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1	STATE OF NEW HAMPSHIRE
2	SITE EVALUATION COMMITTEE
3	
4	November 1, 2010 - 10:13 a.m. DAY 1 Public Utilities Commission
5	21 South Fruit Street MORNING SESSION ONLY Suite 10
6	Concord, New Hampshire
7	
8	RE: SEC DOCKET NO. 2010-01 Application of Groton Wind, LLC,
9	for a Certificate of Site and Facility for a 48 Megawatt Wind
10	Energy Facility in Groton, Grafton County, New Hampshire.
11	(Hearing on the merits)
12	PRESENT: SITE EVALUATION SUBCOMMITTEE:
13	Chairman Thomas B. Getz N.H. Public Utilities Comm. (Presiding)
14	Robert Scott, Director Air Resources Division - DES
15	Brook Dupee, Bureau Chief Dept. of Health & Human Serv. Richard Boisvert N.H. Div. of Historical Res.
16	Stephen Perry, Chief Inland Fisheries - N.H. F&G Charles Hood, Administrator Dept. of Transportation
17	Donald Kent, Administrator Dept. of Resources & Econ. Dev. Eric Steltzer Office of Energy & Planning
18	Michael Harrington, Engineer Public Utilities Commission
19	
20	* * *
21	Counsel for the Committee: Michael Iacopino, Esq.
22	
23	COURT REPORTER: STEVEN E. PATNAUDE, LCR No. 52
24	

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    ALSO PRESENT:
3
    Counsel for the Applicant:
                                    Susan S. Geiger, Esq.
    (Groton Wind, LLC)
                                    Douglas L. Patch, Esq.
 4
                                    (Orr & Reno)
    Counsel for the Public:
5
                                    Peter Roth, Esq.
                                    (Sr. Asst. Atty. General)
                                    Evan Mulholland, Esq.
6
                                    (Asst. Atty. General)
7
                                    Michelle Thibodeau
                                    Spencer Culp
8
    Reptg. the Town of Rumney:
                                    Bernard Waugh, Esq.
9
                                    (Gardner, Fulton & Waugh)
    Reptg. the Town of Plymouth:
                                   John McGowan, Esq.
10
                                    (Donahue, Tucker & Ciandella)
11
    Reptg. the Town of Groton:
                                   Miles Sinclair, Selectman
12
    Reptg. the Buttolph Group:
                                    James Buttolph, Intervenor
13
                                    Cheryl Lewis, Intervenor
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    Reptg. the Mazur Group:
                                   Richard Wetterer, Intervenor
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6 7	APPLICANT 28	"A Summary and Comparison of premarked Bird Mortality from Anthropogenic Causes with an Emphasis on Collision", by	
8		Erickson, Johnson and Young (2005)	
9 10	APPLICANT 29	"Understanding Avian Vision: premarked The Key to Using Light in Bird Management", by Blackwell (2002)	
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19	Mazur 6	"Wind turbine noise, annoyance premarked and self-reported health and	
20 21		well-being in different living environments", Occup Environ Med, 2007 July	
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16	Buttolph 1-C	October 1 response to Peter Roth (11 pages)	premarked	
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18	Buttolph 1-D	Acoustic Ecology Institute Critique of Hoen (3 pages)	premarked	
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21	Buttolph 1-F	Albert L. Wilson Critique and Professional Profile,	premarked	
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6 7		"Condamne pour avoir vendu son bien sans parler du projet eolien" (24 Avril 2009)	
8	Buttolph 1-K	Letter from McCann Appraisal	premarked
9		to the N.H. Site Evaluation Committee, including Exhibit A and Certification (08-31-10)	
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12		to data requests (09-21-10)	
13 14	Buttolph 1-M	Excerpts from the Final Report of the Township of Lincoln Wind Turbine Moratorium	premarked
15		Committee (12 pages)	
16	Buttolph 1-N	Letter from McCann Appraisal to Mr. Ben Hoen (12-14-09)	premarked
17	Buttolph 1-0	"Real Estate Impact Evaluation Midwest Wind Energy Proposed	premarked
18		Walnut Ridge Wind Farm" by Michael S. McCann, CRA	
19	Buttolph 1-P	Critique of "The Impact of	premarked
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11		windpoweringamerica.gov	
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14		by Nicolas Boccard (Oct. 2008)	
15	Buttolph 7	NOT SUBMITTED - Duplicate (Submitted as Buttolph 28)	premarked
16	Buttolph 8	- ·	premarked
17	виссотри в	Director/State Fire Marshal, to Jane Murray, N.H. Dept. of	premarked
18		Environmental Services (10-17-10)	ı
19	Buttolph 9	Weekly Market Bulletin, October 20, 2010	premarked
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21	Buttolph 10	Polar Caves Park, including brochure	premarked
22	Buttolph 11	National Weather Report re: flooding, October 15, 2010	premarked
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10	Buttolph 16	"Bird Survey Standards within the industry are not peer reviewed protocols" by Kim	premarked
12	Buttolph 17	Van Fleet U.S. Fish and Wildlife Service 16 USC 668-668d Bald and Golden Eagle Protection Act	premarked
14 15	Buttolph 18	2009 Avian and Bat Surveys Groton Wind Project, Groton, NH, December 2009 by Stantec	premarked
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PROCEEDING

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CHAIRMAN GETZ: Okay. Good morning, everyone. I will open the hearing in Site Evaluation Committee Docket 2010-01, concerning the Application of Groton Wind. My name is Tom Getz. I'm the Chairman of the Public Utilities Commission, and I've been designated as Chairman of this Subcommittee of the Site Evaluation Committee.

Let me explain how we will proceed today. I'm going to begin with some introductions of the members of the Subcommittee. I will provide a summary of the procedural background for the record. And, I will also, as part of that procedural background, summarize what took place at the prehearing conference on Friday. Then, we will take appearances from the parties, which just means that we'll go around the room, beginning with the Applicant, so that individuals who are representing each of the parties will identify themselves for the record. And, you'll note that Mr. Patnaude is our court reporter. So, there will be a transcript of all of the proceedings. I'm sure he will remind you or I may remind you that, when you're testifying or cross-examining witnesses, to please speak slowly, and we would try to not be speaking over one another and to speak one at a time,

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so that he can get everything on the transcript. I know that, from time to time, emotions carry us away, but that
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makes it difficult for Mr. Patnaude.

Hampshire Fish & Game Department.

Health & Human Services.

- So, let me turn to introductions of the members of the Subcommittee. And, we'll begin on my right
- 6 with Mr. Steltzer.

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- 7 MR. STELTZER: Eric Steltzer, with the 8 Office of Energy & Planning.
- 9 MR. PERRY: Good morning. Steve Perry,
 10 I am designee for Executive Director Glenn Normandeau, New
- MR. DUPEE: Good morning. My name is

 Brook Dupee. I'm here on behalf of the Department of
- DIR. SCOTT: I'm Bob Scott, with the
 Department of Environmental Services.
- MR. HOOD: I'm Charlie Hood, with the
 New Hampshire Department of Transportation.
- MR. HARRINGTON: I'm Michael Harrington,
 New Hampshire PUC.
- DR. KENT: Don Kent, Department of
 Resources & Economic Development.
- DR. BOISVERT: Richard Boisvert, New
 Hampshire Division of Historical Resources.

MR. IACOPINO: Mike Iacopino, Counsel to the Committee.

CHAIRMAN GETZ: And, I'll note that,
pursuant to the statute, that we can proceed as a
subcommittee, a subcommittee of nine has been designated.
All are present, so we have a quorum for today. And, let
me also note that, if at some time during the week a
member is called away for other business, then we will
proceed so long as we have a quorum. To the extent any
member of the Subcommittee is not present, if they are
going to participate in the final decision, then it's
their obligation to read the transcript from the time that
they were absent from the hearings. And, that's a process
that has been dealt with by the Supreme Court in a number
of cases.

So, with respect to procedural background, on March 26, 2010, Groton Wind filed an Application for a Certificate of Site and Facility for Authority to Construct and Operate a Renewable Energy Facility in the Town of Groton, consisting of 24 turbines, each having a nameplate capacity of 2 megawatts, for a total capacity of 48 megawatts. On April 26th, the Application was deemed complete and accepted for purposes of proceeding. On May 7, the Chairman of the Site

Evaluation Committee, Commissioner Burack, designated the nine members of the Subcommittee, including designating me as the Chairman and presiding officer.

On June 7, a prehearing conference was held, and, as a result of that prehearing conference, a procedural order was issued on June 25, which set forth the schedule, culminating in the hearings beginning today. A final prehearing conference was held on Friday, October 29, among other things, at that prehearing conference there was an agreement among the parties as to the order of witnesses. And, we will begin, of course, with the Applicant, who has the burden to proceed and the burden of proof in this hearing. And, the first witness today will be Mr. Cherian. Also was agreement as to the order of cross-examination of each of the witnesses. We have an exhibit list that was agreed to, premarked, and has been made available to all of the parties.

I also want to address the issue of -another issue that was taken up, and I appeared at the
prehearing conference to deal with the Emergency Motion to
Suspend the hearings that was filed on October 27. That
motion was denied. And, we are proceeding, as is obvious,
with the hearing. But there are three items that I
discussed on Friday that are going to need to be addressed

in some regard as we go through the week.

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First of all, one issue that was set out in the Motion to Suspend had to deal with project details that were undefined. And, one piece of that has to do -really goes to the supplemental testimony filed by Mr. Cherian. And, on Pages 3 and 4 of his testimony, there's a discussion about a revised interconnection plan having to do with studies conducted by Public Service Company as to the appropriate interconnection of the system, whether it be a 34.5 or 115 kV, also mentioned some issues with respect to the Beebe River Substation, a study being done by the ISO-New England, and a potential alternative route carrying power from the New Hampshire Co-op distribution systems along Route 25. And, as those issues may be addressed during the cross-examination of Mr. Cherian today, we will determine what's the appropriate procedure.

Now, there is, and I discussed this on Friday, there are a range of options available to the Subcommittee. If there is adequate information, if that is determined to be the case by the Subcommittee, then we can simply proceed. If the Subcommittee thinks the information is not adequate, it has a couple of options. It could ask for additional testimony. There could be an

additional day of hearing. The Subcommittee could conclude that the Company hasn't made its case and hasn't carried its burden on that issue. There could be a potential for a ruling with conditions. So, there's a range of options. And, the option that is selected will be determined by the circumstances, by what we hear from Mr. Cherian and his testimony and what's brought out in cross-examination.

So, I deferred a ruling on Friday as to that issue to wait and see what the facts are and how we should proceed.

Another item that was brought up has to deal with the fact that we received a letter from Fish & Game, that they had -- were still studying the filings made by the Company. And, until we see what Fish & Game actually says, it's going to be -- it will be difficult for us to devise what the procedural mechanism would be or what the conclusion would be. Of course, there's a range of things that Fish & Game could say. They could say they're fine with everything or they could say that they have serious problems in one or more regards, or they could be proposing conditions. And, we'll have to just wait and see what comes out from the Fish & Game letter.

The third, and we have a similar

situation with respect to letters filed by Division of
Historical Resources. Now, we have those letters, parties
have those letters, and my expectation is, they will be a
subject, a part of the cross-examination at least of
Dr. Luhman, and that will contribute to findings that we
may make on those issues, ultimately, whether the
Applicant has carried its burden or not.

