STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

March 9, 2009 - 11:00 a.m.
Public Utilities Commission
21 South Fruit Street
Concord, New Hampshire

DAY 1
[REDACTED - FOR PUBLIC USE]

In re: SITE EVALUATION COMMITTEE:
SEC DOCKET NO. 2008-04:
Application of Granite Reliable Power, LLC, for a Certificate of Site and Facility for the Granite Reliable Power Windpark in Coos County, New Hampshire.

PRESENT:	SITE EVALUATION COMMITTEE:
Thomas B. Getz, Chrmn. (Chairman of SEC Subcommittee - Presiding)	Public Utilities Commission
Donald Kent	Dept. of Resources & Econ. Dev.
Glenn Normandeau	Fish & Game Department
Robert Scott, Director	DES - Air Resources Division
Christopher Northrop	N.H. Office of Energy & Planning
William Janelle	Dept. of Transportation
Michael Harrington	Public Utilities Commission

* * *

Counsel for the Committee: Michael J. Iacopino, Esq.

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

APPEARANCES:

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Susan S. Geiger, Esq. (Orr & Reno)

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Senior Assistant Atty. General
New Hampshire Dept. of Justice

Reptg. N.H. Fish & Game Division:
Evan Mullholand, Esq.
Assistant Atty. General
New Hampshire Dept. of Justice

Reptg. Clean Power Development:
William Gabler

Reptg. N.H. Wind Energy Association:
Farrell Seiler

Reptg. the Appalachian Mountain Club:
David Publicover
Kenneth Kimball

Reptg. Industrial Wind Action Group:
Lisa Linowes

Kathlyn Keene, pro se

Jon Odell, pro se

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Petitioner 1.2	Application Volume 2	premarked
Petitioner 1.3	Application Volume 3	premarked
Petitioner 1.4	Application Volume 4	premarked
Petitioner 1.5	Application Volume 5	premarked
Petitioner 2.1	Supplement to Application Volume 1a	premarked
Petitioner 2.2	Supplement to Application Volume 6	premarked
Petitioner 3	Pre-filed Testimony of Charles Readling & Pip Decker	premarked
Petitioner 4	Supplemental Pre-filed Testimony of Pip Decker Mark Lyons	premarked
Petitioner 5	Pre-filed Testimony of	premarked

	Christopher Lowe	
Petitioner 6	Supplemental Pre-filed Testimony of Christopher Lowe	premarked
Petitioner 7	Pre-filed Testimony of Daniel Mandli	premarked
Petitioner 8	Supplemental Pre-filed Testimony of Daniel Mandli	premarked
Petitioner 9	Pre-filed Testimony of Philip Beaulieu	premarked
Petitioner 10	Supplemental Pre-filed Testimony of Steven Lafrance	premarked

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Petitioner 12	Supplemental Pre-filed Testimony of Raymond Lobdell	premarked
Petitioner 13	Pre-filed Testimony of Stephen Pelletier and Adam Gravel	premarked
Petitioner 14	Supplemental Pre-filed Testimony of Stephen Pelletier and Adam Gravel	premarked
Petitioner 15	Pre-filed Testimony of Jean Vissering	premarked
Petitioner 16	Supplemental Pre-filed Testimony of Jean Vissering	premarked
Petitioner 17	Pre-filed Testimony of Hope Luhman	premarked
Petitioner 18	Supplemental Pre-filed Testimony of Hope Luhman	premarked
Petitioner 19	Pre-filed Testimony of David Hessler	premarked
Petitioner 20	Pre-filed Testimony of Matthew Borkowski	premarked
Petitioner 21.1	GRP Responses to Public Counsel's Data Requests,	premarked

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Petitioner 23	GRP Responses to AMC Data Requests	premarked
Petitioner 24	GRP Responses to NHWEA Data Requests	premarked
Petitioner 25	GRP Responses to Site Evaluation Committee Data Requests	premarked
Petitioner 26	GRP Responses to Kathlyn Keene's Data Requests	premarked
Petitioner 27	GRP Responses to Data Requests from Technical Session 2	premarked
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Petitioner 34.1	Fish & Game Responses to Data Requests from GRP, Volume I	premarked
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Petitioner 35	Kathlyn Keene's Responses to Data Requests from GRP	premarked
Petitioner 36	Meeting minutes of	premarked
Petitioner 37	February 25, 2009 DHR/USACE Site Visit	premarked
Petitioner 38	Letter from Americans Forest Management, Inc. (11-13-07)	premarked
Petitioner 39	DES 401 Water Quality Certificate	premarked
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PC 1	Pre-filed Testimony of	premarked

	Dr. George Mariani	
PC 2	Pre-filed Testimony of Dr. Gary Sanford	premarked
PC 3	Pre-filed Testimony of Trevor Lloyd Evans	premarked
PC 4	Supplemental Pre-filed Testimony of Dr. Gary Sanford	premarked
PC 5	Pre-filed Testimony of Jim Sundstrom, with exhibits	premarked
PC 6	Guidelines for Conducting Bird and Bat Studies at Commercial Wind Energy Projects	premarked
PC 7	Jim Sundstrom's Financial Models	premarked
PC 8	CONFIDENTIAL Exhibits to Counsel for the Public's Motion to Suspend Proceedings (Company financials)	premarked
PC 9	Form S-1 Registration Statement, Filed May 8, 2008 and Amendment No. 4 to Form S-1 (Filed 09-11-08)	premarked
PC 10	E-Mail from Applicant's Counsel to Kathlyn Keene (March 3, 2009)	premarked

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F&G 1	Pre-filed Testimony of Will Staats and Jillian Kelly	premarked
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F&G 3.1	Habitat Profile: High Elevation Spruce Fir	premarked
F&G 3.2	Species Profile: American Marten	premarked

F&G 3.3	Species Profile: Canadian Lynx	premarked
F&G 3.4	Species Profile: Three Toed Woodpecker	premarked
F&G 3.5	Species Profile: Bicknell's Thrush	premarked
F&G 4	Birds of North America	premarked
F&G 5	Mammals of North American	premarked
AMC 1	Pre-filed Testimony of Dr. David Publicover	premarked
AMC 2	Supplemental Pre-filed Testimony of Dr. David Publicover	premarked
AMC 3	Lempster Wind, LLC Certificate of Site and Facility (SEC Docket 2006-01) Appendix III, Section 14	premarked
AMC 4	Evergreen Wind Power V, LLC decision document (Maine Land Use Reg. Commission Permit DP 4788, Condition 13	premarked

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AMC 5	TransCanada Maine Wind Development, Inc. decision document (Maine Land Use Reg. Commission Permit DP 4794), Conditions 10.C and 14	premarked
AMC 6	Dettmers, Randy. 2006. A Blueprint for the Design and Delivery of Bird Conservation in the Atlantic Northern Forest, U.S. Fish & Wildlife Service Atlantic Coast Joint Venture (Pages 1-30, 52, 185-187)	premarked
AMC 7	Leverett, R. 1996. Definitions and History. Pp.3-17 in Eastern Old-Growth Forests: Prospects for Rediscovery and Recovery (M.B. Davis, ed.) Island Press,	premarked

