 78:9,11;101:21,24; 102:6;103:2;104:10, 12,16,22 round (2) 112:3;207:14 Route (1) 77:1 row (1)	142:21 RPMS (1) 191:11 rules (2) 104:8;208:8 run (4) 37:1;150:9;152:1; 169:14 running (4) 35:8;36:24;112:17; 113:2 rural (6) 108:19;123:8; 132:22;138:12; 149:18;164:8
S				
				safety (2) 8:8;43:8 said/she (1) 181:21 Saint-Gaudens (1) 166:18 sake (1) 88:15 Salmon (6) 72:23;73:3,13; 76:11;77:1,2 salmon-colored (1) 116:10 same (19) 6:12;14:4;21:6,9; 43:11;55:24;56:6; 59:5;68:9;92:2,6; 108:8;129:18; 138:15;145:12; 153:3,24;183:17; 191:18 Sanctuaries (1) 127:8 sanctuary (38) 18:23;19:7;20:21; 21:12,19;22:2,11; 23:10,14;25:19;26:4, 5,12,16,19;36:15,19; 42:18;47:17;48:9; 49:16;52:8;69:16,18; 70:22,23;71:3; 127:24;129:9;130:8; 158:1,19;159:4,8,9, 12,23;160:1 Sandy (1) 143:19 Saratoga (5) 5:15;10:9;24:21; 66:17;67:9 satellite (1) 90:3 saw (1) 74:9 saying (35) 9:11;13:4;14:19;

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

19:16;22:16;30:18; 24:31:16;33:7;34:2; 44:15;68:11;70:19; 86:6,18;93:23;94:2; 98:15;100:9;103:22, 22,24;108:3;116:21; 120:19;134:16; 141:23;166:11; 178:18,21;180:20,24; 192:15;200:16,23	section (4) 47:5;82:20;174:20; 189:13 seeing (8) 37:2;43:16;57:2,4, 14;66:5;174:14; 194:5 seem (8) 43:18;78:14;91:21; 137:9,15;175:1,8; 200:17 seemed (1) 175:12 seems (10) 14:5;32:6;81:19; 140:23;147:21; 180:18;200:19,22; 201:9,12 select (2) 152:15;193:18 selected (1) 54:1 selection (1) 54:5 selections (2) 203:24;207:6 send (1) 213:17 sensation (1) 192:11 sense (5) 95:19;154:22; 155:21;164:2;212:15 sensitive (7) 18:7;20:15;50:12; 61:8;66:22;67:1; 104:14 sensitivity (1) 136:22 sentence (4) 51:3,6,13;81:6 separates (1) 154:10 Service (1) 173:5 Services (1) 53:1 SESSION (1) 214:5 set (3) 105:7;149:14; 161:19 sets (1) 66:4 setting (21) 19:1,11,16,18;20:2, 8,11,22;21:1,3,5; 50:20,21,23;105:13, 17;106:6;159:22; 167:18;168:15; 180:11 settings (1) 50:1	seven (2) 181:12;182:12 several (4) 60:18;63:8;111:24; 128:2 severe (2) 43:7;192:24 shade (1) 14:10 shades (1) 194:7 Shadow (69) 6:10;14:10;67:10, 22,24;68:2,2,7;69:2, 19;70:3,4,16,19,20; 71:8,13;75:14,19; 78:6,8,10,12,13,16, 19;101:1,18,23; 102:9;103:7,23,24; 111:13,16,19,23; 112:10,16,19,21; 114:2,5;143:22; 144:3,9,11,12,13,16; 153:6;185:9,14; 186:24;188:14; 190:15;192:4; 194:20,21,24;195:19; 196:1,4,15;207:15, 19,24;208:6,13 shadow-flicker (15) 68:16;70:14;78:7; 110:4;111:4,9;113:9; 114:8;144:7;187:7; 188:20;190:4;195:8, 18;207:17 shadowing (1) 78:21 shadows (5) 68:20;79:1;195:3, 14,20 shall (4) 130:13;138:21; 168:23;180:21 shape (2) 171:18;186:24 share (1) 129:10 shares (2) 129:16,22 sharp (4) 104:1,3,5,6 shift (1) 145:19 short (7) 28:21;73:12;90:15; 102:3;112:1;113:6; 192:3 show (16) 13:19;15:17,19; 59:16;82:9;97:16,17; 98:12;100:4;110:13, 17;124:16;125:1,1; 187:4;190:18	showed (3) 13:13;66:2;72:22 shown (1) 101:17 shows (13) 12:2;25:15;26:10; 74:16;96:23;104:4,6; 133:3;164:15; 190:13;195:19,20; 204:3 side (12) 16:12;57:2;75:23; 77:2;96:21;113:23, 24;114:4;130:22; 139:13;140:14; 189:17 sides (1) 27:4 signers (1) 167:5 significance (24) 10:22;34:14;46:5; 51:14,15,20,24;52:2; 133:11;138:22; 139:9,15;140:18; 141:22;142:1; 144:24;165:1; 168:19;172:8; 173:21;176:16; 179:15;180:16;197:9 significant (20) 18:13,19;20:19; 42:15;43:22;45:16; 52:3;62:1,16;63:19; 137:24;140:8; 162:17;163:12; 166:7;168:6;171:19; 182:17;197:14; 201:19 Similar (17) 50:5;70:5,6;81:14; 107:20,24;108:1; 118:8;124:17; 146:24;169:22; 187:2;197:22,24; 198:23;199:2;202:8 similarity (1) 81:20 Simpkins (3) 172:5,6;174:16 simple (5) 54:3;60:3;62:21; 63:21;84:19 simplistic (3) 54:8;191:13;194:2 simply (2) 