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And, we also had pointed out in that Motion to Suspend a -- one paragraph pointed out that Mr. Tocci's testimony was received on October 22nd, and that was the date it was required to be received, as had been established in an earlier order of the Committee. point that we discussed at the prehearing conference on Friday was basically a request by Ms. Lewis to submit testimony responding to Mr. Tocci's testimony on noise levels. And, as I understand it, she would seek to submit into the record testimony as to the effects of the noise levels indicated by Mr. Tocci it would have on her So, I also indicated on Friday that would be business. another issue that we would have to address this week, and determining whether to permit Ms. Lewis to submit additional testimony on that issue.

So, I think that gives us the procedural background we need for today. And, as we proceed, and let

me just talk through a couple of administrative matters, for those folks who aren't familiar with our processes and for the Subcommittee. We will go till approximately noon today. What we need to recognize is, effectively, the court reporter can go from 90 to 120 minutes at a session. Though, I've been known to push Mr. Patnaude a little harder than that. So, we will take a break at noon, have lunch for an hour and fifteen minutes. We will come back in the afternoon, go into two sessions in the afternoon, and to close the hearings today by 5:00.

We will determine -- well, I guess, let me, probably it's best to make this decision right now, because tomorrow is Election Day, that we will start at 10:00 tomorrow as well, and then hopefully folks can take care of their civic duties early in the morning, and then we would go on until 5:00 tomorrow. We will determine for the rest of the week, as the hearings progress, whether we want to start at 9:00 in the morning, but we can discuss that as we move along. So, on each day, and probably numerous times during each day, we will be taking stock of where we are, how are we progressing with the cross-examination, and what other procedural issues might arise.

I also note, as another procedural

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matter, the affidavit of publication that was required in
this, for these hearings, has been filed.
                                           That's in the
record. And, I'll note that one of the first things we're
going to address today is the -- there is an agreement
between the Town of Rumney and the Applicant, I think that
was mentioned in the supplemental testimony, and we're
going to give Mr. Waugh an opportunity to speak to that
            Then, of course, Mr. Cherian will be available
for cross-examination as to issues related to that
agreement.
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Let me then -- let's take appearances And, I'll try to remember if there's other issues that I need to address. So, beginning with the Applicant.

MS. GEIGER: Yes. Good morning, Mr. Chairman and members of the SEC Subcommittee. I'm Susan Geiger, from the law firm of Orr & Reno. I represent the Applicant, Groton Wind, LLC, together with my colleague, Attorney Doug Patch.

> CHAIRMAN GETZ: Good morning.

MR. WAUGH: I'm Bernard Waugh, from Gardner, Fulton & Waugh, in Lebanon. I represent the Town of Rumney.

> Good morning. CHAIRMAN GETZ:

MR. McGOWAN: Good morning. Attorney

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John McGowan, with the firm of Donahue, Tucker & Ciandella
1
      of Exeter, representing the Town of Plymouth.
 2
                        CHAIRMAN GETZ: Good morning.
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 4
                        MR. WETTERER: Good morning.
                                                       Richard
5
      Wetterer, Intervenor, I'm from Rumney, with the Mazur
 6
      Group.
 7
                        CHAIRMAN GETZ: Good morning.
8
                        MS. LEWIS: Good morning. Cheryl Lewis,
      Intervenor from Rumney, with the Buttolph Group.
9
                        CHAIRMAN GETZ: Good morning.
10
11
                        MR. BUTTOLPH: Good morning. Jim
      Buttolph, from the Buttolph Group, an Intervenor from
12
13
      Rumney.
14
                        CHAIRMAN GETZ: Good morning.
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                        MR. ROTH:
                                   Good morning, Mr. Chairman.
16
      Peter Roth, as Counsel for the Public. With me this
17
      morning, Michelle Thibodeau, an intern from my office, and
      Evan Mulholland, an Assistant Attorney General from my
18
      office, and Spencer Culp, an intern from our office, here
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      to observe.
21
                        CHAIRMAN GETZ: Good morning.
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my checklist. Oh, one other thing is that I would note we

have set aside opportunity for public comment for Thursday

Then, I think I've covered everything that was on

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right.

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afternoon, at 2:00. And, that public comment is an opportunity for individuals, who are not parties to the proceeding, to make comment about their views as regards the Application. So, we'll hold that time available on Thursday.
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So, before I turn to Mr. Waugh, is there anything that the parties have of a procedural nature that I may have missed? Mr. Buttolph.

MR. BUTTOLPH: Yes, Mr. Chairman. I'm the designated spokesperson for our group. There may be times when I won't be able to be here. And, I would hope for advance permission to designate Cheryl Lewis as in my stead when I'm not here.

CHAIRMAN GETZ: Okay. That's fine. We certainly can be flexible on that issue.

MR. BUTTOLPH: Thank you.

CHAIRMAN GETZ: Thank you.

MR. WETTERER: The same goes for the Mazur Group. I'm here today, but Dr. Mazur will be here tomorrow and throughout the rest of the sessions.

CHAIRMAN GETZ: Okay. Thank you.

Mr. McGowan.

MR. McGOWAN: Yes, it's the same theme. There may be occasion where Attorney John Ratigan will be

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appearing, depending on the scheduling of when our witness goes on.
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CHAIRMAN GETZ: Okay. That's fine.

4 Anything else?

5 (No verbal response)

6 CHAIRMAN GETZ: Hearing nothing, then,

7 Mr. Waugh.

8 MR. WAUGH: Thank you, Mr. Chairman.

9 May I speak from here?

CHAIRMAN GETZ: Please. Actually, and sitting down, it would probably be --

MR. WAUGH: Think that would be better?

13 CHAIRMAN GETZ: -- the microphone will

work better and Mr. Patnaude will be able to get your

15 remarks.

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MR. WAUGH: Thank you very much for the opportunity to speak briefly at the beginning here, and the opportunity that the Town has of not having to pay me to attend the entire session. The exhibit that I'm talking about is the Town's Exhibit Number 1, which I think is also the Applicant's Exhibit Number 7, which is the agreement between the Town and the Applicant. And, the reason I wanted to speak briefly about this is just to

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clarify what the Town's position is.

The Town's position is that this agreement satisfies the official concerns of the Town of Rumney with respect to this Project. It doesn't necessarily mean that the Town is actively opposing or supporting this Project. We are certainly aware that there are citizens from Rumney who are speaking, and the Town of Rumney is not actively opposing or supporting their testimony.

Likewise, we are certainly aware that the Fire Chief from the Town of Plymouth will be testifying. Again, the Town is not -- of Rumney is not actively supporting or opposing his testimony.

We are hoping that the Committee will adopt this agreement as part of its order. The reason for that is, not only that it makes the agreement more enforceable, but also is that that is really the only way that the Town can be assured that portions of this agreement are not being preempted.

If I could just highlight a couple of things that were important to the Town in this agreement. First, Section 2.6 talks about "on-site burning". It's important I think to note that the Town of Rumney and the Town of Groton have an inter-municipal agreement, so that the Town of Rumney is primarily responsible for responding

to emergencies at the site of this Project.

Section 2.10 talks about the "route of the distribution power line". It was important to the Selectmen in Rumney, and to some of the citizens at least in Rumney, that the power line not be on Quincy Road. And, the revised interconnection plan that the Applicants have submitted is consistent with this portion of the agreement.

Section 6 deals with "emergency responses". And, it talks -- it says that the owner will cooperate to "develop and coordinate implementation of an emergency response plan for the wind farm." And,

Section 6.2 contains some provisions involving training.

Again, we think this satisfies the concerns of the Town of Rumney. That doesn't necessarily mean we are opposed to the testimony of the Plymouth Fire Chief, it doesn't -- but we are not actively supporting that testimony either.

Section 7 deals with public roads, primarily the Groton Hollow Road, which is a road in the Town of Rumney, which is the primary access to this Project. And, Section 8 of the agreement also deals with that to a certain degree.

We are -- the Town hopes that the

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      Committee will not preempt this, this aspect of the
                  The Town believes it satisfies the Town's
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                 And, as I understand the law, certainly going
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      concerns.
      back to the Stablex versus Hooksett case, I don't -- it's
 4
      my opinion that the Committee really doesn't have the
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      authority to preempt the Town's control of its own roads,
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 7
      unless it uses that control in an exclusionary way, which
      I think you will find that this agreement does not.
8
                         Those are my comments, Mr. Chairman.
9
                         CHAIRMAN GETZ:
                                         Okay.
                                                Thank you.
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      this has been made available, as I understand it, to all
      the parties. And, I guess, to the extent that the -- the
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      Town is not proposing a witness in this proceeding, that,
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14
      to the extent there's questions about this, then they can
      be addressed to Mr. Cherian about this agreement?
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                        MR. WAUGH: Yes, Mr. Chairman.
                         (Atty. Geiger nodding in the
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                         affirmative.)
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                         CHAIRMAN GETZ: All right.
                                                     Then,
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      anything else that we need to address before the Applicant
21
      brings Mr. Cherian to the stand?
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                         (No verbal response)
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                         CHAIRMAN GETZ: Hearing nothing, then
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      you may proceed, Ms. Geiger.
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1 MS. GEIGER: Thank you, Mr. Chairman.

2 The Applicant would call Edward Cherian to the witness

3 stand.

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4 (Whereupon Edward J. Cherian was duly

5 sworn and cautioned by the Court

Reporter.)

EDWARD J. CHERIAN, SWORN

DIRECT EXAMINATION

- 9 BY MS. GEIGER:
- 10 Q. Please state your name and spell your last name for the record.
- 12 A. My name is Edward J. Cherian, C-h-e-r-i-a-n.
- Q. Mr. Cherian, by whom are you employed and in what capacity are you employed?
- 15 A. I work for Iberdrola Renewables, Incorporated, and I am
- the Development Director for New England, responsible
- for all the development work on the Groton Wind
- 18 Project.
- 19 Q. And, are you the same Edward Cherian who submitted
- 20 prefiled direct testimony in this docket, which is
- 21 contained in Applicant's Exhibit 1?
- 22 A. Yes.
- 23 Q. And, did you also submit supplemental prefiled
- testimony in this docket, which is contained in what's

1 been marked for identification as Applicant's Exhibit

2 5?

- 3 A. Yes, I did.
- 4 Q. And, do you have any corrections or updates to your 5 prefiled testimony?
- A. I have two. On Page 4, near the bottom, around Line
 19, which discusses "additional outreach activities".
- Q. And, Mr. Cherian, excuse me. Are you referring to your prefiled direct testimony or your supplemental testimony?
- 11 A. My supplemental prefiled.
- 12 Q. Thank you.

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Page 4, near the bottom, which discusses "additional 13 Α. outreach activities" that have occurred since the --14 since my original prefiled testimony. I wanted to add 15 to that that, since my supplemental prefiled testimony 16 17 was filed, we have had members of the Town of Rumney Fire Department, Emergency Services, at the Lempster 18 19 Wind Project, where they performed a review of safety 20 measures in the facilities there. They were there for 21 about two or three hours. Like to add that.

In addition, at Page 5, Line 4, as

Attorney Waugh mentioned, in my supplemental prefiled

it says we have "reached an agreement in principle with

1 the Town of Rumney". That agreement has been signed

3 Q. Do you have anything further to add?

and submitted as an exhibit.

- 4 A. That's all I have.
- Q. And, with the updates that you've just provided to your supplemental prefiled testimony, if I were to ask you all of the questions in your direct prefiled testimony, as well as your supplemental prefiled testimony, under oath today, would your answers be the same?
- 10 A. Yes, they would.
- MS. GEIGER: Mr. Chairman, the witness is available for cross-examination.
- CHAIRMAN GETZ: Okay. Thank you. Mr.
- 14 Waugh?