	Washington, D.C.	
AMC 8	National Academy of Sciences. 2007. Environmental Impacts of Wind-Energy Projects. National Acad. of Sciences National Research Council, Washington, D.C. (Cover page, pages 48-50, 72-95)	premarked
AMC 9	Rimmer, C.C., K.P. McFarland, J.D. Lambert, R.B. Renfrew. 2004. Evaluating the use of Vermont Ski Areas by Bicknell's Thrush: Applications of Whiteface Mountain, New York. Vermont Institute of Natural Science, Woodstock, VT.	premarked

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AMC 10	Rimmer, C.C., J.D. Lambert and K.P. McFarland. 2005. Bicknell's Thrush Conservation Strategy for the Green Mtn. National Forest. VINS Technical Report 05-5. Vermont Institute of Natural Science, Woodstock, VT.	premarked
AMC 11	Rosenberg K.V. and T.P. Hodgman. 2000. Partners in Flight Landbird Conservation Plan: Region 28: Eastern Spruce-Hardwood Forest (Draft 1.0). American Bird Conservancy, The Plains, VA.	premarked
AMC 12	Seidel, T.M., D.M. Weihrauch, K.D. Kimball, A.P. Pszenny, R. Soboleski, E. Crete and G. Murray. Evidence of climate change since the 1930s declines with elevation on Mt. Washington, N.H., USA. Arctic, Antarctic, and Alpine Research J. (Accepted for publication)	premarked
AMC 13	Spear, R.W. 1989. Late-Quaternary history of high-elevation vegetation in the White Mtns. of N.H. Ecological Monographs 59:125-151	premarked

AMC 14	Desponts, M., G. Brunet, L. Belanger and M. Bouchard. 2004. The eastern boreal old-growth balsam-fir forest: a distinct ecosystem. Canadian Journal of Botany 82: 830-849	premarked

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NHWEA 1	Iberdrola/PSNH Power Purchase Agreement	premarked
NHWEA 2	Iberdrola/PSNH Agreement for Purchase of RECs	premarked
NHWEA 3	Iberdrola/PSNH New Hampshire Electric Loop Agreement	premarked
NHWEA 1	Iberdrola/PSNH Interconnection Agreement	premarked
KK 1	Kathlyn Keene Pre-filed Testimony	premarked
KK 2	Kathlyn Keene Supplemental Pre-filed Testimony	premarked
IWA-X-1	Mechanical Operating & Maintenance Manual	premarked
IWA-X-2	"Problems at Wind Farm could Derail Acquisition"	premarked
IWA-X-4	Page from ISO Standard	premarked
IWA-X-6	Email from Randy Swisher	premarked
IWA-X-9	USDOE 20% Wind Energy by 2030	premarked
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P R O C E E D I N G S

CHAIRMAN GETZ: Okay. Good morning, everyone. I'm going to open the public hearing in Site Evaluation Committee Docket Number 2008-04, regarding the merits of an Application that was filed on July 15, 2008 by Granite Reliable Power for a Certificate of Site and Facility to construct and operate a 99 megawatt wind power electric generation facility in Coos County consisting of 33 3-megawatt turbines, along with transmission and other associated facilities. Thank you, everyone, for being able to make it here. Obviously, the elements have not cooperated.

My name is Tom Getz. I'm the Chairman of the Public Utilities Commission, and, as a result, I am the Vice Chairman of the Site Evaluation Committee. And, I have been designated as the presiding officer for this proceeding. The members of the Committee designated for this proceeding include, beginning on my far right, Chris Northrup, from the Office of Energy and Planning. On August 29, the Director of Energy and Planning, Amy Ignatius, recused herself from this proceeding, and appointed her Deputy, Jack Ruderman, as her designee for this proceeding. Subsequently, in December, Mr. Ruderman left the employ of the Office of Energy and Planning,

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actually, he now works for the Public Utilities

Commission. And, after that, Ms. Ignatius designated Mr. Northrup as OEP's representative on the Subcommittee. Also, we have Bob Scott, from the Department of Environmental Services; Glenn Normandeau, the Director of New Hampshire Fish & Game; on my right is Michael Harrington, is an engineer appointed for this proceeding by the Public Utilities Commission; on my left is Bill Janelle, from the Department of Transportation; and next to him is Don Kent, from the Department of Resources and Economic Development. Also present this morning is Michael Iacopino, who is Counsel to the Site Evaluation Committee. I note for the record as well that the Attorney General has designated for this proceeding Peter Roth to serve as Counsel for the Public.

Before we turn to the examination of the Applicant's witnesses, I will provide some additional background for the record, take appearances from the parties, discuss some ground rules for the hearings, and address any outstanding procedural matters.

In terms of procedural background, the Granite Reliable Power Project is proposed to be located in the Town of Dummer and the unincorporated places of Dixville, Erving's Location, Odell, and Millsfield. The

turbines are proposed to be built on Dixville Peak, Mount Kelsey, Owlhead Mountain, and an unnamed ridgeline sometimes referred to as "Fishbrook".

The Application in this case was accepted on August 14, 2008, when DES Commissioner Thomas Burack, Chairman of the Site Evaluation Committee, issued

an order pursuant to RSA 162-H:6-a, finding that the Application contained sufficient information to carry out the purposes of the Site Evaluation statute. Acceptance of the Application started the 240 day statutory time period during which this Subcommittee designated for the proceeding must issue or deny a certificate. The 240 day period ends on April 6th, 2009.

An order was issued on August 27, 2008, scheduling a prehearing conference, which was held on September 18, 2008. The order also scheduled a public informational hearing, which was held at Groveton High School on October 2nd, 2008, and a site visit, which was conducted on October 3, 2008. The prehearing conference led to an order on September 26th approving a procedural schedule. That schedule provided for discovery by the parties concerning the Application, and it provided for testimony by Public Counsel and Intervenors by December 10, 2008, and that date was subsequently extended until

January 5, 2009. The procedural schedule also provided for a round of supplemental testimony by February 23. And, it provided for the commencements of hearings today, March 9.

In addition, an order was issued on October 14 granting Petitions to Intervene in this proceeding by Clean Power Development, Kathlyn Keene, Robert Keene, Jon Odell, Sonja Sheldon, Wayne Urso, the Appalachian Mountain Club, the Industrial Wind Action Group represented by Lisa Linowes, and the New Hampshire Wind Energy Association represented by Farrell Seiler. In

addition to the Applicant, testimony has been filed by Counsel for the Public, the New Hampshire Department of Fish & Game, and the Appalachian Mountain Club, as well as Ms. Linowes and Ms. Keene. I'll also note for the record, in a prehearing conference last week, a petition to -- an intervention was granted to the New Hampshire Department of Fish & Game.