149:10;155:20 simulation (13) 10:11;12:15;14:13; 47:6;65:24;73:2,14; 74:13;98:19,23; 99:18;156:20;207:11 simulations (12)	13:19,21,23;14:16; 73:11;134:4,10; 151:5,6,19,24;206:23 single (1) 134:8 site (13) 22:6,7,13;46:1; 72:24;106:22; 113:13;150:16; 155:14,17;158:4; 161:22;167:11 sited (1) 156:22 site-dependent (1) 106:17 sites (6) 8:22;40:3;46:2; 65:18;116:23;159:17 siting (3) 24:10;34:16; 155:11 sitting (1) 27:19 situated (1) 75:1 situation (6) 21:22;84:6;102:15; 179:3;181:21;182:19 six (3) 6:3;210:2,5 size (7) 57:21,24;95:22; 96:3,11;131:5,15 skeletal (1) 54:2 ski (3) 36:19;79:10;138:2 skied (1) 36:9 skiing (6) 35:9;36:8;41:1,4,8; 135:20 skills (1) 77:19 sky (5) 58:5;102:10; 152:23,24;153:2 slightly (1) 112:13 slower (3) 107:4,7,9 slowly (2) 102:12;107:8 small (5) 30:9;31:17;32:20; 57:21,24 Smaller (2) 131:2;189:11 smile (1) 85:7 snack (1) 35:20 snowmobiling (3)
--	---	---	---	--

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

<p>35:8;135:20;138:2 so-called (1) 98:2 Society (4) 127:7,12;207:5; 211:13 sole (1) 189:16 solution (1) 8:11 somebody (9) 37:3;84:18;104:14; 139:11;140:13; 141:5;143:2;177:24; 181:24 somebody's (1) 88:13 Someone (3) 4:8;28:1;190:22 someplace (3) 69:5;99:11;179:15 sometimes (4) 36:11;112:3;165:7; 170:13 somewhat (1) 146:24 somewhere (4) 77:2;98:7;134:16; 197:10 sophisticated (1) 157:2 sorry (44) 18:2,15;23:16,17; 24:4,17,24;25:21; 27:12;29:23;38:4; 41:12;45:4;47:1,18; 50:7;54:17;60:12; 67:11;69:6;72:7; 77:8;83:16;92:10; 93:14;94:20;96:14; 99:17,19;100:17; 105:16;111:9; 117:11;133:23; 137:7;140:7;167:16; 188:18;195:17; 198:19,20,20;200:3; 203:2 sort (63) 8:5;14:6;27:1; 36:13,24;41:21; 42:15;65:2;66:14; 94:10;100:6;102:23; 116:10;118:13; 120:10;123:16; 124:13;129:18; 133:14;146:23; 148:13;149:8;151:8; 153:15;155:2,24; 156:1;160:24; 161:13;162:14,19; 163:15;165:16; 168:3;172:14; 174:13;178:23;</p>	<p>180:6,8;181:10,18, 21;182:7,13,17; 184:19;185:15; 190:20,23;192:8,13, 20,22;193:22,23,24; 194:9;197:8,20; 198:6;201:14; 204:24;205:2 sorts (4) 133:9;149:2;150:9; 183:5 sound (4) 115:20;129:9,22; 191:15 sounded (1) 62:7 sounds (5) 56:20;83:12; 129:15;155:2;157:21 source (1) 13:5 South (9) 5:3;70:16,17;77:1; 96:21;101:16; 102:17,24;113:23 southern (1) 159:14 space (1) 80:2 spaces (1) 61:16 speak (6) 5:11;11:7;31:22; 76:15;107:8;161:23 speaking (3) 82:22;168:12; 190:12 speaks (2) 32:2;146:12 species (2) 95:12;96:9 specific (28) 33:14;45:22;47:3; 59:18,20;80:22;83:7; 94:21;100:1;102:14; 104:23;114:21; 120:12;121:8,11; 133:6,21;134:2,15; 135:3;147:20; 150:21;159:17; 161:15;164:17,22; 173:6,14 specifically (9) 6:4;32:5,19;33:14; 54:1;82:23;136:17; 175:3;207:18 specificity (1) 154:9 specifics (2) 106:22;173:2 spend (2) 61:13;182:1 spending (2)</p>	<p>87:7;169:1 spent (1) 139:1 spin (1) 109:14 spinning (1) 107:24 spoke (2) 32:23;50:9 spoken (1) 169:19 spot (2) 97:8;116:10 spots (2) 97:15;151:13 square (3) 163:3;165:4,9 stack (1) 154:21 stake (1) 138:7 standard (10) 8:7;122:20,23,24; 123:12;155:21; 179:21;183:21; 208:15,20 standards (5) 179:10;208:4,18; 209:4,11 standing (7) 56:17;68:11,14,18; 144:5,8,14 start (12) 16:23;51:13;80:13; 88:11;145:20;147:6; 149:16;210:4; 212:15,19;213:2,18 started (1) 180:13 starts (3) 64:1;180:11; 183:14 state (86) 4:24;11:8;18:17; 25:15;35:4;40:14; 42:7;43:20;44:3,10; 45:11;46:3,4,9,10,13; 47:3,6,11,12,19;48:7; 50:1;52:10,12,14,19; 53:4,24;54:14,24; 60:1;61:23;62:19; 65:14;106:14,15; 129:10,12,13,16,23; 130:9,12,12;136:8; 137:4,9,15;138:7; 139:13;140:14,16; 141:11;142:1;158:6, 9,10;166:14,18; 168:24;170:1,4; 171:1,5,11;172:7,12, 13,18,23;173:8,21, 22;174:1;177:3; 