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- MR. WAUGH: No.
- 16 CHAIRMAN GETZ: Mr. McGowan?
- 17 MR. McGOWAN: No.
- 18 CHAIRMAN GETZ: And, Mr. Wetterer?
- 19 MR. WETTERER: I don't have any
- 20 questions at this time.
- 21 CHAIRMAN GETZ: Well, this would be the
- 22 opportunity to question this witness.
- MR. WETTERER: Okay. I have a couple of
- 24 questions then.

CROSS-EXAMINATION

2 BY MR. WETTERER:

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- Q. In your testimony, I believe you said that the Project is "100 percent green, renewable", is that correct, or
- A. Are you referring to a specific part of my prefiled testimony?
- 8 Q. I'm sorry, I don't have that in front of me now, so I'm relying on my memory. In various speeches you've 9 given, you've mentioned the renewable nature of the 10 wind project. And, I have read that there is actually 11 700 gallons of petroleum oil in each turbine, which 12 could cause a fire hazard. If there were a fire in one 13 of the turbines, this could create toxic smoke and 14 flame, which would -- could harm the health of 15 residents downwind. Can you respond to that? 16
 - A. I think that would be a question for our safety witness, Mr. Devlin, to respond to that in more detail.
 - Q. Are you required to have a bond for decommissioning of the turbines and has that been completed?
- A. We have a agreement in principle with the Town of
 Groton that does address decommissioning. It has not
 been finalized. When it has been signed, it will be
 submitted for the Committee. And, we'll recommend, as

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we join with the Town of Rumney, in recommending that
the agreements be made a part of a certificate, if one
were to be issued. So, it has not been finalized to
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MR. WETTERER: I guess that completes my questions at this point.

CHAIRMAN GETZ: Thank you.

Mr. Buttolph?

this point.

MR. BUTTOLPH: Yes. Good morning, Mr.

10 Cherian.

11 WITNESS CHERIAN: Good morning.

12 BY MR. BUTTOLPH:

- Q. Mr. Cherian, on Page 8 of your prefiled testimony, you indicate that this project will perform at "33 to 36 percent capacity factor". Would you please briefly define for us what a "capacity factor" is and why that's important?
- A. "Capacity factor" is the net production of a wind farm or any other facility. It's a function of the availability of turbines, the percentage of time that they're available to produce power. It's a function of the amount of time at which the wind is blowing and to the extent it can generate electricity. It's a function of downtime for maintenance, line losses.

- And, so, it results in what we call a "net capacity factor".
 - Q. Okay. Thank you. So, would it be fair to say, for example, that, if you had a 50 percent capacity factor, as compared to say a 25 percent capacity factor, that we could expect, with a 25 percent capacity factor, half as much power coming out of the wind farm as at 50?
 - A. I'm not sure I understand that question.

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- I quess I'm asking as to whether it would be fair to 10 0. say that the production from this power plant is 11 proportional to the capacity factor? 12 In other words, if you have a lower capacity factor, the proportion of 13 the amount of power that comes out at that lower 14 capacity is, well, if you have a higher capacity 15 factor, then the amount of power is that much higher 16 17 proportionally?
 - A. I'm sorry, I'm still not following exactly your question.

20 CHAIRMAN GETZ: Well, let me, I think
21 it's pretty straightforward. His hypothetical is, if you
22 had a 50 percent capacity factor, and you were going to
23 compare that to a facility with a 25 percent capacity
24 factor, that there's a proportionality, a relationship. A

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50 percent capacity factor is going to, at your facility,
with your 24 turbines, would tend to generate twice as
much energy as if you had a 25 percent capacity factor. I
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4 hope I'm getting --

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5 WITNESS CHERIAN: For a similar sized -6 MR. BUTTOLPH: Right.

WITNESS CHERIAN: -- electricity

MR. BUTTOLPH: Yes.

producing facility. Is that what you mean?

WITNESS CHERIAN: Okay. I believe the answer to that is "yes", if I understand what you're asking.

MR. BUTTOLPH: Okay. Fair enough.

WITNESS CHERIAN: Let me add a little to that. You know, "capacity factor" is an annual average. So, that means there are times in which a wind farm will produce at or close to 100 percent capacity. But, on an annual average, our estimate is between 33 and 36 percent. But it does vary during the course of a year.

MR. BUTTOLPH: Sure. Thank you.

21 BY MR. BUTTOLPH:

Q. In your Application, Section F, Pages 22 to 23, you indicate that "[Tenney Mountain and Fletcher Mountain] enjoy some of the greatest potential for...wind-

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generated electricity in New Hampshire." Now, your
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- 2 Lempster Application is a matter of public record. It
- is Docket 2006-01. Page 27, you indicate the capacity
- factor would be higher than Groton's, "37 to
- 5 40 percent". Why did you estimate Lempster's would be
- higher, if Groton has the best wind in New Hampshire?
- 7 A. Which part in F again please?
- 8 Q. This is Section F, Pages 22 to 23.
- 9 A. I'm not sure that in here where we stated that "Groton
- 10 has the best wind in New Hampshire."
- 11 Q. Okay.
- 12 A. We stated that it has a "very good wind resource".
- 13 Q. You said -- the quote would be "enjoy some of the
- greatest potential for...wind-generated electricity in
- New Hampshire."
- 16 A. Yes. As does Lempster.
- 17 Q. This is in your Application for Groton.
- 18 A. Yes.
- 19 Q. So, if you've estimated "33 to 36 percent" for Groton,
- 20 which has "some of the greatest potential for...
- wind-generated electricity in New Hampshire", why, in
- Lempster, which presumably wouldn't be any greater,
- necessarily, certainly, if anything, less, based on the
- tone of your comments, why did you estimate that to be

even higher, at "37 to 40 percent"?

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- A. I'm not sure I follow. I think we've stated that it

 has some of the greatest potential for wind power in

 the state, and it does. That both sides do. I don't

 think we made the statement here that "Groton had

 better wind" or "a worst wind than Lempster." I don't

 think that's in here, unless I'm missing something.
 - Q. Okay. So, could you tell us how the Lempster production factor -- how the Webster -- Lempster capacity factors have differed from the estimates that you gave on Lempster?
- 12 A. Well, the specific data is proprietary. But I can tell
 13 you that it's performed to expectations.
 - Q. So, can you explain why you would estimate Groton at a lower capacity factor than what you've experienced in Lempster?
- 17 Α. Lower elevation. Much of the turbines at Groton are at lower elevation than Lempster. The Lempster 18 elevation is -- ranges from 1,900 to about 22 to 2,300. 19 I believe the lower-end elevation turbines that are 20 21 proposed for Groton are in the 14 to 1,500 area. 22 tends to correlate somewhat with the quality of the 23 wind.
 - Q. Okay. So, you would -- do I understand you to say then

the quality of the wind at Groton would be less than
Lempster perhaps?

- A. For a turbine at 1,400 feet, compared to a turbine at 2,000 feet, yes.
 - Q. Okay. I'd like to draw your attention, if I may, to -we have several exhibits, of course, a full package of
 exhibits you have up there, I'm sure, from our group.
 So, Buttolph Exhibit 6. Now, if you have that in front
 of you, this is a study which was done by Nicolas
 Boccard, October 2008.

And, I'll just read the abstract for you: "For two decades, the capacity factor of wind power measuring the mean energy delivered by wind turbines has been assumed at 35 percent of the nameplate capacity. Yet, the mean realized value for Europe over the last five years is closer to 21 percent thus making levelized cost 66 percent higher than previously thought. We document this discrepancy and offer rationalizations, emphasizing the long term variations of wind speeds. We conclude with the consequences of the capacity factor miscalculation..."

So, there's a study here.

I guess my question is, given the concerns with estimates and the reliability of those

- estimates in Europe, do you have any concerns with your own estimating reliability here with these projects in New Hampshire?
 - No, I do not. I think there is, without having read Α. this, there is factors that would play into this. This involves projects from a number of different companies. I really can't speak for other companies and how well they site or evaluate wind farms or how well they operate them. I can tell you that, for our projects, they do very well compared to what is predicted. There's a lot of meteorological analysis that goes into selecting a site and proposing a project. I'm not sure that that's done as rigorously for other projects. probably could be a factor why there are other wind plants that have not lived up to their capacity expectations.
 - Q. You have indicated that the actual production numbers from Lempster are "proprietary". Do you perhaps have non-proprietary information that may relate to a collection of your wind farms in this country, where you could perhaps talk about your estimates versus your actual performance on the capacity factors?
 - A. I don't have that information.

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Q. In your March 2010 prefiled testimony, on Page 17, you

state the following: "A 2 megawatt wind turbine displaces nearly 3,600 tons of the carbon dioxide each year...Compared to using fossil fuels, to generate the same amount of electricity as a single 2 megawatt wind turbine for 20 years would require burning 58,000 tons of coal (a line of 10-ton trucks 22 miles long) or 184,000 barrels of oil. For a 24 megawatt project, that equates to 700,000 tons of coal or 2.2 million barrels of oil over a 20 year period." That was in your testimony.

Was it Groton Wind, LLC's intention to suggest to the people of New Hampshire that this particular power plant would be capable of generating this level of carbon dioxide mitigation over a 20 year period?

- A. Well, what's in my testimony is for a 2 megawatt wind turbine. So, the point of this is that, for a 24 megawatt project, half the size, what this equates to. So, yes. It was our intention to compare the avoided carbon dioxide emissions and use of coal and oil, in order to demonstrate some of the green attributes of wind power.
- Q. In Appendix 27 of your Application, there is a study there of "Comparative Air Emissions of Wind and Other

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Fuels." Now, if somebody might want to take a minute
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         to look at that, that's fine. Now, this chart is from
 2
         the American Wind Energy Association.
                                                 It shows that
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         coal emits 2.13 pounds of CO2 per kilowatt-hour and
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5
         natural gas generates 1.03 pounds per kilowatt-hour.
         So, approximately less than half as much CO2 as coal
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 7
         per kilowatt-hour. That's just a statement of what I
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         -- how I read your Appendix 27, you correct me if I'm
         wrong on that. So, if you please take a look also next
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         at Buttolph Exhibit 2.
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MR. IACOPINO: Mr. Buttolph, can I just interrupt for a minute? What you're referring to is the Applicant's Exhibit Number 4, which is the fourth volume of the Application?

MR. BUTTOLPH: Yes. Is that where Appendix 27 is --

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MR. IACOPINO: And, it's Appendix 27 within that volume?

MR. BUTTOLPH: Yes, I'm sorry. I'm sorry, Mr. Iacopino.

MR. IACOPINO: Okay. I just want to make sure the record is clear.

MR. BUTTOLPH: Yes. I appreciate that.

CHAIRMAN GETZ: And, just as a general

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matter, if you can give a couple of minutes, or not "a
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      couple of minutes", but some time for, when you cite an
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      exhibit, for the members to get a chance to catch up on
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      which documents, and then -- and also for the witness.
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                        MS. GEIGER: And, also, Mr. Chairman,
      I'm going to ask Mr. Buttolph, do you have an extra set of
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 7
      your exhibits that I could give to Mr. Cherian? Or, in
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      the alternative, when you ask him a question about each
9
      one, could you please approach him and show him what
      you're asking?
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                        MR. BUTTOLPH:
                                        Sure.
                                               And, we may have
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      another copy.
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                        MS. LEWIS:
                                     I'm not sure where
      Mr. Patnaude put --
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                         CHAIRMAN GETZ: Just off the record.
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                         (Brief off-the-record discussion ensued
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                         regarding exhibits.)
                         CHAIRMAN GETZ: Okay. Back on the
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      record.
20
                        MR. BUTTOLPH:
                                        Thank you. I will do my
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      best to give everybody time to get to the proper pages.
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                         WITNESS CHERIAN: What was the exhibit
23
      number again?
    BY MR. BUTTOLPH:
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- Q. This is -- okay. My exhibit, this is Buttolph 2. So, you will see there is Buttolph 1, there is A, B, C, and several letters down through. And, then you will find, oh, it's approximately, most of this, this first part, it relates to real estate, I'm going to say three-quarters of the way through, two-thirds of the way through, you'll see "Buttolph 2" in the upper right.
- A. Yes. I see it.