Hearings are scheduled for today, March 9, as well as Tuesday, March 10, Wednesday, March 11, and Friday, March 13. Hearings are also scheduled next week to occur on Monday, March 16th and Tuesday, March 17th, and those hearings are intended to focus on financial issues. Closing arguments have been scheduled to occur at

3:00 on Thursday, March 19, at the DRED offices in Lancaster. And, of course, that assumes that the hearings have been completed prior to providing for closing arguments. In addition, a public hearing has been scheduled for 6:30 on Monday evening, March 23, at the Lancaster Town Hall, for the purpose of receiving public comment.

One other item I wanted to point out is that note for the record that budget hearings are in progress this week and next week at the Legislature, and several members may need to attend those hearings during this week and possibly next week. Our intention, so long as there is a quorum, we will continue with the hearings. And, it is the responsibility of any member of this Subcommittee, who is absent for any period of time for the hearings, that they must read the transcript for the

period while they were absent from the hearings in order to permit them to vote on the final Application.

Let's, at this time, take appearances for the record, beginning with the Applicant.

MR. PATCH: Good morning, Mr. Chairman, members of the Committee. My name is Doug Patch. I'm with the law firm of Orr & Reno, and with me this morning Susan Geiger, also with Orr & Reno. We're counsel for the

Applicant.

CHAIRMAN GETZ: Good morning.

MS. GEIGER: Good morning.

CHAIRMAN GETZ: Mr. Gabler.

MR. GABLER: Good morning, Mr. Chairman, members of the Committee, Bill Gabler, for Clean Power Development.

MS. KEENE: Kathlyn Keene, intervenor.

CHAIRMAN GETZ: Good morning.

MS. KEENE: Good morning.

CHAIRMAN GETZ: Sir.

MR. ODELL: Good morning, Mr. Chairman. Jon Odell, intervenor.

CHAIRMAN GETZ: Good morning. Other parties? Ms. Linowes.

MS. LINOWES: Mr. Chairman, members of the Committee, good morning. My name is Lisa Linowes, Industrial Wind Action Group.

CHAIRMAN GETZ: Good morning. Mr. Publicover.

DR. PUBLICOVER: Yes. David Publicover,

representing the Appalachian Mountain Club. And, I'm joined by Kenneth Kimball, also from the Appalachian Mountain Club.

CHAIRMAN GETZ: Good morning.

MR. MULLHOLAND: Mr. Chairman, I'm Evan Mullholand, from the Attorney General's Office, here on behalf of Fish & Game.

CHAIRMAN GETZ: Good morning.

MR. ROTH: Good morning, Mr. Chairman, members of the Committee. I'm Peter Roth, Counsel for the Public, appointed by the Attorney General.

CHAIRMAN GETZ: Okay. Good morning. And, I take it there are no other parties who are present this morning to make their appearance?

(No verbal response)

CHAIRMAN GETZ: So, let's move onto a couple of ground rules for the hearings. This has been I think noted before in technical sessions, and I brought it up again at the prehearing conference last week, but I'll make clear that the witnesses have all prefiled their direct testimony in writing. Direct examination will therefore comprise only those questions necessary to qualify the witness, and they will, once the witness is qualified and sworn, we will move to cross-examination. And, the order of cross-examination, for purposes of the Applicant's witnesses, we'll begin with Fish & Game, Mr. Mullholand will have the opportunity; then the

Appalachian Mountain Club; then we'll turn to Mr. Gabler; then to -- Mr. Seiler does not appear to be here today; then we will turn to Ms. Keene; and then to Ms. Linowes; and Counsel for the Public, Mr. Roth, will go last in terms of cross-examination. At that point, we'll have questions from the Subcommittee, and then there will be an opportunity for redirect.

I want to address also the manner of cross-examination of panels. We have a number of panels consisting of two, and, in the first instance, three persons. This is an issue that has caused some discussion in previous proceedings. And, the way we will handle cross-examination of panels is this: It is up to the discretion of the cross-examiner whether to direct a question to a particular witness or to direct it to the panel. When questions are directed to a particular witness, if the witness cannot answer the question, he may say who might be better qualified to answer, but that does not automatically open the floor to other witnesses. The cross-examiner may follow up, if he or she chooses, with another witness, but the cross-examiner is not required to do so. As presiding officer, if I believe it's in the interest of the orderly conduct of the proceeding, I may follow up at that time. But, of course, members of the

Committee can always follow up during their questions, or the issues can be ultimately addressed on redirect by who's ever supporting the witness. I also note that panels are intended to assist in the orderly conduct of the proceeding and to, as best as we can, review related

pieces of evidence at the same time. It does not constitute permission for the panel to confer orally, either through -- or through notes before answering a question. So, let's, for all the witnesses who are members of the panel, let's keep that in mind. And, also, for anyone who's cross-examining, if you don't want a question to be directed to the entire panel, then turn your question to a particular member of the panel.

For witnesses, witnesses are reminded to answer questions as directly as possible. If the question can be fairly answered by a "yes" or "no" or in another direct manner, the direct answer should be given first, and an opportunity to explain will be permitted. As for persons cross-examining, please ask your questions as directly as possible. I'll note that there -- sometimes there's a fine line between a question and an argument. There will be plenty of opportunity for argument to make at the closing statements and in briefs at the end of the proceedings. I note, however, that there are parties not

represented by counsel, and such parties will be given reasonable leeway in their cross-examination.

Any questions about these particular ground rules, before I move onto some open procedural issues? Ms. Linowes.

MS. LINOWES: Yes, Mr. Chairman. I don't know if these mikes are working. But, with regard to the panel, if a cross-examiner asks a question of one panel member, since we're not entirely sure each person's expertise, we do have some understanding, but their

specific knowledge of the project, could you remind the panelists that, if one party knows more information than was prompted or made available by another panelist, that they would have an obligation to offer that information? Do you understand the question?

CHAIRMAN GETZ: Well, let me put it this way. I think, in the first instance, who's ever cross-examining a witness will probably be referring to some particular piece of testimony. What I was trying to make clear was, if a question is directed to a particular witness, that witness tries to answer as best that they can. If they think there's another party who is better able to answer, they may point out who that party is. But that doesn't give this other party permission to speak

unless, for instance, if you had asked Mr. Smith for a question, Mr. Smith said "Mr. Jones could answer that better", it's up to you whether you want to follow up with the second witness.

MS. LINOWES: I understand that. And, my point is, I want to make sure it's not permission to withhold information. I'm speaking specifically to the Application that was filed. There's prefiled testimony, but there is also the Application, which information within the Application is not specifically referenced in some of the testimony. Thank you.

CHAIRMAN GETZ: Okay. Well, I guess we'll just have to address that issue if and when it arises. My experience with most witnesses, they would be more than happy to say everything that they can in answer

to a question.

Any other issues with respect to those testimonial ground rules?