179:16;180:14,24;</p>	<p>181:1,2;196:21; 197:22,24;198:1,9 stated (12) 18:12;24:3;27:10, 14;40:11;50:16; 57:22;60:10;66:15; 69:12;138:21;183:10 state-level (1) 166:7 statement (15) 7:24;9:17,19; 14:19,22;19:4,12,14; 30:6,24;31:14;44:9; 103:1;146:17;199:14 statements (5) 9:8;21:9;80:22; 123:6;130:4 statement's (1) 8:1 state-owned (4) 166:6;169:11; 180:15,21 state-registered (1) 169:14 states (18) 7:17;10:7;27:7; 34:9;68:6;69:4,5; 90:21;122:4;131:14, 17;145:1;179:21; 180:1,1;182:6;208:5, 8 State's (2) 51:17;52:5 statewide (26) 10:22;31:8;51:14, 24;52:2,3;67:7; 133:10;138:22; 139:9,15;140:9,18; 141:12,16,22,24; 144:24;163:11; 165:1;173:23; 176:16;179:15; 180:16;197:8,14 statewide-significant (7) 149:17,20;163:18; 169:12,19;170:6,22 stationary (7) 37:18,20,22;38:6, 10,11,19 Statue (1) 141:16 statute (3) 166:20;197:10; 198:4 stay (3) 22:14;80:1;94:9 staying (1) 50:8 steady (2) 103:7,24 step (6) 148:24;150:23; 199:7;200:4;201:12,</p>	<p>17 step-by-step (1) 153:12 steps (5) 148:2,9,19,23; 199:5 STEWART (1) 188:22 stick (3) 153:7;187:12; 198:1 sticking (2) 152:13;154:18 still (14) 45:10;55:19;57:13, 24;78:12;119:5; 143:8;145:8;159:8, 21,24;170:21; 172:19;186:2 stopped (1) 91:20 Street (1) 5:3 strictly (1) 149:19 Strike (3) 24:4;41:15;60:13 strobe (3) 192:19,22,23 strong (1) 166:6 strongest (1) 200:22 structure (5) 111:7;165:14,22; 175:24;176:4 structures (13) 93:14;105:8;109:7; 144:14;150:5;155:8; 158:21;170:9,20; 193:16;194:6; 196:18,20 studied (4) 34:2;115:22; 142:24;193:14 studies (3) 65:4;86:19;104:21 study (44) 23:23;26:21;30:10, 11,23;31:4;33:22; 34:3,24;35:3;37:11; 44:11;58:21;59:1,14; 60:22;69:18;70:13, 23;71:5;78:5;79:1; 81:4,13;89:20;90:20; 91:2,24;92:12; 103:19;117:19,21; 121:10;133:11,12,13, 22;134:2;143:1,1; 144:15;148:11; 149:6;164:11 stuff (9) 38:1;95:6;120:20;</p>
--	--	--	---	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

135:14,22;136:7; 172:21;175:6;178:17 stumbled (1) 42:12 style (2) 54:5,7 subject (3) 97:23;108:22; 203:7 subjective (33) 18:5,8;19:14,17; 20:16;50:13;62:8; 65:3;83:15,18,20,24; 84:5,8,10,13,22; 85:13,17;86:3,8,12, 22;87:12;88:7,9; 122:17,23;123:3,12, 13;142:14;163:23 subjectively (1) 141:4 submarine (1) 166:17 submit (2) 6:21;52:22 submitted (3) 6:13;10:9,11 substantially (1) 171:3 substantiate (1) 39:18 substation (2) 175:22,23 sudden (1) 79:23 sufficient (2) 106:20;123:17 suggest (1) 116:24 suggestions (1) 161:15 Suite (1) 5:3 summary (7) 5:18;82:3,18,19, 20;118:10;153:11 summer (2) 41:5;127:20 summertime (1) 42:19 summit (5) 38:8,9,11,12;55:3 sun (9) 101:5,12,15; 102:15,18;143:20,21; 152:22;153:4 sunbathe (1) 195:24 sunbathing (2) 178:5;196:9 SUNY (1) 5:21 superimposed (1) 187:3	supplemental (35) 6:21;7:2,6,11;8:17; 10:3;17:9,24;23:11, 17;29:19,22;34:19; 39:23;40:6;42:1; 45:11;50:6;51:12; 54:13,20;55:22; 57:19;59:24;60:9; 61:22;62:18;64:2; 73:11;91:23;116:3; 130:17 support (5) 10:10;14:22;82:8; 104:21;131:9 supportable (1) 34:13 supporting (1) 131:12 supportive (1) 9:19 supports (1) 9:2 supposed (1) 80:3 Sure (41) 5:20;23:18;26:13, 17;35:14,22;39:12; 46:6;54:19;76:6; 81:4;84:16;86:5; 87:5,18;89:2;90:12; 95:18;102:13;107:2; 109:13;115:4; 116:17;121:2;124:6; 146:5,10;148:15,15; 152:2;158:5;159:5; 167:19;168:1;188:7; 192:16;201:24; 202:2,5;207:14; 213:19 surface (1) 134:6 surrounded (1) 49:22 surrounding (3) 31:8;60:6;67:5 survey (1) 119:9 suspect (3) 65:22;75:17;125:7 swaths (1) 26:24 sweep (4) 78:23;79:2;144:16; 196:15 sweeping (4) 102:2;195:3,11; 196:14 swifter (2) 107:5,6 swimming (1) 46:15 switch (1)	199:1 sworn (2) 4:19,21 Syracuse (2) 5:3,23 system (3) 