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If you take a look at that, this is a fact sheet 10 0. put out by the U.S. Energy Information Administration 11 for the State of New Hampshire. I'd like to direct 12 your attention to the bottom of Page 3 and the top of 13 Page 4 in this exhibit. The bottom of Page 3 shows 14 that, in New Hampshire, total net electricity 15 generation, 1,825,000 [1,829,000?] megawatt-hours. 16 17 this, none is from petroleum-fired generation; 450,000 is from natural gas; 282,000 is from coal-fired; 18 898,000 is from nuclear; and 189,000 remaining is from 19 hydro and other renewables. So, said differently, it 20 21 would be my conclusion from that is that about 22 25 percent of our power comes from natural gas, approximately 15 percent from coal, and the rest is 23 from sources that emit essentially zero CO2 into the 24

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atmosphere.

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Now, let's revisit your line of trucks ten miles long, filled with coal, from Page 17 of your March prefiled testimony. And, again, now we're back to Appendix 27 also, which suggests that coal generation in the U.S., in 1997, on the average was responsible for about half of the power in the United States, but, again, New Hampshire is only about 15 percent. So, we have -- Appendix 27 is interjected in here as well. Now, that's less than one-third as Now, wouldn't this suggest, without getting into much. too much arithmetic here, that the carbon mitigation is substantially less than the numbers suggested in your testimony, at best, half as much, probably less than that, considering the baseload in this state is already environmentally friendly?

A. No, I don't agree with that. The degree and the type of power source that is offset when wind or other renewables is producing is what can create these savings. So, I don't know specifically which sources would be offset when Groton Wind is producing, but there's no reason that it could not be primarily coal or primarily gas, and not necessarily primarily another resource.

Q. Okay. So, it would be fair to say you certainly don't have a way to know -- a way to know what the most likely offset would be?

Α.

- A. That's, you know, a function of ISO-New England and how they schedule sources. There are a number of the sources that are listed here for New Hampshire provide electricity for other areas outside of the state.
- Q. Yes. I understand it's a quality of electricity, it can go pretty much anywhere. But, of course, this is the Site Evaluation Committee in the State of New Hampshire interested in accomplishing state's goals. So, that's why I'm focusing on the State of New Hampshire.

Now, the numbers that were used to develop again this trainload of -- truckload of coal that was from your prefiled testimony, were those numbers calculated at 100 percent of production? And, I'm talking about the 2 megawatts and the numbers of, you know, miles long the coal train was and so forth, whatever that was that you said in your prefiled testimony, were those numbers calculated at 100 percent production, in other words, perhaps I shouldn't say -- not "production", but 100 percent capacity factor? That I don't know right offhand.

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- Q. Okay. Because, if so, if I understand capacity factors properly, and if we're at 33 to 36 percent, or perhaps less, if we have some concerns with those numbers, then the amount of carbon mitigation would be cut yet again, by another two-thirds, from what was in your prefiled testimony. That's my understanding of it. Can you help me with that? Am I wrong about that?
- A. Again, I don't know right offhand how that was calculated. I can get that answer back to you.
- Q. Okay. Now, there's also been quite a bit of -CHAIRMAN GETZ: Well, if we can stop

there. Let's hold an exhibit then for -- we'll consider this an information request. And, I take the question to be that, on Line 8 of Page 17 of Mr. Cherian's initial testimony, what we need to know is whether that single 2 megawatt wind turbine was estimated at 100 percent capacity factor or at a 33 to 36 percent capacity factor or what -- just what the understanding was? And, so that we would mark that exhibit as -- well, let's do it for the Company's or the Applicant's next exhibit, which would be --

MR. IACOPINO: Thirty-three.

CHAIRMAN GETZ: -- Applicant's 33.

(Applicant's Exhibit 33 reserved)

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1 CHAIRMAN GETZ: Mr. Buttolph.

2 MR. BUTTOLPH: Thank you.

3 BY MR. BUTTOLPH:

- Q. Mr. Cherian, let's change gears a little bit to your most recent prefiled testimony, and I'm talking about Page 5.
- 7 A. Okay.
- Q. You state that "The Applicant stands behind the...LBNL Report submitted with the Application as Appendix 37."
 Are you certified and/or licensed as a real estate appraiser?
- 12 A. No, I am not.
- Q. Is there anyone who has been entered into the expert
 witness list from the Applicant that is a certified
 and/or licensed real estate appraiser?
- 16 A. Not that I'm aware of.
- On the bottom of Page 5, you state that "Based on the 17 Q. data and analysis represented" -- or "presented", 18 19 excuse me, "the report found no evidence that home 20 prices surrounding wind facilities are consistently, 21 measurably and significantly affected by either the 22 view of wind facilities or the distance of [a] home to 23 those facilities." Now, there's some debate about that, and my intention is not to get into that now. 24

But, my question is, of course, let's assume, for the sake of argument, without agreeing, that that is true.

Is the Applicant -- would the Applicant be willing to agree to offer the concept, if the legal processes can be worked out, for a property value guarantee under those conditions?

- A. No, I don't think it's necessary. I think the conclusion of the study done by the National Laboratory, and it's certainly being considered as the most comprehensive and complete study, is that there is -- that they did not find any statistical connection between location of wind farms and property values.
 - Q. Okay. And, the primary author of that study is -- was he a Ben Hoen, I believe was one of the primary authors of that study that is in your Application, is that correct?
- 17 A. I think there's a number of authors that contributed to it.
 - Q. Okay. I'd like to address the Committee's attention to I believe it's our very first exhibit, that is Buttolph 1-A. So, I'll give you just a minute to find that in your pile. Okay. How are we doing? I would ask you, if you would, to turn -- well, first of all, let me just draw your attention to what this is. This is

"Impacts on Residential Property Values Near Wind Turbines". It was by Mr. Ben Hoen of the Lawrence Berkeley National Laboratory, and a Webinar from May 5th, 2010. So, it is my understanding that this is the same gentleman who took an active role in your Application from the Lawrence Berkeley National Laboratory, this study that we've been referring to, the LBNL study, the same Ben Hoen.

I would ask you to go to Page 31 and 32.

And, I think we're on front and back on those. So, if you're confused by that, you can see that. Now, Page 31, I'll just read it: "Property Value Risks Will Persist Unless They Are Measured, Mitigated and Managed. Increase efforts to quantify risks for those living closest so as to reduce risk adverse actions, and improve models and resulting regulations. Organize visits to other facilities; having discussions with nearby residents; model visual and audio aspects; use video to better describe aesthetic impacts; improve models to better predict visual and audio impacts; adjust regulations and maximum sound limits to take into account meteorological conditions."

Now, on Page 32, it says:

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Value Risks Will Persist Unless They Are Measured,

Mitigated and Managed." Now, in order to manage, the suggestion here from Mr. Ben Hoen is to, in the first bullet, to "offer some combination of neighbor agreements/incentives and/or property value guarantees (example, Dekalb County, Illinois) to nearby homeowners as are economically tenable and legally workable."

So, I guess what I'm asking you is, if this is the same individual who co-authored your analysis, which is, as I understand it, the -- where you are vesting all of your analysis with respect to real estate values in this Application, and he's saying that you should be considering or that the industry should be considering property value guarantees, could you explain why you don't agree with him?

A. Well, first, he was one of a number of authors of the study. So, I think we should clarify that. Second, I think very much that his list of mitigations, I'd argue that we have done all those things. All right? Just looking at his charts here that you've provided, he suggests "measuring, mitigating and managing". All of the mitigation measures are things that we've done for Groton Wind, including offering visits to other facilities, having discussions with nearby residents, model visual and audio aspects. We use a very high --

highly regarded visual effects analysis. So, in terms of adjusting regulations, we don't set regulations, but sound limits, all right, are items that have been discussed with the Town of Groton and that were reviewed by the Committee on the Lempster Project and set for that project. So, I would argue that all of those mitigation measures have already been taken. That's part of our process in working with local communities.

The other point I want to return to is that the study has not shown a statistical connection between location of a wind farm and impact on property values. You asked in the beginning whether I'm a real estate appraiser, I am not. But I know well enough that there's many different factors that affects property values. If I were to try and sell my house now, I would take a big loss, because the whole market has gone soft over the last few years. You know, what is that due to? It's due to a number of economic factors.

Q. Okay. Do you happen to know whether the LBNL Report includes and takes into consideration properties that were unable to be sold at any price due to wind farm concerns and impacts?

A. I don't know the answer to that. And, I think maybe it
might be -- I'm not sure I understand the nature of
your question. You're asserting properties that cannot
be sold solely because of location near wind farms.

5 That's your statement?

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- Q. The premise would be that the likely cause for a property that was unable to be sold would be its proximity to a wind turbine, yes.
- 9 A. I don't believe the Report said that. There's

 10 properties in many places that cannot find a buyer for

 11 many reasons.
- Just another point for clarity for the record, with 12 Q. respect to the primary authors of the LBNL study, the 13 appropriate appendix that's included in your 14 Application lists the principal authors as "Ben Hoen, 15 Ryan Wiser, Peter Cappers, Ernest Orlando" from the 16 17 Lawrence Berkeley National Laboratory. So, those four individuals. You're saying there's a whole bunch of 18 19 people. Okay, I'm sorry. "Ben Hoen, Ryan Wiser, and Peter Cappers", "Capers" perhaps, those three 20 individuals are the primary authors, according to your 21 22 Application?
 - A. It lists five individuals on the cover sheet that I'm looking at. And, then it has a detailed list of a

number of other individuals that contributed or peer reviewed that report.

CHAIRMAN GETZ: Mr. Cherian, what are you looking at? What's the cite?

WITNESS CHERIAN: I'm sorry. This is

Volume IV, Appendix 37. The cover sheet lists "Ben Hoen,

Ryan Wiser, Peter Cappers, Mark Thayer, and Gautam Sethi."

CHAIRMAN GETZ: Okay. Thank you.

WITNESS CHERIAN: The "Acknowledgment" section, it also lists another 15 or 20 individuals, including Mr. McCann.

12 BY MR. BUTTOLPH:

- Q. Right. Yes. We recall having read, and I regret to not be able to point it out, and perhaps you might be able to confirm, that this study was based on a thesis of Mr. Ben Hoen. We don't have that, where that citing is, but, for whatever that's worth, do you happen to remember that, Mr. Cherian?
- A. I'm sorry, what is the question? Whether this --
- Q. That this study was actually based on a Master's thesis from Mr. Ben Hoen?
- A. I don't know that. I'd look at the study, it says it
 was prepared, sponsored by the United States
 government, and provides details on what the purpose of

- 1 the study was.
- Q. All right. So, I guess we'll move on here a little
 bit. In your supplemental prefiled, Page 6, you
 commented on anecdotal information regarding the Town
 of Lempster and the lack of complaints regarding
 property values. Is the Town of Lempster paid a PILOT
- 7 fee?