(No verbal response)

CHAIRMAN GETZ: Okay. Let's move onto some procedural matters. Exhibits have been marked, copies should have been distributed to the Committee and to the -- and to all the parties. But there's one issue regarding exhibits. Counsel for the Public filed an

objection on Friday evening with respect to what's denoted as "Applicant's Exhibit 56", which is entitled the "Economic Impact of Granite Reliable Power Wind Power Project in Coos County", authored by Ross Gittell and Matt Magnusson. Counsel for the Public argues that the evidence should be denied. We have a response by the Applicant that was filed on March 8 asking that we overrule the objection. And, well, let me give quickly, Mr. Roth, do you have any --

MR. IACOPINO: Mr. Chairman, I just want to make sure the record's clear. What we're talking about is Petitioner's Exhibit 2.2, which is the Volume 6, the Supplement to the Application. And, it's Appendix 56 within that exhibit that is the subject of the objection, as I understand it.

CHAIRMAN GETZ: Yes. Thank you. Mr. Roth.

MR. ROTH: Certainly. There are a lot of things in this, in this case, many papers, many reports, many documents. For example, there's a breeding

bird study in there that was made part of the record back in July or August, very early on. And, the parties all had an opportunity to ask questions about it, learn more about it. And, if there was going to be a witness

proffered with respect to the breeding bird survey, I'm sure we would have had an opportunity to meet that witness and deal with it or learn from them. And, there are a number of other documents in the file, in the record, technical reports, fairly dry stuff that doesn't touch on sort of an expert opinion.

On the 25th of February, buried in the volume of supplemental information and supplemental testimony, the Applicant filed the economic impact paper, authored by two individuals, one of whom appears to be a professor at UNH. And, that document makes a number of conclusions and provides opinions, and apparently a fair amount of research was conducted. And, it was a study apparently funded and paid for by the Applicant, over -- and I don't know how long it took, but it apparently took a long time. I mean, based on the amount of research that was described in that paper, they put a considerable amount of time and effort. Yet, not until February 25th was anybody apprised of the existence of this report or this paper. Way too late for anybody to have any opportunity to examine the factual assumptions, to examine the science of the model, to examine anything about it, and even the background of the author. We had basically two weeks to deal with a fairly significant bit of

research that was kept from us since August.

I think, at this point, to introduce that document, with no ability to cross-examine those witnesses, those people who wrote that paper, no ability to conduct any discovery about it, it's completely unfair and denies all the other parties the right of cross-examination of those witnesses, which I believe, while, you know, I understand the rules of evidence don't apply here, I do believe that it's well established that the right to cross-examine witnesses is and does apply here. And, I object to that, the introduction of that report, that paper, because there's no ability to cross-examine those people, no ability to do any discovery.

Now, the Applicant has said "Okay, well, we'll bring him in. We'll put him on the stand. You can cross-examine him. You can talk to him." It's too late for that. The hearing is today. It's too late to bring in a new witness that they have been essentially preparing since August. That's just not fair. And, I think that report should not be allowed. Thank you.

CHAIRMAN GETZ: Mr. Patch.

MR. PATCH: Thank you, Mr. Chairman, members of the Committee. A couple of things I'd like to

note. First of all, this was filed on February 24th, consistent with the schedule that the Committee had laid out for submitting supplemental information. Mr. Roth

failed to raise this objection at the prehearing conference or before that. He didn't file the objection until, I received it on Saturday, maybe it was Friday night. We didn't keep this from him since August. It wasn't prepared until -- I think it was actually in February that it was prepared. The reason that it was prepared was to respond to particular concerns expressed by Intervenors and others over the fact that there was not some professional study like this done, and so we did it in response to those concerns.

Now, as I noted in an e-mail that I sent this morning, in our response to the objection, I incorrectly said that we did not receive a copy of the DRED comments that were submitted and referenced in the order last August. And, I had forgotten, but there was an e-mail that I had received back in August. So, I apologize for that. But I still think that the issues here are important ones, and that is, as Mr. Roth knows, this is an iterative process. And, the Applicant is given the opportunity to respond to concerns that are raised by Intervenors during the process, and that's essentially

what we did. We are, as he pointed out, willing to make him available. He has some scheduling problems, but I think we can find a way to fit him in, if that's the Chair and the Committee's desire. And, we would urge you to consider that report, because I think it's important information that ought to be made available as part of the record. Thank you.

MR. ROTH: Mr. Chairman, --

CHAIRMAN GETZ: Any other parties that would like to weigh in? Ms. Linowes.

MS. LINOWES: Mr. Chairman, yes. I agree with Mr. Roth on the issue here that this is very last minute. But the key point is that, had we known that there was going to be this document coming forward, other Intervenors would have had an opportunity to have brought forward an expert to counter. It's not sufficient to simply ask questions and poke holes in a report that's been brought forward. One could have stepped much further into this debate. And, so, it's quite disappointing it's coming this late time, and perhaps a delay in the hearings, if it's that important to have this process -- this evidence be brought forward. Thank you.

CHAIRMAN GETZ: Anyone else? Ms. Keene.

MS. KEENE: Mr. Chairman, I --

CHAIRMAN GETZ: Ms. Keene, if you can use the microphone please.

MS. KEENE: I'm sorry.

CHAIRMAN GETZ: Thank you.

MS. KEENE: Is it on?

MR. PATNAUDE: Yes.

MS. KEENE: I would just like to say that probably Doug Patch is bringing this up because I happened to be one of the intervenors that actually put it in my prefiled testimony, that I thought not enough was done on the economic aspect of things. This report I had a chance to read briefly and couldn't absorb much of it. But what it's actually saying is what the construction of

this facility would bring for Coos County on a temporary basis. What I was looking for is the impact that it was going to have on us economically with our source of living in the Coos County, in which I mean logging is an important industry that we have, but the second is tourism. And, if you look in my prefiled testimony, in the supplemental testimony, you will see the amount of traffic flow that does flow on 16 and 26 in this -- on the scenic -- they are scenic roads. And, what concerns me is nothing was done to make a determination. I realize that this facility is going to bring some money to Coos County.

I recognize that. I recognize two years there will be construction money. After that, there will be payment in lieu of taxes, that an agreement has been signed.

CHAIRMAN GETZ: Excuse me, Ms. Keene.

MS. KEENE: Yes.

CHAIRMAN GETZ: But I think you're going to the substantive issue with respect to the economic development.

MS. KEENE: Okay.

CHAIRMAN GETZ: What I'm trying to address now is, procedurally, whether this study should be allowed in the record or not.

MS. KEENE: And, I would say "no".

CHAIRMAN GETZ: Thank you.

MS. KEENE: For those reasons.

CHAIRMAN GETZ: Thank you. Mr. Roth, did you have something further?

MR. ROTH: Yes. I just wanted to point

out that, in the testimony, the supplemental testimony that was filed on the 23rd, at the same time as the study or the "paper" I'd like to call it, the Applicant testified that they created this paper in response to Department of Resources and Economic Development's comments on the Application dated August 14th that it was

lacking in certain documentation. And, in response to discussions and questions from intervenors, we decided it would be useful to further quantify the impact. And, then, this morning I got an e-mail from Attorney Patch, where he included the comments that were made by DRED. And, because I searched the record to find out where those comments were, and there was nothing on the record back in August of DRED comments. And, I don't know how this affects the makeup of the Committee right now, but the e-mail is from Mr. Kent. And, in it, he describes what was lacking. And, none of the things that he pointed out as lacking included an analysis of the economic impacts. So, the testimony is inconsistent with the reality. And, I think that what's going on is that, you know, they have been thinking about this, perhaps erroneously, since August, that somehow they had to do more documentation for this report. And, so, they have known about the work underway and they haven't said anything about it. And, so, now here we are with no ability to cross-examine these witnesses, you know, with this, I don't want to call it an "ambush", but that's kind of what it is. And, I just object to it as being included, because it's really not fair to do it this late in the game. Thank you.