182:8;204:11; 206:15 systems (1) 205:8 T Tab (2) 6:18;7:3 Table (8) 37:11;59:19; 134:23;135:1,12,19, 24;152:17 tail (1) 78:24 talk (15) 64:11;65:19;88:21; 94:16,22;101:1; 108:12;111:18; 139:24;147:15; 154:15;156:4,6; 182:16;199:2 talked (16) 39:12;40:8;43:7; 97:24;98:1,1;115:3; 130:18;156:12; 159:6;161:2,3,4,5,14; 172:9 talking (26) 25:11;32:18;33:5, 10;37:19;47:8;70:11; 73:13;74:12;78:4; 90:10;94:17;97:20; 98:23,23;104:24; 108:17;138:16; 159:7;187:22; 191:14;198:20; 199:18,21;202:22; 207:2 talks (5) 127:24;128:1,3; 148:8;154:24 tall (8) 14:1;95:10;131:12, 14;142:22;193:16; 196:18,18 tapered (1) 154:17 taxpayer (1) 139:6 teacher (1) 86:20 team (1) 173:9 Technical (1) 67:10 techniques (1)	157:2 technology (1) 79:19 telephone (1) 108:2 telling (1) 12:10 temporary (1) 7:20 Ten (5) 97:19;142:22; 154:17;200:10; 201:13 tend (2) 70:17;127:19 tends (3) 69:8;138:23; 208:11 term (2) 80:19;133:20 terminology (1) 185:5 terms (33) 10:17;14:17;23:13; 26:23;38:22,23; 39:19;47:8;52:6; 62:15;75:21;79:22; 92:15;96:16;98:11; 108:16;112:13; 118:21;121:23; 131:4;132:16; 136:19;151:4; 163:10;175:13; 176:7;177:17;178:3; 180:4;191:13;194:2, 5;197:13 terrain (2) 151:11;152:13 terrains (1) 152:12 test (2) 12:20;62:17 testified (1) 114:16 testifying (1) 23:4 testimony (96) 6:13,18,22;7:2,7, 11;8:18;9:24;10:3, 16;12:14;17:9,10; 18:1;23:12;27:10,13; 29:19;31:22;32:12; 39:23;40:7;42:1; 43:17;45:11;48:22; 50:6;51:13;54:13; 59:24;60:9;61:22; 62:19;63:6;64:2,14; 65:1;73:11;87:10; 88:17,19;90:17;92:9; 105:2,6;106:3; 107:15,16;115:18; 116:3,21;117:1,3,4, 14,16;119:1,18;	123:15;125:15,16,22; 126:2,7,7,12,24; 127:11,16;128:7,10, 12;129:5;130:3,17; 135:8;146:3,12; 147:11,14;148:7; 154:5;161:17; 183:10,11;185:13; 191:16;200:1,2; 204:12,12;205:9,23; 209:11,24;210:4 tests (1) 181:16 textbook (1) 197:6 textural (1) 54:3 Texture (1) 53:22 Thanks (1) 174:23 theories (1) 62:17 therefore (9) 20:21;35:6;42:16; 44:17;83:24;116:23; 162:18;166:8;208:19 thinking (4) 172:16;182:22; 192:13;210:15 third (2) 199:7;200:3 thoroughly (1) 121:11 though (17) 13:24;48:15;53:4; 55:8;66:2;71:14; 91:10;93:10;108:3; 135:12;141:13; 145:2;175:7;177:17; 182:12;195:4;204:16 thought (4) 81:15;87:2,23; 108:20 thoughtful (1) 209:21 thoughts (3) 124:22;148:13; 153:14 thousands (1) 158:3 threatened (1) 173:18 three (14) 16:14;17:18;48:19, 20;66:4;74:18;77:9; 99:3;162:16,17; 166:15;182:15; 185:18;192:2 three-quarters (1) 77:4 threshold (1) 182:3
---	---	--	--	---

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

throughout (3) 37:15;122:9;208:7	131:9,18;132:2; 170:16,18	Tuesday (1) 213:20	56:11;57:15;58:2; 77:7;99:3;160:8; 181:6;192:2;195:24; 198:24;202:4	128:4
thumb (1) 208:9	towers (7) 53:24;54:2,10; 130:18;131:1; 167:21;168:3	turbine (52) 13:14;14:8;23:2; 38:16;58:4,7;64:23; 65:7;66:6,11;70:18; 73:3,5,24;74:2,9; 77:10,10,11,12; 101:5,12,19;102:16, 19;105:15,17,21; 106:13;112:7,7,9,12, 17;114:1;118:19; 131:10,17;132:5; 151:12;153:5,22; 187:1,18;188:9; 189:15;191:9,15; 193:13;194:10; 196:2;203:23	type (4) 118:12;165:14; 170:13;204:18	unobstructed (1) 113:21
timber (4) 26:14,18,23;90:6	town (19) 11:18;92:24;93:6; 132:23;133:7;164:9, 12,19;176:23; 177:22;180:7,7,23; 194:12,14;203:11,13, 15,20		types (5) 43:24;135:13; 154:3;173:19;207:2	unreasonable (20) 7:21;8:1,9;4; 19:24;30:3,13;58:18; 59:3;60:2;62:20; 117:8,22;118:6; 119:5;122:22; 132:18;146:9;161:7, 21;202:12
times (13) 33:17;78:9;101:24; 102:6;103:2;104:10, 12,16,22;142:9; 152:17;172:22; 196:17	Town-owned (1) 177:7		typical (2) 101:17;176:1	untenable (1) 166:10