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- 8 A. They are paid taxes.
- 9 Q. Has this decreased the residents' property tax bills,
 10 and therefore providing a direct benefit to the
 11 residents living there?
- 12 A. It certainly has provided a substantial new source of
 13 tax revenue for the Town. It's over half of the Town's
 14 municipal budget.
 - CHAIRMAN GETZ: Well, let me just clarify for the record that, the reference to "PILOT", I take it to mean a "Payment in Lieu of Taxes". So, just -- BY MR. BUTTOLPH:
 - Q. Have there been any property owners near the project area who have been unable to sell their properties during the two years the project has been operating?
 - A. Not that I know of.
- Q. Regarding sound issues, prefiled notes that Lempster has not had any complaints on sound issues. Does

- 3 A. Yes, we do have other wind farms.
- 4 Q. Have others experienced any sound issues?
- 5 A. I don't have information on that. My responsibilities are in New England.
- Q. Do you know how many homes are within a two-mile radius of Lempster?
- 9 A. No, I don't. Not offhand.
- Q. Is the sound affected by topography and other various factors in Lempster?
- 12 A. That's true in any area.
- Q. Would you agree to a limit of a 5-decibel increase over the ambient sound to minimize the amount of sound issues that may occur?
- No, I don't think it's necessary. And, I think I will 16 Α. 17 defer other sound questions to Mr. O'Neal, who is the expert on that. I'll just mention that we have an 18 agreement with the Town of Lempster and conditions from 19 the Committee that set what the limitations are for 20 21 sound for Lempster. We will also have sound agreement 22 limitations with the Town of Groton that the Committee 23 will presumably consider. I think the Town that hosts 24 the facility would be the most appropriate ones to

determine what sound levels are or should be allowable.

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Q. I'm going to draw your attention now, a little change of gears once again, to Buttolph Number 23. Now, fortunately, this is near the bottom of the pile here. So, if you would go to the back and work forward, you may have an easier time of finding it.

Now, the title on this exhibit says "Iberdrola Renewables, Incorporated, Updated September 20th, 2010. Financial Interests of Municipal Officers/Relatives in Properties Identified by Iberdrola Renewables, Incorporated, for Wind Farm Development within the Last 6 Years." It is my understanding that the State of New York or some entity associated with the State of New York required that Iberdrola put this out. And, there's a listing here of 36 officials at your various wind farms, five of which are showing to have had a nature and scope of financial interest in the property of over \$1 million. When this Groton wind farm is done and complete and operating, are there individuals in the State of New Hampshire who may appear on a similarly required chart in the State of New Hampshire, after your Project is complete at the point in time? Do you have agreements that would result in people appearing on this chart in the State

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of New Hampshire if the State of New Hampshire were to require a similar chart as this for Groton Wind?

A. No.

- Q. No. All right. I'm going to go change gears a little
 bit again here. And, this relates to some of the
 issues that came up on Friday. When were the
 intervenors and Counsel for the Public notified of the
 change in the interconnection route?
- 9 A. Well, we made a supplemental filing on October 12th, I
 10 believe, which we included that information.
- 11 Q. And, when was the revised work submitted to the ISO?
- 12 A. If you're referring to the revised filing for the queue, that was in September.
- Q. Okay. So, I think I've read someplace, perhaps early
 September, I believe is when --
- 16 A. Yes.
- Q. So, would it be fair to say it was a month or more
 between when the filing was made and when -- I'm sorry,
 when the ISO submission was made and when you notified
 the intervenors and Counsel for the Public of that, a
 month?
- 22 A. It was probably around a month between when we
 23 submitted paperwork to the ISO-New England, which then
 24 starts to review it, determining whether to accept it,

and October the 12th, which is when we submitted the supplemental.

- 3 Q. Where will the new substation be built?
- A. That answer is not known. It's partly going to be a function of what ISO-New England and Public Service New Hampshire determine in their studies.
- 7 Q. Will any wetlands be affected?

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- A. Since the site is unknown, that would be unknown.

 That's one of the things that PSNH is looking at at the

 Beebe River Substation, is whether it can be expanded
- Q. Do you have an approximate location where it might be located?

or can accommodate some facilities.

- A. Well, what's being looked at is, again, something that is in or approximate to the Beebe River Substation.
- Alternatively, it could be elsewhere along the 115 kV
 line that runs between Beebe River and Ashland
 Substation.
- Q. Okay. So, if we were close to Beebe, for example, it sounds like a likely location, are there any historical homes within three miles of the viewshed of the transmission lines or planned substation?
- 23 A. The existing transmission lines?
- 24 Q. The new transmission lines.

1 A. It's a distribution line.

that.

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- 2 Q. Distribution lines, I'm sorry for the terminology.
- A. Well, they would go on the Co-op poles. It would be an attachment to Co-op poles. So, if you're asking me

 "are there any historic structures within range of the existing Co-op poles?" I don't know the answer to
- Q. Okay, that's the poles. And, the other part of the question was the planned substation, and recognizing, you know, perhaps it's close to Beebe, we think it might be close to the Beebe Substation, and we're talking about 3 miles around that. So, that's a pretty wide area. The question is, are there any historical homes within three miles of that planned -- that
 - A. Within three miles of Beebe River Substation?

potential location for a substation?

- Q. Within three miles of your likely location of this
 substation, that is my understanding is close to Beebe.

 So, I guess we could say "within three miles of Beebe."

 So, let's just assume that. Are there -- let me ask
 that question. Are there any historical homes within
 three miles of the Beebe Substation?
- 23 A. I don't know.
 - Q. Bringing the -- now I've got to get my terminology

right, please help me here. There is transmission

lines and there is distribution lines. Are those the

3 two terms we're using?

4 A. Yes.

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- 5 Q. Could you explain the difference between those two.
- 6 A. Well, I'm not an electrical engineer, but my

7 understanding is that normal what we call "three phase

8 power" that's in Concord or most towns is 34.5 kV.

9 Those are distribution lines. Once you step up to 69

kV, which we don't have in New Hampshire, so 115 kV,

those are transmission lines that move bulk power.

12 Typically, at substations, you have some combination of

13 transmission that brings power from Seabrook or

elsewhere, and then distribution that then distributes

that power into the local area.

- 16 Q. So, the smaller ones then would be distribution lines?
- 17 A. The smaller lines?
- 18 Q. Yes.
- 19 A. Yes.
- 20 Q. Yes. So, your new route, that goes -- there's a

location, for example, I believe there's a retail

outlet called the "Quonset Hut", it's on Route 25, if

you're familiar with that or not, I guess my question

is, those distribution lines, do they cross down

- through private property?
- A. It depends on where the Co-op or utility has their

 poles located. Sometimes they're within public

 right-of-ways, sometimes they have easements and place
 - Q. Okay. So, you're saying that you -- this is all going to be Co-op poles, even down through your new -- your new route, coming down, say, from the Project to Route 25?
- 10 A. That portion of the route would be an easement on private property.

poles and anchors on private property.

- Q. Okay. So, that was really my question from before.

 So, these are going down through private property?
- 14 A. Yes.

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- Q. Are there any wetlands in that transmission line area that we would need to be concerned with? Or, with the distribution line, excuse me, to be concerned with?
- A. That I don't have the answer to. The easements, if and when they were completed, would typically allow for placement of poles with a lot of flexibility, so they could be routed to avoid any sensitive resources, if there were any. The area is logged quite a bit already, I know that.
 - Q. Probably the same answer for historical homes, I would

- 1 imagine?
- 2 A. I'm not aware of any homes on the easement areas of those properties.
- Q. Okay. Are there any endangered species that will be affected by either of the lines or the substation?
- A. Are you talking about the proposed lines from the site location to Route 25?
- 8 Q. I'm sorry, I should have been clearer.
- 9 A. Or the entire length?
- Q. Anywhere in your new route, you have, of course, you're going down Route 25, you're going perhaps up to Beebe, you're going to a substation. Are there any endangered
- species that will be affected anywhere along that
- 14 route?
- 15 A. Well, the poles on Route 25 and elsewhere are owned by
- the Co-op. So, we would be attaching to their poles,
- 17 to their property.
- 18 Q. Okay.
- A. The answer is, I don't know if there's endangered species along Route 25.
- Q. Okay. But, of course, coming down through the private property you mentioned then that you wouldn't know about that either at this point?
- 24 A. That's correct.

- Q. Recognizing we're citizens of Rumney, and we understand
 Rumney is an intervenor, but I'll ask you a few -- a
 question about benefits to the Town of Rumney, if I
 may, or at least to the citizens of the Town of Rumney.
 What do you believe are the long-term post construction
 benefits to Rumney?
 - A. I think there's a number of benefits that start with construction, I know your question is "post construction".
- 10 Q. Right.

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I think that Rumney and Rumney businesses will benefit 11 Α. during construction, because there's a number of 12 businesses there, and Groton does not have a lot of 13 I think, long term, is it puts money into 14 businesses. the communities, through payments to landowners, 15 through taxes to the state and others, and that 16 17 benefits all of us that pay taxes. I think, if you believe that using electricity that does not produce 18 emissions is better than coal-fired or other, then 19 there are environmental and social benefits to the area 20 21 and to the state.

I think that -- I know that, at

Lempster, there has kind of been an increase in people

coming by and tourists, so it could very well provide

- some benefits in that regard as well.
- 2 Q. Have you factored in, in your analysis, the potential
- job losses of local businesses due to this Project?
- Like, for example, we have a number of campgrounds
- within approximately two miles, already struggling
- businesses unable to afford higher electric rates.
- 7 And, then, of course, Polar Caves, the historical
- 8 tourist attraction, that is in a close proximity,
- 9 subjective term "close", I understand, to the blasting,
- which I believe you have planned. Have you factored
- into your analysis any of those possibilities?
- 12 A. I've actually spoken with the Manager of Polar Caves a
- few times, and they indicated a lot of support and
- interest in the Project. I think, I won't speak for
- them, but they seem to view it as a positive.
- 16 Q. Did they ask any questions or did you make them aware
- of the extent of the blasting that was going to be
- 18 happening?

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- 19 A. They did not ask me any questions about that.
- 20 Q. Bear with me, I think we've answered some of these
- 21 questions. I don't want to be redundant. Since Groton
- does not have a fire department, who will be the first
- responders for fire and medical?
 - A. Town of Rumney Fire Department is the first responder.

- 1 Q. Have you met with the Hebron Rescue/Ambulance?
- 2 A. No. But I have met with the Hebron Board of Selectmen.
- 3 Q. Do you think you need to meet with the Hebron Rescue
- and Ambulance people or do you leave that up to the
- 5 Hebron Selectboard?
- 6 A. I left it up to the Selectmen. When I met with them, I
- gave them my information, and asked that, if they
- 8 wanted me to meet with anyone else in the Town
- 9 divisions or departments, that I would do that at their
- 10 direction.
- 11 Q. You're aware that Rumney does not have a full-time fire
- department, is that true? Are you aware of that?
- 13 A. I know most of the firemen or firefighters are
- part-time, yes.
- 15 Q. Are you aware of who will back them up in an emergency?
- 16 A. My understanding is they're part of a Mutual Aid
- 17 Agreement, which includes 30 something towns. So,
- there's an awful lot of backup.
- 19 Q. Are you aware that Plymouth -- Plymouth is the only
- 20 full-time local paid department?
- 21 A. I'm not sure how you define "local". Is that the only
- full-time department in the Mutual Aid Agreement, is
- that what you're stating?
- Q. Yes. I'm not sure about that, to be honest. I'm

- asking if you, well, if you're aware that they're the
 only full-time paid department, and I have your answer.