MR. PATCH: Mr. Chairman, could I make

one brief response on it? I just want to remind the Committee that, first of all, Public Counsel waited until the last minute for its financial expert, and the Applicant has been required to pay $75,000 for that expert. So, I don't think he comes before this Committee with clean hands when it comes to "waiting until the last minute".

And, then, secondly, I guess what I would like to point out is, we did this in conformance with the schedule that the Committee had laid out in its orders. And, so, we don't feel that we did anything that was inappropriate.

CHAIRMAN GETZ: You get the chance to go last, Mr. Roth.

MR. ROTH: To suggest that somehow I don't have clean hands, you know, it's really too early in the day for that. And, I hope that we can have a more positive discourse about it. But the suggestion was made, "Okay, let's delay the proceeding." And, I think, you know, maybe that's the right thing to do. But I think what we ought to do then is to give Counsel to the Public an opportunity to retain an expert on economic impacts, at, of course, the Applicant's expense, and then we can conduct our own study to refute it or confirm it. And,

let's, you know, put the hearing off for several months, I suppose, and we can go through that process. But I think

that the right thing to do, frankly, is to not admit this report. It's just too late to mess around with that now. Thank you.

CHAIRMAN GETZ: Okay. Let me address the motion in this way. There's now two issues of relevance that have been raised. The first is Mr. Patch is pointing to Mr. Roth's request for a financial consultant, and that's not at all relevant to a decision with respect to whether we should admit this exhibit on economic impact. With respect to the particular exhibit on economic impact, I think it's clear that it's relevant to this proceeding. And, as Mr. Roth has pointed out, the technical rules of evidence do not apply, but relevance is always -- does apply to administrative proceedings.

If the Applicant had wanted to make this report into testimony, it had the opportunity to do so when it filed its supplemental testimony. It is too late in the proceeding now to offer the authors of that report as witnesses in this proceeding.

However, I think what the -- the issue is not so much one of whether the document should be admitted into evidence, it's how much weight we should

give it. Clearly, the document has not been subject to discovery. There will not be a witness here supporting it, and that witness will not be subject to cross-examination. So, it does not merit the weight that other prefiled testimony, subject to discovery and cross-examination, would be given.

I think we addressed this issue a number

of times in the Lempster proceeding with respect to reports that were filed by various witnesses. I'm going to allow the document into the record. But note for the record, and for the members of the Committee, that the document cannot be given the same weight as testimony that is sworn to and provided in the proceeding.

I have one other procedural issue. And, this goes to the mitigation agreement that I understand has been reached among the Applicant, Appalachian Mountain Club, and the Department of Fish & Game. As I understand it, the outline of that agreement is substantially provided in the testimony of the Gravel and Pelletier panel. But I'm concerned about how the -- what's the status of the final arrangement, and how are we going to address that fairly in this proceeding? Mr. Mullholand.

MR. MULLHOLAND: Mr. Chairman, thank you. And, indeed, this morning we did solidify the final

numbers of the agreement between the Applicant and Fish & Game and AMC, in terms of acres preserved. Unfortunately, we haven't had a chance to have an agreement signed, and we expect to do that tonight and then tomorrow morning, and then submit that agreement, once it's signed, to the Committee here. But, in the meantime, what we'd like to present, and I believe AMC is on board with this, is that we'd like to reserve the right to cross-examine the panel this morning, the Decker/Lyons panel, with the understanding that it probably won't be necessary. But, until we have an agreement signed, we feel like we want to reserve the right to create a record to support some sort

of mitigation. And, without the ability to cross-examine them, we wouldn't be able to do that.

So, let me just restate what we're asking. We're asking to reserve the right to recall the Decker/Lyons panel in the future, contingent on not having a signed agreement tonight. But we anticipate that it won't be necessary.

CHAIRMAN GETZ: Anyone else want to speak to this issue? Dr. Publicover.

DR. PUBLICOVER: Yes. We would support that. We are hopeful, I think, of having the agreement tomorrow. But, until such time as there is a signed

agreement entered into the record, we have to proceed as if there will be no agreement. And, that would substantially affect the way we cross-examine Mr. Lyons. If our only chance to cross-examine him is this morning, we have to proceed with the line of questioning assuming there is no agreement. That line of questioning may essentially become moot if an agreement is submitted tomorrow. And, we feel it would be a waste of time, of, you know, the Committee's time and everyone else's time, to have to question him on issues that, again, may be rendered moot tomorrow. So, we would support the ability to -- the option to recall the Lyons/Decker panel tomorrow, after it becomes clear that a settlement agreement either will or will not be signed.

MR. MULLHOLAND: Or Wednesday.

DR. PUBLICOVER: Or Wednesday.

CHAIRMAN GETZ: Anyone else?

Ms. Linowes.

MS. LINOWES: Mr. Chairman, if we could -- if Attorney Mullholand could at least state, in its briefest form, the narrow aspect of the habitat protection that's covered in the agreement, to make sure that some of the other questions that are going to be directed at the various parties or witnesses relating to wetlands,

bird/bat issues, in fact, are not covered. It's just, I would like -- so that we are not talking about all wildlife impacts, as far as this mitigation plan is --

CHAIRMAN GETZ: Okay, let's address this issue this way. I think we need to proceed with the panel, the Lyons/Decker/Mandli panel. At the end of today, before we recess for the day, we're going to have to take stock to see how much progress we've made with the witnesses. We're going to have to make some decisions about what we're going to do, who's going to appear when during the remainder of the week. So, I think, for cross-examination purposes today, there will be an opportunity to recall these witnesses in the manner proposed by Mr. Mullholand and Dr. Publicover. And, with respect to Ms. Linowes' question, rather than handling that on the record, I suggest that, at the lunch recess, afternoon recess, or at the end of the day, the parties discuss your proposal, so there's a meeting of the minds as much as possible about the extent of the mitigation.

One way to handle this may be just to deal with it later in the week, Friday or Monday, or Wednesday or Friday, depending on if the agreement is

memorialized, and so we have a better understanding of what the parameters of the mitigation plan are. Ms.

Keene?

MS. KEENE: Yes. The only question I have is, there's two motions that are still sitting out there because the settlement agreement hadn't been concluded. And, those are -- are those motions now gone?

CHAIRMAN GETZ: Well, it depends. Are you talking about the Motion in Limine and the Motion to Strike?

MS. KEENE: Yes.