tip (1) 13:14	Towns (2) 90:9;164:12		Typically (5) 56:7;68:2,10;78:8; 138:20	up (68) 12:7;18:15;35:19; 38:9,11,13;43:2,5,9; 52:22;56:11;57:5; 58:8;72:22;76:1,3; 77:7,14,19;79:22; 88:8;95:20;96:12,16, 19;97:3,10,22;98:4,5, 9;107:1;108:13; 110:13;111:17; 112:3;126:17; 127:21;130:13; 131:18;132:1; 139:21;140:5;146:3; 149:5,7;153:11; 164:4,6;169:13; 173:1;176:2;180:11, 22;181:23,24;182:7, 21;183:20;184:1; 185:23;186:14; 188:9;189:24; 201:19;204:21; 205:13;210:3
tired (1) 107:3	trails (5) 49:16,18;129:1,2; 159:13	turbines (85) 8:3;10:13,15; 13:22,24;14:3,10; 17:15,19;21:23;22:4, 7,17;23:3;25:16,20; 26:6,11,16;27:16,22; 35:7;36:10;37:3; 57:21;66:2;73:1; 74:4,18,23;75:8,18; 77:8;79:6;80:3;97:3, 17;98:8,16;99:3; 100:15;105:7; 106:21;107:18,24; 109:1,11;112:6; 113:1,4,18;114:1; 116:12;118:5,18; 120:19;131:1,2,5,11, 13;142:22;150:19, 21;152:7,13,23; 153:1,4;154:17; 157:8;159:15,22; 165:13;177:19,21,23; 178:6,8,9,19;187:1; 189:10;204:2,6	typo (1) 42:12	
title (1) 198:17	tree (5) 13:19;93:14;94:6; 135:22;136:6		U	
Tocci (1) 209:9	trees (10) 38:13,15;68:10; 83:9;86:4,8;95:24; 142:16,21;194:6	turn (7) 7:10;56:8,13,20; 80:4;116:1;124:15	ultimately (1) 207:10	
today (2) 213:6,24	tricky (1) 183:15	turned (1) 191:5	unavailability (1) 42:11	
together (5) 90:1;115:20; 126:13;155:3;202:24	tried (6) 113:14;123:5; 149:20;162:4,5,20	turning (2) 7:9;10:2	Unbelievable (1) 212:24	
tonight (1) 210:5	trouble (1) 192:9	Tuscola (1) 122:7	under (8) 6:18;34:8;63:14; 69:16;81:4;136:20; 158:6;202:8	
took (7) 10:18,24;11:15,21; 42:12;98:9;199:5	trout (2) 52:17;128:4	Tuttle (5) 90:7;92:19;93:4; 96:13;98:12	understands (1) 76:6	
top (10) 8:3;27:20;35:10, 16;56:18;99:1,2; 105:3;138:18;189:12	true (9) 36:6;38:3;70:8; 96:6;103:17;114:18; 116:15;143:10;162:1	Tuttle/Willard (1) 95:15	understood (1) 88:2	
topic (1) 85:15	trustee (2) 127:6,6	tweak (1) 152:1	undeveloped (3) 47:16,24;49:22	
topics (1) 203:11	try (14) 16:19;32:11,16; 77:18;94:9;114:3; 119:19;131:8;140:3; 143:16;149:5;155:7, 19;203:6	tweaks (1) 154:2	undoubtedly (1) 194:6	
topo (2) 149:11,12	trying (17) 4:9;25:3;39:18; 59:23;62:15;63:15, 16;76:12;84:20; 102:14;120:14; 131:4;133:14; 145:13;163:22; 186:2;201:24	two (18) 16:2,19;23:6; 24:13;31:3;48:19,20;	undue (1) 184:14	
topographic (1) 24:14	tubular (2) 54:4,7		unfair (2) 51:3;140:22	
topo-only (1) 26:9	Tubular-style (1) 53:24		unfortunately (2) 139:4;185:7	
tops (2) 27:3;36:5			unfounded (1) 193:2	
total (1) 98:20			uninterrupted (2) 21:24;22:5	
totally (3) 195:2,13,21			unique (2) 49:23,23	
touring (1) 138:2			unit (1) 37:13	
Tourist (2) 136:5,21			United (4) 131:14,16;208:4,8	
toward (2) 20:23;82:6			University (1) 174:13	
towards (12) 24:8;38:16;44:24; 96:4;113:13,17; 144:6,15;150:16,22; 164:15;208:11			unless (3) 38:14;47:3;144:19	
tower (8) 54:9;66:6;93:1;			Unlike (1) 180:5	
			Unlimited (1)	
				updated (1) 89:22
				updates (1) 7:5
				upon (4) 42:12;127:10; 132:11;200:19
				upper (1) 11:13
				uproar (1) 108:7
				upwards (2) 111:12;112:2
				usage (2) 127:18,21
				used (25) 7:19,20;8:9;38:23; 39:15;41:5;46:6; 62:22;63:18;69:13; 74:22;89:3;123:6; 139:24;148:8; 151:16;156:1; 158:12;179:21,24; 182:14,24;196:9; 197:9;206:15
				used (21) 29:11;34:22;35:4;

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