 So, thank you. Now, is there a reason that Plymouth
 was not included in your recent training session at
- 5 Lempster?
- We are working with the Rumney Fire Department, because 6 Α. 7 they're the first responder. I think we take our cues from the Rumney Chief, since they're the ones that will 8 have primary responsibility. In the event that, as for 9 any emergency, they invoke mutual aid, then it brings 10 in other towns, which could be Plymouth, it could be 11 Ashland, it could be any number of 30 something towns. 12 So, as a first responder, and the one that is 13 responsible for determining what facilities or 14 equipment are necessary, and to, when they need backup 15 and when to tone other departments, working with mutual 16 17 aid, felt that Rumney Fire Department and Emergency Services was the appropriate folks to talk with. 18
- Q. Onto a cost question, will the Town of Rumney incur any costs from this Project?
- 21 A. Not that I'm aware of.
- Q. And, if "no", then why was the attorney for Rumney
 raising a concern on Friday that he would "cost the
 Town money for him being here during the proceedings"

in the longer day on Friday?

- A. I'm guessing, because he's -- the Town did not want to expend too much funds for having an attorney here. We have agreed to reimburse the Town of Rumney for legal costs, and maybe it's because he's expensive, I don't know.
- Q. Has an agreement been reached with the Town of Groton?

 We've heard about Rumney earlier, but has there been an

 agreement reached with the Town of Groton?
- 10 A. We have an agreement in principle. It has not been finalized and signed.
- 12 Q. And, why hasn't it been finalized and signed?
- A. We're continuing to work on a couple of provisions in it.
 - Q. It's interesting, because the Town of Rumney has been articulating that they're neutral in this process, but we've been seeing a number of letters from the Town of Groton in support of this Project. Do you have any explanation as to why it's taking so much longer for the Town of Groton to be signed up and under contract than it was for Rumney?
 - A. I don't know that they're taking a lot longer. I mean,
 I think both of these agreements are long term. It
 takes a while to work them out. These are significant

agreements for the Towns to consider. Groton, as the host community, it's probably more significant for them. It's also -- Groton is a small town, and they have other issues to work on. I don't expect them to exclusively work with us on the town agreement. I'm confident that we'll have an agreement finalized with

MR. BUTTOLPH: I don't have any more questions. Thank you.

CHAIRMAN GETZ: Thank you. Mr. Roth.

MR. ROTH: Thank you. Since

Mr. Buttolph did such a commendable job of his

cross-examination, it makes my job easier, and that's why

14 I like to go last.

the Town of Groton.

15 BY MR. ROTH:

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- Q. But I wanted to start with something where -- start
 where he left off on the Groton agreement. I have a
 copy of it, of the unsigned document, at Appendix 5 of
 Volume III, which is Applicant's Exhibit Number 3.
- 20 A. Yes, I've got it.
- Q. This looks like a fairly comprehensive agreement. And, it looks like it has the assistance of somebody's attorney in writing it. It also, in my read, bears some resemblance to agreements I've seen in these cases

in other instances. But I wanted to follow up on an

answer that you gave to Mr. Buttolph. And, ask you

which are the provisions that you're still working on?

- 4 A. Just about all of the agreement that is in here as
- draft is mostly unchanged. I can tell you, frankly,
- 6 that the one area that we have been working to finalize
- 7 is on decommissioning funding.
- 8 Q. Decommissioning funding assurance?
- 9 A. That's right.
- 10 Q. 14.2?
- 11 A. Yes, in those areas.
- 12 Q. Okay.
- 13 A. And, we've been working with the Town to find a form of
- financial assurance that the Town is comfortable with,
- that Groton Wind is comfortable with as well.
- 16 Q. Okay. Can you represent to the Committee that, however
- that gets worked out, that Paragraph 14, with scope of
- 18 decommissioning activities and decommissioning funding
- 19 assurance, and transfer of decommissioning
- 20 responsibility, that's 14.1, 14.2, and 14.3, will, in
- 21 some form, in substantial reflection of what's here now
- be in your final agreement?
- 23 A. Yes.
- 24 Q. Okay.

- 1 A. And, we do intend, when it is signed, to submit it as
- an exhibit. And, as I mentioned before, we would have
- no objection, in fact, would support, the same as with
- 4 the Town of Rumney agreement, and as we've done for
- 5 Lempster, is to ask that it become a part of any order
- 6 that was issued.
- 7 Q. Okay. And, you're, of course, aware that your
- 8 competitor, Granite Reliable, also had to do a
- 9 decommissioning agreement and funding assurance?
- 10 A. Yes.
- 11 Q. And, that you did one of these in Lempster as well?
- 12 A. Yes, sir.
- 13 Q. Okay. And, so, you agree with me that it would be fair
- 14 and consistent for Groton Wind to also do a
- 15 decommissioning agreement and funding assurance of some
- 16 kind?
- 17 A. Yes.
- 18 Q. Okay. Thank you.
- 19 A. And, I will go one beyond that and say a
- decommissioning funding assurance that is acceptable to
- the Town of Groton. That's, you know, been one of the
- issues that we've been working towards resolving.
- 23 Q. Okay. Thank you. And, now, you said that it was
- mostly unchanged, except for that one, which you're

still working out. Are there any other provisions that you're still working on?

- A. I don't think there's anything else. I mean, there may be some minor changes since this was submitted. But it's primarily this Section 14.2.
- Q. Okay. And, let me ask you, just while we're here, on Paragraph 11, the "Noise Restrictions".
- 8 A. Yes.
- 9 Q. Did this "Noise Restriction" provision come out of, at
 10 least with some DNA, so to speak, out of the Lempster
 11 agreement?
- 12 A. The Groton Board of Selectmen requested that the
 13 Lempster agreement be used as the basis for discussion
 14 of an agreement with the Town of Groton. At their
 15 request, that's what we started from.
- 16 Q. Okay.

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- A. And, they had accepted or revised sections as they wanted to.
- Q. Okay. All right. Now, in your exhibits, there was
 Appendix -- or, Applicant's Exhibit 8, an aerial map of
 the project site.

MR. ROTH: Susan, do you have that available? You didn't do a big, like, blowup thing of it?

MS. GEIGER: I did. He's got it. Ed's

1 got it.

2 WITNESS CHERIAN: Do you want me to put

3 this up?

4 MR. ROTH: Yes. Somebody, maybe your --

5 CHAIRMAN GETZ: Let's just go off the

record, so Mr. Patnaude doesn't have to try and record all

this.

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(Off the record.)

CHAIRMAN GETZ: Back on the record.

MR. ROTH: Okay.

11 BY MR. ROTH:

- 12 Q. In your testimony, you indicated that the Project
- initially was considered as an 80 megawatt project,
- 14 correct?
- 15 A. I don't know the exact figure, but we had a series of
- 16 alternatives in the Application. We looked at a larger
- 17 project, yes.
- 18 Q. Can you indicate on that aerial photograph where the
- 19 additional turbines were considered to be located under
- the larger scale project?
- 21 A. The other areas that we looked at, in terms of wind
- resources, was essentially a horseshoe that come around
- like this [indicating], which is west of the current
- 24 project location. Continues along this Fletcher ridge,

if you can see, well, there's a high elevation here
that wraps around in a horseshoe.

- Q. Okay. So, you would have placed an additional number of turbines in that location?
- 5 A. That was one alternative we looked at.
- 6 Q. Okay. Do you still have rights or options for any of 7 that land?
- 8 A. No. And, we did not for most of it, --
- 9 Q. Okay.
- 10 A. -- to start with. That's one of the reasons that it
 11 was not carried forward.
- Q. Are there any other areas on that map or that photo
 where you do have rights or options available to you
 for additional project resources?
- 15 A. No.
- Q. Okay. If you needed to move a half a dozen turbines
 further away from Route 25, is there any flexibility
 for you to do that with the land and wind resource that
 you have there?
- 20 A. There is not. There is a minimum separation distance
 21 between turbines. So, for example, moving turbines
 22 from the northern end of the string down would just -23 starts to remove some. In addition, those on the
 24 Fletcher string are already at low elevation, and there

- is minimum separation distances between those turbines as well. Given the topography of the site and the wind resources, it's -- there's not a lot of flexibility. In flatland areas, there is a lot more flexibility on where turbines are placed.
- Q. With respect to Fletcher Mountain, you said that you were not able to obtain leases for that, for that property? Was that your testimony a minute ago?
- A. Well, we were either not able to obtain or did not seek to obtain.
 - Q. Okay. And, that was based on the wind resource?

A. It was based on a number of things. Constructability, some of those areas are very difficult to get to, and we were not convinced that we could construct roads. It would be -- the grades would be too steep. In some cases, it was a function of how much power we thought we could be able to distribute from this location. And, I think others, there was landowners that had approached us, but, you know, either the terms were not favorable or the access was too difficult. I think we discuss in the Application that, if we had proposed to, as it were, build out the whole horseshoe, we would have needed at least one and maybe two more access roads. And, the cost to build would have gone up

substantially. So, there was some economic factors in there as well.

- Q. Okay. Now, I want to turn your attention to the Town of Rumney's Exhibit Number 1. Do you have that?
- 5 A. Yes.

3

- Q. Okay. Now, you may recall that I asked you at the
 public meeting, at least I recall it, whether you were
 going -- whether the Project was going to need to widen
 or otherwise improve the public portion of Groton
 Hollow Road, in order to get your equipment down, and
 your construction equipment and the turbines and cranes
 and the like, do you remember that?
- 13 A. Yes.
- Q. And, you answered, as I recall, that you were not going to have to do any improvements or widening or anything to Groton Hollow Road. Is that --
- 17 A. That's correct.
- 18 Q. Is that your recollection as well?
- 19 A. Yes.
- Q. Now, look at Paragraph 7 of the Rumney agreement. And, in particular, I'm looking at Paragraph 7.5. And, here it says, and this is good: "Construction and repair work on Groton Hollow Road shall not result in the widening of the existing traveled way of said road;

provided, however, that the Town may authorize such temporary measures as may be reasonably necessary to

enable the passage of wide loads, so long as the

existing condition of the road is restored subsequent

to the construction period." That's what it says,

6 correct?

7 A. Yes.

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- 8 Q. Now, can you tell me what "temporary measures" you have 9 in mind with that -- with that paragraph and that 10 provision?
- We don't have any temporary measures in mind. 11 Α. This was a provision that, to my recollection, was added by the 12 Town of Rumney, not by Groton Wind. Theoretically 13 speaking, things that you might do temporarily, like we 14 did at Lempster, was, on a sharp corner, is having a 15 temporary gravel fill that is then removed. You know, 16 17 some smoothing work on the road. I'm not sure what But there are no temporary measures that we 18 19 believe will be necessary.
 - Q. So, if there were a gravel fill on a sharp corner, would that result in "widening of the existing traveled way of the road"?
- A. Well, I think, under the provisions of the Agreement, the Town may authorize temporary measures, as long as

the existing condition is restored. That's the way
they're describing it.

- Q. Okay. But does the -- would that include widening the road, on a temporary basis?
- 5 A. I guess, if we wanted to temporarily widen the road, we would have to ask the Town and see whether they would agree to it under this provision.
- 8 Q. Okay.
- 9 A. But it's really not up to me, so much as the Town of Rumney, on how they would do that.
- Q. And, what about removing trees? Would a "temporary measure" include removing a tree or groups of trees?
- 13 A. Not to my knowledge.
- Q. Okay. So, you can commit that there won't be any tree removal as a temporary measure?
- 16 A. Not that we plan on.
- Q. And, "restoring the existing condition of the road subsequent to the construction period", would you envision that, if a tree were removed, it would then be replanted?
- A. Again, we have no plans to remove any trees. It's not our road anyway. So, it would be up to the Town of Rumney.
- Q. So, the Town would have to remove the trees?