CHAIRMAN GETZ: Yes, I ruled on that from the Bench at the prehearing conference last week. And, both of the motions by the Applicant were denied.

MS. KEENE: Okay.

CHAIRMAN GETZ: So, we will be hearing the testimony from the Fish & Game witnesses. Ms. Linowes.

MS. LINOWES: Mr. Chairman, I have a procedural question regarding another line of questioning having to do with the system impact study. And, I'm not sure if we're going to have to go into nonpublic for that. And, my thinking is we will not have to. But I just wanted to give you a heads-up to see how you wanted to handle that.

CHAIRMAN GETZ: And, that would occur

today?

MS. LINOWES: Yes, for this panel.

CHAIRMAN GETZ: For this panel.

MR. ROTH: Similarly, I would have questions that may require a discussion of confidential financial information for this panel today.

CHAIRMAN GETZ: Okay. Well, again, that was an issue that was discussed at the prehearing conference last week. What I suggest is, if we can -- if we wrap up the preliminary matters, and then turn to cross-examination, that, during the lunch recess, discuss with the other parties and discuss with counsel for the Committee to make sure that everyone has an understanding of how to proceed in the handling of confidential materials.

MR. ROTH: I have, literally, or not -- perhaps, literally, my first question is going to involve confidential financial information.

CHAIRMAN GETZ: And, the way you're saying that, and that has to be your first question?

MR. ROTH: No, but it's going to be there before too long.

MR. IACOPINO: It would be easier if we could have all of the lines of questioning that are going

to deal with confidential information reserved for a particular period of time, so we only have to go into nonpublic session once.

MR. ROTH: Okay.

MR. IACOPINO: Instead of having all of

these good people who have come here trucking in and out of the room.

MR. ROTH: Okay. And, I'll try to sculpt my approach, too.

CHAIRMAN GETZ: Thank you. That would be helpful to the process. Dr. Publicover?

DR. PUBLICOVER: Yes. I just want to be clear that you have said we will have the right to recall Lyons and Decker?

CHAIRMAN GETZ: That's correct.

DR. PUBLICOVER: Thank you.

MR. ROTH: I have another procedural issue.

CHAIRMAN GETZ: Yes, sir.

MR. ROTH: One of my witnesses, Mr. Trevor Lloyd-Evans, is unavailable until the 19th. And, I would like to be able to call him for his cross-examination and to defend his testimony at the session that's being scheduled for March 19th. And, I ask

for the Chair's permission to do that, instead of in the order that was otherwise prescribed at the prehearing conference.

CHAIRMAN GETZ: Well, let's include that as one of the issues that we're going to have to address at the end of the day, when we see how much progress we've made on other witnesses, to figure out who's testifying when. So, we'll defer that until later in the day.

Anything else, before we hear from the first panel?

(No verbal response)
CHAIRMAN GETZ: Okay. Hearing nothing, then, Mr. Patch, if you could bring your witnesses forward and have them sworn in.
(Whereupon Pip Decker, Mark Lyons and Daniel Mandli were duly sworn and cautioned by the Court Reporter.)
PIP DECKER, SWORN
MARK LYONS, SWORN
DANIEL MANDLI, SWORN
DIRECT EXAMINATION
BY MR. PATCH:
Q. Okay. Good morning. Mr. Decker, I'm going to start with you. Could you please state your name for the record.
A. (Decker) My name is Pip Decker. My address is 200 Portland Street, Lancaster, New Hampshire 03584. I'm a Project Manager for Noble Environmental Power and for the Granite Reliable Power Windpark.
Q. Are you the same Pip Decker who submitted prefiled testimony in this docket, which has been premarked as "Petitioner's Exhibit 3"?
A. (Decker) Yes.
MR. PATCH: And, just for the Committee, Mr. Decker's prefiled testimony is contained in Volume 1, in Tab (a).
BY MR. PATCH:
Q. Did you also submit supplemental prefiled testimony in this docket, which has been marked as "Petitioner's

Exhibit 4"?

A. (Decker) Yes.

MR. PATCH: And, for the Committee, that's Volume 1a, Tab (a).

BY MR. PATCH:

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

A. (Decker) Yes, I have four corrections. They're really just updates. The first is the original prefiled

testimony that I supplied. On Page, let's see, it would be Page 12, Line 2, of my prefiled testimony, where I state that the "99-megawatt project would be sufficient to power approximately 35,000 homes." It should be reflected that is actually "40,000 homes" compared with the Application that we submitted to the SEC.

The second correction, or actually update, rather, is on my supplemental testimony, discusses the status of the FAA, and that we would be submitting FAA permits. We have received those permits from the Federal Aviation Administration.

The third, I talk -- discuss the timing of construction. This is found in, let's see, on Page 8 of my prefiled testimony, where I state that "It is anticipated that the Project will be fully constructed in 2009, with the exception of the wind turbines themselves, which will arrive in the Spring of 2010." We will be -- The timing of this is subject to obtaining construction financing. And, I would ask

that those questions be directed to Chris Lowe and Jeff Wood, who will be testifying on Monday.

Finally, we, in the supplemental testimony that I provided, we said that "we will be

providing an alternatives analysis of windparks, potential windparks in New Hampshire, as part of our compliance to the United States Army Corps process. We have done so. And, we can file that as well. We recently did that I believe last week.

Q. With these corrections and updates that you just described, if you were asked the same questions contained in Exhibits 3 and 4 today under oath, would your answers be the same as is contained in those exhibits?

A. (Decker) Yes.

Q. Thank you. Mr. Lyons, please state your name.

A. (Lyons) Mark Lyons.

Q. And, are you the same Mark Lyons who submitted supplemental testimony in this docket, which has been marked as "Petitioner's Exhibit 4"?

A. (Lyons) Yes, I am.

MR. PATCH: And, again, for the Committee, that's Volume 1a, Tab (a).

WITNESS LYONS: Correct.

BY MR. PATCH:

Q. Are you also adopting the testimony of Charles Readling that had been marked as "Exhibit 3", and was co-sponsored with Pip Decker?

A. (Lyons) Yes, I am.
Q. Do you have any corrections or updates to either your supplemental testimony or to the prefiled direct testimony?
A. (Lyons) Well, I have one update, as the Chairman had noted earlier, that I testified in the supplemental testimony, on Page 3, at Line 8, that we were engaged in a negotiation with Fish & Game Department of New Hampshire and with AMC, to agree upon a mitigation plan for high elevation habitat. And, we have reached an agreement in principle, subject to documentation, which we expect over the course of the next 24 hours. And, at such time, that would necessitate updating and revising some testimony of Adam Gravel and Steve Pelletier. And, we will make those revisions accordingly.
Q. With the update that you just described, if you were asked the same questions contained in Exhibits 3 and 4 today under oath, would your answers be the same?
A. (Lyons) Yes.
Q. Mr. Mandli, please state your name.
A. (Mandli) Daniel Mandli.
Q. And, are you the same Daniel Mandli who submitted prefiled testimony in this docket, which has been

marked as "Petitioner's Exhibit 7"?
A. (Mandli) Yes, I am.
MR. PATCH: And, for the Committee, that's Volume 1, Tab (c).