40:10,12;41:10,14, 17:44;17:55;17; 64:21,22;65:4,5; 90:22;140:5;153:24; 158:12;162:8;181:7; 182:22 user (2) 136:4,5 users (9) 65:11;129:7,7; 136:10,21,23;137:14, 14;183:11 uses (9) 36:14;62:11;124:5, 10,11,14;125:3; 130:24;173:10 USGS (1) 13:5 using (3) 70:21;135:13; 193:18 USS (1) 166:16 usually (11) 26:24;27:4;56:9; 82:5;84:11;102:11; 122:14;176:6;183:6, 18;192:13	vegetation (22) 13:8,16;25:18,23; 26:1,5;68:3;89:4; 90:11,22;92:14; 93:13;94:10,12,23; 105:12,19;106:9,11; 111:15;149:12; 193:18 vegetative (2) 88:24;96:22 verbal (1) 15:15 Verification (1) 90:13 verify (3) 13:6;99:7;130:3 versed (1) 76:8 version (4) 25:4;67:18;88:24; 188:23 versus (10) 14:6;23:14;41:4; 100:14,20;120:12; 163:3;165:4;176:15; 177:6 vertical (1) 152:14 vetted (1) 182:5 VIA (27) 17:8,12,24;18:4,6, 17,17;20:15,17; 23:22;24:12;25:14; 39:4,16;50:11,14,18; 53:17;55:17;60:19; 61:23;62:7;65:14; 66:16,17;73:18; 148:3 vicinity (3) 8:13;97:7;196:21 videos (1) 191:2 view (44) 21:23,24;22:4,5,13, 20;27:15,19;35:23; 36:7,16;37:8,14,17; 50:19;55:24;56:6,10; 61:1,13;66:22,23; 67:1;83:2,8;84:9; 85:20;98:2,12,24; 105:15,21;106:13; 113:20,21;118:2,13; 142:16,20;144:19; 160:14,15;200:18; 204:5 viewed (1) 74:18 viewer (4) 37:13;102:19,20; 136:2 viewers (1) 42:20	viewing (1) 123:9 Viewpoint (1) 73:14 views (24) 18:12,18;20:18; 31:10;35:7;36:5; 38:13,14,15;43:24; 44:16;61:11,24; 66:18;86:13;87:14; 118:19;133:6,9; 159:10;164:17,22; 174:4;175:14 Viewshed (34) 8:19,23;10:9,14; 24:14,15;26:9;30:9; 31:5;55:17;88:22,24; 90:13,22;91:21,24; 96:23;99:1,5,12; 100:4,15,21;111:8; 116:4;117:7;118:10; 119:4;133:3;149:10; 150:3;164:13,15; 200:21 viewsheds (1) 100:10 village (1) 93:15 Virginia (1) 122:11 virtue (1) 51:15 visibility (59) 9:12;11:4,21,24; 12:4,8,11;13:10; 14:2;22:23;23:1,5,6, 7;24:8;25:10,11,12, 13,22;27:2;34:3; 37:12;40:4;58:20; 59:1;65:15;66:12; 93:16,17,21;96:3; 97:6;119:12,16; 120:1,7,15,20;121:3; 122:1;123:2,2;133:2; 149:9,13;150:1,6,7, 11,14,15;152:19; 156:4,6;159:18,19; 178:9;201:10 visible (46) 10:14,15;13:15; 18:22;19:2;26:4,11; 28:6,9;29:8,11,14; 40:2;55:2,8,12,15,20; 57:23;58:1,3,5,9; 60:5,12,21,23;64:24; 65:7;66:3,3,4,11; 74:23;79:7;97:3,18; 98:21;108:14; 116:13;118:5,18; 120:20;152:15; 157:11,13 vision (2) 56:14,22	visions (1) 74:17 visit (8) 9:22;10:1;21:11; 44:10;47:15;83:1; 127:24;158:18 visitation (1) 45:22 visitations (2) 45:24;46:2 visited (9) 20:2,7,10;46:11; 61:12;65:10,23; 135:5;158:4 visiting (3) 37:19;42:17;49:23 visitor (2) 50:22;127:17 visitors (5) 37:22;40:18;41:6; 45:12,14 Vissering (32) 7:12,17;8:21;9:22; 18:6,16,17;33:4,9; 40:4;43:22;45:15; 50:18;60:10,19; 61:23;65:14,18; 66:16,21;118:8,21; 119:13;120:11; 121:7;123:16;125:6; 134:18;138:20; 184:4;201:3;202:7 Vissering's (19) 8:17;18:4;20:15, 17;23:22;33:3,11; 34:23;39:2,13;40:9; 50:11,14;60:16;62:7, 14;63:18;116:21; 182:9 visual (78) 6:2,10;7:21;10:11; 17:7,8,13,15,21;24:5, 22;27:11,14;29:20, 24;30:21,23;31:2; 32:4,13;33:13,22; 34:3,7,9,12,13;37:11; 40:2;58:15;59:10,14; 73:2;80:15;81:4,8; 86:21;87:13,20; 89:20;90:20;106:20; 108:17;115:20; 119:24;120:2,16; 121:4,7,9;122:1; 136:22,23,24;140:17; 147:7,18;148:1,10; 149:7;154:8;160:19; 184:12;185:2; 193:12;198:9,14,16, 18;199:6,9,14,16; 201:4,9;202:9; 206:23;209:4 visually (5) 54:4;61:8;107:24;	108:1;141:20 vocal (1) 115:2 vodka (3) 139:12;140:13; 141:6 voice (1) 185:23 volleyball (1) 178:16 Volume (2) 6:18,19 volunteers (1) 127:13 Von (8) 48:22;49:3;125:14, 23;126:2;127:4; 128:7;129:5
V				W
value (13) 84:1,6,9,13,17,23; 85:14;86:6,9,13,19, 23;183:13 valued (2) 61:2,17 values (2) 87:21;197:16 valuing (1) 61:3 vantage (4) 18:7;50:12;66:18, 20 variable (1) 136:24 varieties (1) 114:7 variety (5) 49:18;100:5;104:9; 112:24;187:23 various (5) 90:9;123:17; 132:21;169:2;177:18 vary (2) 157:10;192:7 vast (2) 60:22;92:11 vegetated (14) 10:9,14;13:8,12; 24:15;31:5;61:20; 116:4;123:8;133:2,3; 164:10,13,14			wait (1) 174:22 waiting (1) 85:4 Walking (1) 159:14 wants (3) 10:7;140:13; 205:20 warrant (1) 174:7 Warren (1) 5:3 was/were (1) 4:18 Washington (2) 167:9;171:5 watching (1) 135:21 water (13) 52:15;53:10;86:4, 9;142:16,20;143:9; 156:10,11,15;158:8; 178:4,5 waterfall (1) 61:19 waters (1) 83:9 way (45) 8:15;13:5;14:9; 24:9;34:15;52:17; 56:23;62:12;67:4; 70:2;75:3;76:22; 79:22;81:13;87:23; 98:12,16;104:4; 118:15;121:13,19; 124:21;129:15; 130:6;138:8;146:22; 149:23;151:17,19,21; 152:20;159:16; 161:18;167:23; 170:24;171:18;	