- 1 A. Well, the Town would have the approval, it's their
- 2 right-of-way.
- 3 Q. Okay. But, if you ask them, you would expect and hope
- that they would approve, correct?
- 5 A. Yes.
- 6 Q. Okay. And, so, at this point, you're still saying that
- you're not expecting to remove any trees or widen the
- 8 road in any way?
- 9 A. That's right.
- 10 Q. That's good. Thank you. Now, Mr. Buttolph asked you a
- number of questions about the change in the
- interconnection route. How long are you expecting the
- 13 115 kilovolt line to be?
- 14 A. Probably on the range of 200 feet or less.
- 15 Q. Two hundred feet or less, okay. And, what does a 115
- 16 kilovolt line look like?
- 17 A. Typically, they're on H poles, we call "H poles". We
- see them, they run just on the other side of the river
- here from Concord. They're larger than typical poles
- that are running along the roadways. I don't know the
- 21 actual heights.
- 22 Q. And, how big is the wire, the conductor itself?
- 23 A. What conductor size is it?
- 24 Q. Yes. If you had to sort of, using your hand, you know,

is it as big as a baseball, big as a basketball? I don't know, you tell me.

- A. I don't know right offhand what the wire size is.
- Q. And, when you did your Feasibility Study, there were six alternatives that were analyzed, but not the one that's being proposed?
- 7 Well, there are a couple of Feasibility Studies. Α. 8 was an initial Feasibility Study that was completed in 2008, which looked at 230 kV, 115 kV, and 34.5. 9 then went ahead and focused on the 34.5 kV options. 10 And, there were five options, I believe, that came out 11 of that, that were presented by Public Service New 12 Hampshire. Subsequent to that, they had recommended or 13 had some, I guess, later concerns about interconnecting 14 15 48 megawatts at 34.5.
- Q. Okay. I don't want you to go there. I just want to figure out that whether -- there were six alternatives, and the one that you're now proposing, at least in the initial Feasibility Study, was not among them, is that correct?
- A. Not really. I mean, the 115 kV interconnect was originally studied in the first Feasibility Study in 2008. In this exact configuration, no.
- 24 Q. Okay.

That's why you revise the Feasibility Study. This will 1 Α. be the second or third one that's been done.

- Okay. Now, along Route 25, do you expect that -- I 3 Q.
- 4 guess you said it was the Co-op that owns that route?
- 5 Α. Yes.

- Are they going to have to install new poles and wire 6 Q. 7 along that, along Route 25?
- I would expect that, in some areas, they will. 8 Α. them are very old. Other parts of Route 25 have been 9 rebuilt with new three phase lines recently, and it may 10 not be required. 11
- 12 Okay. And, will they expect you to pay for that? Q.
- 13 Α. Yes.
- And, do you have an estimate for how much that's going 14 Q. to cost you? 15
- I don't. 16 Α.
- 17 Q. Okay. And, isn't it true that you haven't had any of your consultants do any analysis or reports or 18 19 testimony that analyze the environmental impacts from 20 the line down to Route 25?
- 21 Α. Talking about the line from the sites down to Route 25?
- 22 That's correct. Q.
- 23 We have not done detailed environmental analysis of 24 that area.

Q. Okay. So, without that, isn't it true that we really don't know what the impact on wetlands and wildlife

- 3 might be in that area?
- A. Well, I think you have to put it in perspective. I

 mean, we're talking about, you know, maybe 20 poles or

 so. Also, the reason for doing that, changing that,

 was not something that we wanted to do. This was at

 the request of the Town of Rumney.
- 9 Q. That wasn't my question. I didn't ask you why you did
 10 it. But the question is, isn't it true that we don't
 11 know what the environmental impact might be on that
 12 route through the woods, correct?
- A. Well, we don't know if there are going to be any wetland impacts.
- Q. Okay. And, wildlife impacts as well. We don't know whether there are going to be any wildlife impacts in there either, do we?
- 18 A. From setting 20 poles or so, no, we don't know that.
- Q. Okay. And, the same goes for the route along Route 25, to the extent that the Co-op has to modify, put in new poles, supports, whatever, we don't know what any of those impacts might be on wetlands or wildlife at this point, do we?
 - A. That would be the Co-op that does that, so --

1 Q. Okay. But we don't know what the impact is, do we?

- 2 A. I don't know what they are.
- 3 Q. Okay.
- 4 A. The Co-op does the licensing and permitting for their own poles.
- Q. And, we also don't know anything about the visual impacts of your new line through the woods, from the site down to Route 25, do we?
- 9 A. Well, I think we know enough to know that they're well below the tree canopy.
- Q. Okay. But you haven't asked your consultants to do any visual impact analysis of that line, have you?
- A. Well, we also did not do visual impact analysis of the poles on the site.
- 15 Q. Yes, I'm aware of that, and we'll get to that, your
 16 visual impact analysis. But, at this point, you
 17 haven't done any visual impact analysis of the route
 18 from the Project down to Route 25?
- 19 A. No, we haven't.
- Q. Okay. And, you haven't done any visual impact analysis
 of any changes to the lines and poles along Route 25
 and up to Campton, correct?
- 23 A. They're not our poles.
- Q. Okay. And, since we don't know where the 115 kV line

and the substation are going to be, we don't know about

- 2 any of the impacts that those things may have either,
- 3 do we?
- 4 A. Not at this time.
- 5 Q. Okay.
- 6 A. We are looking at the Beebe River Substation, and
- 7 awaiting a PSNH study of whether that facility can
- 8 accommodate some of the improvements.
- 9 Q. Now, the equipment you're installing to do the step-up
- over -- I guess that's up in Campton, right?
- 11 A. It may be in Campton.
- 12 Q. Okay. It could be somewhere else?
- 13 A. Yes, it could be somewhere else.
- 14 Q. And, is that where the 200 foot stretch of 115 is going
- 15 to be?
- 16 A. Yes.
- 17 Q. If it's somewhere else, is that 115 kV stretch going to
- 18 be longer than 200 feet?
- 19 A. No.
- 20 Q. Okay. So, if it's not in Campton, it's still only
- going to be 200 feet long?
- 22 A. Yes.
- 23 Q. Okay. Can you explain how you do that?
- 24 A. The 115 kV line runs north/south between Beebe River

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- and Ashland, and elsewhere.
- 2 Q. So, you just tap into that line somewhere?
- 3 A. That's right.
- 4 0. Okay.

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- 5 A. If PSNH determined that there was inadequate room at
 6 Beebe River to host all of the facilities, then it
 7 could then be located elsewhere along, next to that 115
- 9 Q. Okay. If you install this new interconnection, which
 10 includes the 115 kV step-up, is that equipment -- would
 11 that equipment be useful to you in the future, if you
 12 wanted to expand this Project or add another project?
- A. But we wouldn't own it. PSNH is going to own most or all of this.
- 15 Q. Okay. But it's going to be there, correct?
- 16 A. Yes, but we won't own it.

kV right-of-way.

- 17 Q. I didn't ask whether you are going to own it. I just
 18 asked if it would be useful to you in the future, if
 19 you wanted to expand the Project or put in another one?
- 20 A. Not that I'm aware of.
- Q. Okay. Now, I understand from I guess it was -- it was
 either the motion or the objection that was filed, and
 you can correct me if I'm wrong, that the commercial
 operation commencement date is now scheduled for 2012,

- 1 is that correct?
- 2 A. That's what we filed with the ISO-New England in the revised interconnection request.
- Q. Okay. And, in your Application, what was your commercial operation date?
- A. In the previous Application, we had proposed a end of 2011 commercial operation date.
- Q. And, do you know what time of 2012, what date, season, portion, quarter?
- 10 A. I think we have October 2012 is what's call an "Initial Synchronization Date".
- 12 Q. And, is that the commencement of commercial operation?
- 13 A. On or about.
- Q. So, from the Initial Synchronization Date, how long do you expect it would take to go to commercial operation, assuming everything goes well?
- 17 A. I don't have the answer to that. It's part of the
 18 commissioning process and working with ISO-New England
 19 and the utility.
- 20 Q. What's a typical time frame?
- 21 A. Could be a month or two.
- Q. So, it could actually be -- it could go until 2013 to go to commercial operation, correct?
- 24 A. Doubtful.

- 1 Q. But possible?
- 2 A. Yes, possible.
- 3 Q. Okay. And, especially if you don't get things worked
- 4 out with DHR?
- 5 A. (Witness nodding in the affirmative.)
- 6 Q. Is that a "yes"?
- 7 A. I'm not saying -- are you saying that you think the
- 8 Project will not be completed until 2013?
- 9 Q. To go commercial operation by -- it could go to
- 10 commercial operation as late as 2013, correct?
- 11 A. Well, I mean, theoretically, it could be any date.
- But, you know, our plans are to have it in operation,
- you know, by October of 2012. If you're asking about
- "why the change?" Well, we've had to --
- 15 Q. I didn't ask "why the change?" I'm just suggesting,
- it's possible that it could -- your commercial
- operation date could move to as late as early 2013?
- 18 A. That's your suggestion. I don't think that's likely.
- 19 Q. You don't think it's likely, but do you agree that it's
- 20 possible?
- 21 A. It is theoretically possible, yes.
- 22 Q. Okay. Now, the Project retained Professor Gittell and
- 23 Magnusson to write a report, correct?
- 24 A. Yes.

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Q. And, none of those -- neither of those professors were made available during any tech sessions or -- nor did
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- anybody provide them any data requests, correct?
- 4 A. That's correct.
- Q. Okay. And, they're not testifying, they haven't provided any testimony in this proceeding, correct?
- 7 A. That's correct.
- Q. Okay. And, did you consult with them on the change in date for the commercial operation?
- 10 A. No, I did not.
- Q. Okay. Now, do you have any credentials of your own to conduct economic analysis or a statistical analysis?
- 13 A. No, I don't.
- Q. So, isn't it true that you have no way of evaluating
 whether Professor Gittell or Professor Magnusson
 followed acceptable economic or statistical methods?
 You don't have any way to evaluate that, do you?
- A. Well, my only basis for evaluating that is by their reputation and experience, and having done that for many years.
- Q. Okay. But you personally don't know enough about
 economic analysis or statistical analysis to conclude
 for us that the way they conducted their study, which
 nobody has the ability to cross-examine, was done

- 1 correctly, correct?
- 2 A. I don't -- personally have not reviewed their methods
- and modeling, no.
- 4 Q. Okay. And, the Gittell study hasn't been
- 5 peer-reviewed, has it?
- 6 A. I don't believe so, no.
- 7 Q. Okay. And, how much did you pay Professor Gittell to
- 8 do that study?
- 9 A. I don't recall. I'd have to look that up.
- 10 Q. Okay. Was it \$100,000?
- 11 A. I don't remember how much it was.
- 12 Q. You have no memory whatsoever on how much you paid him?
- 13 A. I do not. I have many contractors.
- 14 Q. Okay.
- 15 A. I can look that up. We can take that as an action and
- find out that number. That would be easy for me to
- 17 find out.
- 18 Q. Thank you.
- 19 CHAIRMAN GETZ: Well, then, let's hold
- 20 Exhibit 34 of the Applicant for the answer to that
- 21 question.
- 22 (Applicant Exhibit 34 reserved.)
- 23 BY MR. ROTH:
- Q. Do you expect that the Project is going to qualify for

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- 1 an Investment Tax Credit?
 - A. That's uncertain. That expires this year, I believe, as far as beginning construction, which we, of course, don't expect to do. There are other provisions, to my limited knowledge of the regulations, that allows some projects to retain eligibility. So, that Investment Tax Credit grant expires at the end of 2010 for obtaining eligibility, and I think it runs through 2012 or '13 for completion of work. So, my short answer is
- 11 Q. Do you hope it will?