BY MR. PATCH:
Q. Did you also submit supplemental prefiled testimony in this docket, which has been marked as "Petitioner's Exhibit 8"?
A. (Mandli) Yes, I did.
MR. PATCH: And, again, for the Committee, that's Volume 1a, Tab (c). Mr. Chairman, I understand the ground rules which you've laid out, and I'm happy to do this either way. But there was an incident that occurred on Friday, at a Noble windpark in Altona, which I think it would be useful if Mr. Mandli provided a brief update of that at this point in time. But I'm happy to handle that however you would like.
CHAIRMAN GETZ: Well, it's a very mysterious lead-in. But is there any objection to -- Ms. Linowes.
MS. LINOWES: Yes, Mr. Chairman. I fully plan to explore that with Mr. Mandli now, and he will have an opportunity to bring the information forward at that time. I'd rather that, than open the floor to the

panel, since this is cross-examination time.
MR. ROTH: I agree.
MS. KEENE: I agree.
MR. ROTH: I was also intending to cross-examine on that issue. And, I think that's probably the appropriate point to bring it up.
CHAIRMAN GETZ: Okay. And, that issue is -- could you describe what happened?
MR. ROTH: One of their turbines fell

down.

CHAIRMAN GETZ: Okay. All right. Then, let's -- we'll let it arise during cross-examination. It seems like we'll get the information on the record and the witnesses will have an opportunity to address it. Okay. Anything further?

MR. PATCH: Just I think one or two more questions.

BY MR. PATCH:

Q. Mr. Mandli, do you have any corrections or updates to either your prefiled or supplemental prefiled testimony?

A. (Mandli) Yes, I do. There's four different updates. One of them, the first one has to do with the fact that, since we've prefiled the testimony, we've added

more wind turbines on line. We're now operating 726 megawatts of wind capacity. We went from -- We're operating 484 turbines now. And, that's the first one.

We are operating our 24-hour Monitoring Center in Plattsburgh, which monitors all windparks 24 hours a day/seven days a week. Each of the projects that were mentioned in the prefiled testimony are all operating now, that would be Bliss, which is western New York, Clinton and Ellenburg, which are in northern New York. And, all three of those projects are running in the high 90 percentage -- percentile for availability.

So, the biggest thing is that, since the prefiled testimony, we've actually increased from 282

megawatts of actual operating capacity, to 726. With that increase of operating capacity, we've actually doubled the size of our Operations team. During the prefiled testimony, we had 30, now we have 60 wind professionals that work in northern New York, western New York, and, of course, Texas, where we've got a project in west Texas. That's it.

Q. Okay. Mr. Mandli, with the corrections and updates that you just described, if you were asked the same questions contained in Exhibit 7 and 8 under oath

today, would your answers be the same?

A. (Mandli) Yes, they would be the same.

MR. PATCH: Okay. The witnesses are available for cross.

CHAIRMAN GETZ: Thank you. Mr. Mullholand, questions?

MR. MULLHOLAND: Mr. Chairman, we'd like to reserve our cross till tomorrow, if possible. Thank you.

CHAIRMAN GETZ: I'm not sure if it's going to be tomorrow, but you may reserve your cross. Dr. Publicover.

DR. PUBLICOVER: Yes, I have a few questions on decommissioning, but do reserve the right to question the panel on other issues at a later date. And, I think these are probably most appropriately directed to Mr. Lyons, but if somebody else is better equipped to answer, feel free to do so.

BY DR. PUBLICOVER:
Q. The decommissioning plan, the current decommissioning plan is set forth in Appendix 53 of the supplement to the Application, is that correct?
A. (Lyons) Yes.

Q. Now, it specifies that the amount of the salvage fund will be determined based on the cost of -- the cost of removal and remediation of the site, minus the salvage value of the components. Can you describe how the salvage value was calculated?
A. (Lyons) The salvage value would be calculated by independent experts in the area that are familiar with the market for the various salvage components, including electronics, and primarily the steel in the towers.
Q. Okay. So, it's a combination of scrap value and components, component value?
A. (Lyons) Yes. When we say "salvage value", I mean, some of the parts I imagine would be resalable as components and others as raw material.
Q. Okay. Is that -- Are those values determined just at one point in time?
A. (Lyons) No, we would propose that the -- that all costs of decommissioning, including the cost of salvage value as a net to the decommissioning costs, be updated over time, so that they be as accurate as possible.
Q. What would be the schedule for updating?
A. (Lyons) That's a matter that we've been discussing with Coos County. And, we're happy to do it as often as

they think is necessary.
Q. Okay. Now, in terms of, for example, you're aware our Exhibit 3 is the decommissioning conditions for the Lempster Project?
A. (Lyons) Yes.
Q. And, the Lempster Project required that the fund be re-evaluated and updated every five years.
A. (Lyons) Uh-huh.
Q. Would that be an appropriate schedule?
A. (Lyons) That would be acceptable to us, certainly.
Q. Okay. And, within a five year period, it's likely that the scrap value could fluctuate considerably, up or down. Would it be appropriate to use, as your estimate of scrap value, for example, the low point, the low value over the previous five year period, so that you have a conservative estimate?
A. (Lyons) I suppose that would be. You know, we'd have to look at the overall plan. I think that -- I think that it would be appropriate to make a more frequent update of costs and values in the out years, when you're getting closer to a point in time when decommissioning might actually become a possibility.
Q. Okay.
A. (Lyons) But, in any case, you know, our concern, I

think we would share your concern and the County's concern, that these costs be as accurate as possible

from time to time, without unnecessary updating.

Q. Okay. But you believe it would be appropriate for the SEC to include, as a condition of the Application, a required updating schedule?

A. (Lyons) Yes.

Q. All right. Now, as I understand it, your schedule for establishing and paying into the decommissioning fund provides for the fund to be built up with the payment of 20 percent of the amount every year between years 11 and 15.

A. (Lyons) Yes.

Q. Is that correct?

A. (Lyons) Yes.

Q. All right. Are you aware that the Lempster certificate required the fund to be fully in place prior to the beginning of construction?

A. (Lyons) I am aware of that, yes.

Q. All right. Now, our Exhibit 4 is the decommissioning conditions established by Maine Land Use Regulation Commission for the Stetson Mountain Project, the 57 megawatt project in eastern Maine. And, that is included as our Exhibit 4. That required their

decommissioning fund to be built up over a 15 year period, beginning in year one. Do you disagree with that?

A. (Lyons) I don't disagree that that is the condition in Stetson. And, I don't think that it is necessarily an unreasonable approach.

Q. Okay. And, our Exhibit 5 is the decommissioning

conditions established -- required by the Land Use Regulation Commission for TransCanada's Kibby Mountain Project. Their decommissioning fund, their conditions required that 50 percent of the fund be in place at the end of year one, and that it be fully funded at the end of year 10.