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

175:7;176:4;183:17; 184:6,19;190:21; 192:19;194:8;195:8 ways (6) 65:17;146:7; 193:11,17;194:3,10 web (1) 158:4 week (1) 212:1 weekday (1) 127:21 weekends (1) 127:20 weight (7) 130:11;137:5,10, 16,18;181:2;208:23 welcome (1) 4:16 welcomed (1) 122:15 well- (1) 157:1 Wells (1) 127:22 weren't (2) 31:16;205:14 west (12) 11:17;75:22,23; 77:11;97:8,9,9; 101:22;103:1; 122:10;178:7;189:15 west/southwesterly (1) 178:2 western (1) 189:17 whammy (1) 115:21 what's (12) 9:16;25:21;56:3; 83:16;103:18; 113:22;139:19; 149:21;182:1;188:3; 191:7;197:19 whenever (2) 180:13;212:16 Where's (2) 62:3,24 Whereupon (4) 4:1,18;109:22; 214:5 white (5) 58:4,5;97:1; 152:23,24 whole (16) 51:3,5;59:22; 62:11;93:11;94:13; 95:23;108:17; 120:12;128:17; 143:4;151:23; 157:24;163:17; 165:3;173:7 who's (2)	15:17;190:22 wider (1) 31:3 wife (1) 195:23 wildlife (18) 18:23;19:7;20:21; 21:19;22:2;23:14; 36:15;67:22;68:13, 16;71:13,17;129:9; 130:8;158:19;159:4; 173:17;174:2 Willard (91) 18:10,11,13,18; 19:3;21:11,11,16,18; 22:10,11,16;23:9,24; 24:6;25:16,24;27:20; 28:4,10;29:21;30:1, 19;31:7,10,15,18,24; 32:5,14,21;33:14; 36:19,21;37:22;39:9, 16;40:15,20,20;41:9, 13,16,19;42:2,3,8,13, 23;43:13,19;45:23; 47:16,17,24;48:4,8, 11;49:15;50:15,15; 52:9,16,20;53:2,10; 58:12,16;59:17; 62:23;70:12,14; 92:20;98:13,17; 124:5;127:18;128:3; 129:2,8;130:8; 138:16;156:13,21; 157:22,24;158:19; 159:17;179:2;204:2, 7 willing (1) 194:11 wind (52) 6:4,6;8:2,4,14; 21:23;22:4,7;23:2,3; 27:16,22;36:9;55:1,3, 7,19;56:1,1,18,19,21, 24;57:14,22;105:6, 21;107:18,24;108:8; 109:1;114:17,19; 119:23;122:10; 130:22;131:1,3,5,9, 13,17;132:5;142:22; 153:22;165:13; 175:9,21;196:2; 204:1,17;206:16 winding (1) 106:24 window (4) 68:9;102:22; 113:13;191:4 windows (7) 69:21,22,24;75:2; 113:17;114:3;190:11 Wind's (1) 8:9 Windsor (1)	99:2 winter (11) 36:22;40:17;41:11, 14,17;42:4,10,15,24; 43:3;46:7 winters (1) 43:10 wintertime (1) 41:22 wished (1) 167:20 wishing (1) 158:22 within (25) 9:2;20:20;22:2; 56:10;58:20;59:1; 70:23;71:5;73:1; 78:8;94:14;96:5; 101:24;104:10; 107:22;109:8;110:4; 133:11,21;134:2; 164:9;174:4;181:1; 196:21;200:21 Without (6) 9:13,19,21;21:1; 62:1;63:19 WITNESS (40) 11:14;14:24;15:7; 19:5;23:21;33:1; 34:6;37:10;38:7,21; 44:12;46:24;49:1; 51:4;54:6,21;62:5; 63:10;64:11;73:6,8, 19;74:13;85:2;87:10; 89:19;90:19;100:3; 110:19;120:3,6; 124:20;135:23; 140:24;188:5,17; 191:19;201:6;202:7; 204:22 witnesses (1) 209:10 wonder (1) 81:2 wonderful (1) 8:10 wondering (4) 63:22;81:16; 102:21;175:2 wood (1) 69:1 wooded (1) 59:7 woodland (3) 105:12,19;106:8 woods (2) 70:7;167:12 word (1) 145:13 worded (1) 41:15 words (5) 11:6,8;69:13;	76:16;83:8 work (8) 29:3;143:2;146:22; 147:21;150:24; 154:1;175:9;179:12 worked (1) 163:14 world (4) 21:13;140:20; 168:8,9 worried (1) 155:15 worst (2) 165:20;166:1 worth (2) 16:19;87:12 worthy (1) 166:8 wow (1) 177:21 wrap (1) 153:11 wraps (1) 11:18 write (2) 134:17;198:5 writing (1) 64:10 written (2) 85:22;99:10 wrong (5) 29:23;94:1;116:9; 119:22;178:3 wrote (6) 82:12,13,14,17; 119:11;197:12	144:7 0 00 (1) 198:19 00-2 (1) 198:21 1 1 (15) 6:18,19;10:7; 24:13;26:7;34:7; 62:4;81:4;97:9,15; 