"I'm not sure."

12 A. Yes.

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- Q. Now, if you get a certificate from the Committee in the time that you wish to, obviously, before the end of this year, and well before the end of this year, is there anything that you can do that will qualify you for the ITC?
- A. My understanding is that, if there are certain

 financial commitments made, binding purchase agreements

 for turbines, things like that, that add up to a

 certain percentage of the project, that you can then

 qualify in that regard.
 - Q. Okay. And, as I understand it from your testimony, I believe it was your testimony, you can correct me if

1 I'm wrong about that, Iberdrola Renewables has sort of

- a standing agreement with Gamesa, correct, to purchase
- turbines, isn't that correct?
- 4 A. We have agreements with a number of turbine
- 5 manufacturers.
- 6 Q. But you're using Gamesa turbines in this Project?
- 7 A. We are proposing Gamesa turbines in this Project.
- 8 Q. And, is it true that Iberdrola Renewables has a
- 9 standing agreement with Gamesa for purchase of Gamesa
- 10 turbines?
- 11 A. We have an agreement to purchase turbines, numbers of
- turbines, as we do with GE and Suzlon and Mitsubishi.
- 13 Q. Okay.
- 14 A. I'm not sure what you mean by "standing agreement".
- 15 Each --
- 16 Q. A turbine supply agreement.
- 17 A. Yes. We have turbine supply agreements with a number
- of companies, including Gamesa.
- 19 Q. And, you could simply invoke a provision of that
- 20 turbine supply agreement the day after the Committee
- 21 signs its order, correct?
- 22 A. I'm not sure what you mean by "invoke"?
- 23 Q. Complete the order.
- 24 A. Place an order?

Q. Complete the order.

- A. Not to my knowledge, because turbine supply agreements cover delivery of components at a certain quarter in the future. And, they are typically combined, for us, a number of projects at once. We would not order 24 turbines in one order. We might order 100 turbines for multiple projects for 2011 or 2012.
- Q. Well, I'm just trying to understand how this -- how purchasing turbines is going to qualify you for the ITC before the end of this year. How does that work in this case?
- A. I really have limited knowledge of that. I can tell you what little I know. But there's -- the regulations are complicated, and I don't pretend to understand them. It's not my role to qualify the Project or attempt to. What I have read indicates that, if you make a binding purchase agreement, which means there is not a refundable aspect to it, which there usually is, and a certain percentage of those funds are deposited for a turbine purchase, for a specific project, then, in some cases, that can qualify a project, because it's a commitment of funds that cannot be undone.
- Q. Okay. And, so, still again, how does that translate into qualifying for the ITC before the end of this year

for this Project? 1

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That's the way the regulations work, as I understand it, is there is different ways to qualify. One would be to make a commitment on turbines, the other is there's a series of different requirements on what type of work has been done, some of which is actual dirt moving, some of which is analytical engineering.

Are you asking how would we, where we sit today, qualify for the ITC?

- Yes, that's correct. I'm trying to understand that. 10 Q.
- The only way that I understand is to make a purchase 11 Α. agreement on turbines before the end of the year. 12
- Okay. And, if you did that, how much would you expect 13 Q. the Project would garner from the ITC? 14
- I don't know that either. My understanding is it's a Α. way to monetize the Production Tax Credit. So, it's a choice of either/or; either production tax credits that are spread over ten years or the Investment Tax Credit 18 grant, which it receives I think at commercial operation.
 - Q. I understand that. But I'm just trying to understand what you think is going to be the net result of that, in terms of money coming on the ITC for the Project?

- 1 A. I don't know.
- 2 CHAIRMAN GETZ: Is that something
- 3 Mr. Mihalik can testify to?
- 4 WITNESS CHERIAN: That would probably be
- a good question for Mr. Mihalik.
- 6 MR. ROTH: Okay. Thank you.
- 7 WITNESS CHERIAN: I should have deferred
- 8 right away, because I'm in the deep weeds on those
- 9 questions.
- MR. ROTH: I noticed that. I was
- 11 enjoying that.
- 12 WITNESS CHERIAN: Thank you. I'm here
- 13 to entertain you.
- 14 BY MR. ROTH:
- 15 Q. Now, when we toured the area back in June, there were a
- significant number of signs protesting the Project.
- Are there fewer of them out there now or more?
- 18 A. I don't know if I would share that characterization, I
- think. There's no signs out there that I've seen, and
- 20 I'm there on a regular basis.
- 21 Q. Okay.
- 22 A. I think it was for that particular day, you know, some
- people put out some signs.
- Q. Okay. Would you conclude, by the absence of signs

then, that you have greater public support for the
Project in the communities or less or about the same?

3 Do you have a sense of that?

- 4 A. Greater than in June?
- 5 Q. Yes.
- I don't know if it's either way. I think that, you 6 Α. 7 know, there are folks on Groton Hollow Road and folks in Rumney, as you know, that are very opposed to the There are also folks that are very much in 9 Project. favor of the Project, including some that live very 10 close to the Project location and on Groton Hollow 11 I think what we've endeavored to do is have a 12 Road. lot of meetings and engage people in a lot of 13 I don't know that it's changed minds for questions. 14 people that have made up their minds whether they 15 support the Project or not. But we've at least 16 17 provided opportunities to discuss concerns and issues.
- 18 Q. Okay.
- A. Overall, I think we have broad support in Groton, and I think we have pretty broad support in Rumney.
- Q. Okay. Moving to a completely different subject matter.
 You stated in your testimony that "cleared areas will
 be [allowed to] re-vegetate", that was on Page 12, I
 believe, of your initial testimony. Can you provide

- some more detail on what you mean by that?
- 2 A. Well, typically, when building access roads, you have
- grubbings and spoils, grubbings, which is basically
- 4 loam and stumps in some cases, so those areas are
- restored and re-vegetated after the project is
- 6 completed.
- 7 O. Which areas again?
- 8 A. These are areas along the side of the access road or
- 9 areas near temporary staging, for example, or staging
- 10 areas.
- 11 Q. So, along the access road, you've cut trees and removed
- 12 stumps and the like, correct?
- 13 A. Yes.
- 14 Q. And, that process continues so that you can construct
- the road and the cuts and fills necessary to have the
- 17 A. Yes.
- 18 Q. And, is it your testimony that, throughout the length
- of the access road, clearings made to accommodate that
- 20 process, and I assume to accommodate the turning of the
- large pieces of equipment, those areas will be allowed
- to re-vegetate along the entire length of the road?
- 23 A. Well, I'm going to refer you to our detailed plans,
- which describe the extent of any soil disturbance.

And, I think have some details on what is re-vegetated and brought in. I think the more significant portions of that are along the crane access roads, which are quite a bit wider to accommodate the width of the crane tracks, but, after that point, are re-vegetated to a much more narrow road.

- Q. Okay. Is there going to be an active process to do that or is it simply going to be whatever naturally grows back will be allowed to grow back?
- A. It will be active, and it's directed in some detail by the DES permit conditions, down to the level of what kind of seed mixes are used, and it has to be confirmed in follow-up years that the seed has taken hold.
- Q. Now, are you familiar with the certificate that was given to your competitor, Granite Reliable?
- 16 A. I have not read it.

Q. Okay. Would you be surprised to learn that there is actually a condition imposed by the Committee that provides that, "upon completion of construction areas above [a certain] elevation will be revegetated in accordance with a plan developed by the Applicant in consultation with New Hampshire Fish & Game. This plan will address reestablishment of endemic species, including spruce and fir, within the restored

right-of-way. The plan will include provisions for planting of seedlings and application of organic matter

3 to best support a successful restoration effort." Does

that sound familiar to you at all?

- A. Again, I have not read it. My limited understanding of that project it that it was in high elevation areas, where there was some sensitivity on the impacts of alpine environments 2,700 feet or above.
- 9 Q. Given that this was required in that case, as well as
 10 in this case, apparently, by DES, would you -- would
 11 the Applicant agree to a condition similar to the one
 12 that was imposed upon a competitor, if DES --
- 13 A. Well, I think --

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- Q. Sorry. Consistent with whatever DES is going to require in the permit?
- Without having read the certificate you referred to, I 16 Α. think most of those conditions, the details of those, 17 are unnecessary for this project. They were, to my 18 19 knowledge, imposed because it was a high elevation This is lower elevation. 20 sensitive area. 21 habitat that is not unique in that regard. 22 logged pretty substantially.
 - Q. Can I just interrupt you, because that's not the question I asked you was, which is "whether you think

it's necessary?" But the question was, "are you willing to agree to a condition similar to that?" And

if the answer is "no", then just say "no", that's okay.

- A. Well, I don't -- without having seen a condition that's being proposed, it's a little bit difficult to give you
- a clear answer on that.
- 7 Q. Okay.

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- 8 A. If you're saying, "would we agree with a condition as
 9 you just read it?" I would say "no". I don't think
 10 it's necessary.
- 11 Q. Okay. Thank you. The last question I have, this goes
 12 back to -- we'll start where we -- we'll finish where
 13 we began, which was Mr. Buttolph's questioning, and
 14 this concept of a "property value guarantee". Are you
 15 familiar with that concept and with that mechanism?
 - A. I am -- I've heard the concept. I'm not familiar with the mechanism in detail.
- Q. So, you have extensive experience in siting alternative energy facilities and, in particular, wind farms, and you just have -- you just heard of it? You haven't -- you're not curious enough to sort of do research on it?
 - A. It's never, to my knowledge, been requested or been considered as necessary by any local or state agency that I've ever worked with.

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    Q.
                So, you've never had one in your experience.
                                                                Do
2
         you know whether Iberdrola Renewables, in its other
         projects, has agreed to them?
 3
         Not to my knowledge.
 4
    Α.
         Okay. Or had one imposed upon them?
5
    Q.
6
         Not to my knowledge.
    Α.
 7
                         MR. ROTH:
                                    Okay.
                                           That's all.
                                                         That's
      all I have.
8
                   Thank you.
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                         CHAIRMAN GETZ: Okay. Thank you,
10
      Mr. Roth.
                 Then, what we'll do at this time is take the
11
      lunch recess. We will resume at 1:30, and we'll turn to
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      questions from the Subcommittee. So, thank you.
13
                         (Whereupon the Day 1 Morning Session
                         recessed for lunch at 12:08 p.m.
14
                                                            The
15
                         Day 1 Afternoon Session to resume
16
                         under separate cover so designated.)
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	14 (2)	89:8;91:7		9:00 (1)
\$	37:21;69:17	2013 (4)	4	21:18
Ψ	14.1 (1)	85:22;86:8,10,17	-	90 (1)
61 (1)	69:20	20th (1)	4 (6)	21:5
56:18	14.2 (3)	56:9	18:6;30:6,13,22;	
5100,000 (1)	69:10,20;71:5	21 (1)	41:13;43:14	A
88:10	14.3 (1)	38:16	40 (2)	
00.10	69:20	22 (4)	36:5;37:1	ability (1)
[15 (3)	35:22;36:8;37:19;40:6	450,000 (1)	87:24
L	43:23;44:9;53:10	22nd (1)	43:17	able (7)
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