123:20,24;147:24; 148:11;189:10 1,160 (1) 103:19 1.1 (1) 81:5 1:07 (1) 4:2 10 (54) 6:1;10:13;25:15, 24;26:10;55:10,19; 57:6,9,9,12,23;61:22; 62:4,6;65:14;66:15; 72:14;74:3;78:9,11; 83:7;92:10,11;95:5; 96:6;97:15,16,17, 101:4,6,13,24;102:6, 20;103:11;104:10,12, 15,21;116:11;118:4; 124:12;137:19; 156:3,5;158:8; 189:10;190:1,1; 200:5,9;209:2;211:4 100 (2) 187:21;188:9 102 (1) 88:18 109 (1) 5:2 10B (1) 184:24 10-mile (8) 8:18;91:24;92:3; 116:4;117:6;118:2; 119:4,8 10-minute (1) 109:19 10th (1) 101:21 11 (19) 6:22;10:4;34:19, 20;40:7,14;42:6; 43:18;60:1;63:1,7; 64:2;66:18;185:11; 186:9,9;200:6,9,10 11th (1) 7:12 12 (15)
			Y	
			year (14) 7:13;40:19;44:1, 18;111:14,24;112:1; 120:5;187:17;190:8; 208:1,7,11,14 year-round (3) 44:23;129:3,7 years (10) 6:1,1,3;96:1,6,10; 148:20;181:12; 182:12;203:1 yesterday (4) 72:21;76:5;191:14, 16 York (8) 5:4;122:9;140:19; 169:21;179:23; 197:24;198:8,9 Yup (2) 40:13;200:10	
			Z	
			zone (1)	

**DAY 5 - AFTERNOON SESSION ONLY - November 2, 2012
SEC 2012-01 ANTRIM WIND ENERGY HEARING ON THE MERITS**

6:1;40:7;42:6; 43:18,20;45:10;92:7, 9;105:5,24;106:2,3; 109:20;136:4,21 12.3 (1) 191:22 120 (1) 56:16 13 (1) 191:11 13202 (1) 5:4 13B (5) 67:17;119:21; 185:17;188:16,24 14 (6) 18:2;23:17;50:8; 123:19,22;156:6 15 (7) 16:12;37:11;51:12; 103:2;156:6;188:22; 211:4 150-ish (1) 56:16 156 (1) 72:23 16 (2) 45:14;50:17 17 (5) 27:12;106:4; 107:15;146:12;161:6 18 (1) 60:17 180 (3) 56:8,13,15 19 (1) 53:18 1940s (1) 131:24 1944 (1) 167:11	2000 (1) 198:15 2001 (1) 89:21 2010 (3) 91:2;132:23;133:1 2011 (1) 53:3 2012 (6) 6:14,22;10:4; 119:24;124:16; 125:23 21 (7) 23:20;111:12; 174:21;185:13,21; 186:3,20 22 (2) 40:14;166:12 23 (1) 208:3 234 (1) 127:4 24/7 (2) 29:3;113:2 25 (1) 210:2 252 (1) 138:15 26 (4) 67:19;73:14; 185:20;188:23 269 (1) 88:20 27th (3) 213:4,16;214:1 28 (1) 111:13	31st (4) 6:13;125:23;127:1; 147:14 33 (2) 9:12;116:22 39 (2) 76:24;97:6 39B (1) 11:15 3D (2) 14:3,7 3-megawatt (1) 131:9	6	53:18;73:21;80:16; 119:22;185:1
		4	6 (15) 43:20;44:14;54:14, 18,24;55:22;57:11, 19;63:1;88:20;90:12, 17;97:8,9;124:7 62 (1) 88:20	
		4 (17) 6:18;7:3,14;74:5, 17;77:10,11,12;97:8; 147:8,10;148:7; 199:14,16,17;200:5,9 4.0 (1) 174:20 40 (11) 16:10;89:4;95:10; 96:6,10;104:15; 187:18,20,21;189:22, 23 400 (1) 5:3 40-foot (1) 94:3 45 (1) 188:1 492-foot (1) 107:23	7 (4) 10:5;44:14;117:20; 190:2 7:00 (1) 196:4 70 (1) 14:1 71 (1) 134:8	
		5	7	
	3		8	
2		5 (13) 54:14,18;63:1; 65:20;74:5,17;89:20; 112:9;123:19,22; 124:4;189:15;214:5 5- (1) 119:7 5:00 (1) 16:17 5:55 (1) 214:6 50 (3) 14:1;104:15; 187:21 500-foot (1) 142:22 50-millimeter (1) 14:13 541-A (1) 63:14 5-mile (2) 55:17;117:24	8 (16) 10:13;24:12,14; 29:19,22;44:14; 58:12;97:7;111:22; 117:5,12,17,20; 119:2;124:8;156:19 8:00 (3) 112:10;196:4,7 80 (2) 111:8;113:8 800 (1) 74:24	
2 (17) 24:15;37:11;54:24; 62:4;78:6;111:10; 116:3;134:23;135:1, 19,24;152:18;187:1, 7;188:14;190:1; 195:17 2,367 (1) 132:24 2,400 (1) 164:9 20 (11) 6:1;16:5,12;60:17; 72:3;96:6,10;189:23; 190:1;208:1,14 20- (1) 108:2 200- (1) 154:21	3 (11) 24:23;25:4;51:13; 67:17;73:21;74:4,17; 97:9;112:7;147:13; 185:19 3,806 (3) 103:11,20;104:19 3,900 (2) 103:15,24 3:13 (2) 109:21,22 3:25 (1) 109:20 3:35 (1) 109:23 30 (9) 96:6,10;126:19; 189:22,24;203:1; 208:1,11,14 300-foot (1) 154:21 30-foot (1) 108:2		9	
			9 (21) 7:3;24:12,15;25:5, 15,23;26:10;60:9,16; 64:1;73:22;77:1; 92:11;116:11; 117:20;118:4; 119:24;124:10,15; 186:19;189:1 9:00 (3) 112:10;196:8; 213:19 90 (3) 210:16,19,21 94.7 (1) 92:12 95 (8) 31:6;60:5;92:24; 93:5;132:15;133:4; 160:18;200:20 95-percent (2) 132:10;200:20 9A (8) 17:14;24:20;25:5;	