A. (Lyons) Uh-huh.

Q. Do you disagree with that?

A. (Lyons) I don't disagree that that's the condition of Kibby.

Q. Okay. I just didn't know if you wanted to see the exhibit. So, of these other major projects, Lempster would be fully funded prior to construction; Kibby would be fully funded at the end of year 10; and Stetson would be approximately two-thirds funded by the end of year 10. Yet, you do not start funding until year 11. Why is that?

A. (Lyons) That was based on a proposal that we had seen in the State of Maine. Again, we're in the process of discussing this with Coos County, who we believe is sort of the real party in interest on this, which sort of parallels the Town of Lempster in the Lempster proceeding. So, we thought it was a matter for discussion with Coos County.

As far as the timing of the funding, we don't have a strong position necessarily regarding our proposal. Our view, however, is that, as in the case of Kibby and Stetson, we think that it would be unnecessary to tie up large sums of money in the early

years, when decommissioning is highly unlikely. So, we're simply proposing that the funding of the -- that the decommissioning security coincide with what it would probably be a schedule, you know, for the actual decommissioning to take place. Which is to say, not all up front, but at some reasonable schedule over time, and to make sure that the -- as much as possible, to make sure that sufficient funds are in place at such point in time as decommissioning can be expected to occur.

Q. Okay. But you would not be opposed to conditions that required a funding schedule that was more advanced than

what is currently proposed?

A. (Lyons) Not more advanced, but, again, our chief concern is that we would -- we would have it happen over time, and not all at once.

Q. All right. Would you agree that there are other parties besides the Coos County Commissioners that have an interest in how the decommissioning is funded?

A. (Lyons) Clearly.

Q. Okay. When it was originally proposed that funding not begin till year 11, am I correct in understanding that the Federal Production Tax Credit applies to the first ten years of the Project?

A. (Lyons) I believe that's the case.

Q. Okay. And, is there any relation between the Production -- the ten year Production Tax Credit and the beginning -- the original proposal to begin funding in year 11?

A. (Lyons) No, that was purely coincidence.
Q. Okay. And, let me just ask, though it's unlikely, what happens if the Project needs to be decommissioned before the fund is fully funded?
A. (Lyons) I can't imagine that that would be the case. But, again, I think, you know, we would agree that funds should be available, in sufficient amount to

decommissioning, at such time as decommissioning needs to take place. The trade-off is tying up large sums of money unnecessarily, versus having it available when it's needed. I can't imagine a scenario where a windpark would need to be decommissioned prior to the expected useful life of the machinery.
Q. Given that, I could say it was unlikely, but I could imagine a scenario: Year 11, Noble goes bankrupt. At the same time, a hurricane comes through blows down most of the turbines. Whoever acquires the Company's assets through bankruptcy decides it is not economically viable to rebuild the Project. That's an unlikely but possible scenario. So, what happens if the decommissioning fund is not fully established at a time decommissioning is needed? Would decommissioning essentially go undone?
A. (Lyons) Well, it sounds like an insurable event to me. So, I imagine insurance would cover the damage.
Q. Is there anything in the record that specifies that insurance would be available to carry out decommissioning if the fund was not fully funded?
A. (Lyons) Not to my knowledge, no.

DR. PUBLICOVER: All right. Thank you. No further questions.

WITNESS LYONS: Thank you.

CHAIRMAN GETZ: Mr. Gabler, do you have questions for the panel.

MR. GABLER: No questions.

CHAIRMAN GETZ: Mr. Seiler, I note that you're here. You can make your appearance for the record.

MR. SEILER: Yes. I'm Farrell Seiler. I'm Chairman of the New Hampshire Wind Energy Association.

CHAIRMAN GETZ: Thank you. And, you have no questions for this panel?

MR. SEILER: No.

CHAIRMAN GETZ: Ms. Keene?

MS. KEENE: No.

CHAIRMAN GETZ: Mr. Odell?

MR. ODELL: Yes, I have one question.

BY MR. ODELL:

Q. I've heard about the costs of decommissioning and removal of steel and electronics, but I heard nothing about costs that might be relevant to removal of the concrete tabs or the bunkers that the wind turbines would be placed on, or would they just stay there?

CHAIRMAN GETZ: Mr. Lyons.

BY THE WITNESS:

A. (Lyons) Our proposal is that all underground structures would be removed to 2 feet below grade. And, those --

And, the costs of those removal will be in our cost estimate, developed as part of a final plan.

CHAIRMAN GETZ: And, Ms. Linowes?

MS. LINOWES: Yes, Mr. Chairman. I have exhibits that I would like to hand to the panel, if I may?

CHAIRMAN GETZ: Please. Ms. Linowes, are these documents that have already been marked?

MS. LINOWES: Yes, Mr. Chairman. I brought them today. And, they have been distributed to the parties. If there are parties that do not have them, please let me know. I do have copies. There are five exhibits there, of which I'm only going to be referencing four for this panel, but I thought it would easier just to give them all. And, they're marked all "IWA", with an "X" for cross-examination, and then it should be 1, 2, 4, 6, and 9. And, I apologize for the randomness of those numbers.

MR. IACOPINO: Mr. Chairman, they're not in the record as of yet. They were just brought in this morning.

CHAIRMAN GETZ: Okay. Well, then let's get copies before we proceed.

(Exhibits IWA-X-1, IWA-X-2, IWA-X-4,

IWA-X-6 and IWA-X-9 were premarked just prior to commencement of the hearing.)

MR. IACOPINO: I noticed that the Chairman was looking at the list for those. The list was created yesterday.

MS. LINOWES: My apologies, Mr.

Chairman. I anticipated six members on the Committee, and there may not be enough for everyone.

CHAIRMAN GETZ: We're sharing. We're fine.

MS. LINOWES: Thank you.

CHAIRMAN GETZ: Please proceed.

MS. LINOWES: In my first set of questions, I have quite a number to go through, the first set will be for Mr. Mandli. But please answer, if anyone else has responses, I'd appreciate full and complete answers.

BY MS. LINOWES:

Q. Mr. Mandli, you had mentioned in your prefiled testimony of February 23rd that the -- and this is Page 2, Line 22, "The New York 07 projects, which include Bliss, Clinton and Ellenburg projects, are operating at availability levels in the high 90 percentile." And, I believe you restated that again

today, is that correct?

A. (Mandli) That is. That is correct, yes.

Q. By "07", by the way, what does that mean?

A. (Mandli) The -- Come back? Can you repeat the question? 07 projects?

Q. Yes.

A. (Mandli) The 07 projects were the class year that the projects went to the actual class study. So, we had Clinton, Ellenburg and Bliss that were part of our '07 portfolio. They actually came on line in '08.

Q. Okay. Thank you. So, they were under construction

beginning in '07?
A. (Mandli) Yes. Yes.
Q. And, can you explain what you mean by "availability levels"?
A. (Mandli) The main criteria for measuring the efficiencies of the windpark is availability. You want to have the turbines available to run when the wind is there. So, what we do is we track the actual up-time that a turbine has, and it's called "availability". So, it's a percentage of up-time for the turbines. So, when I talk about "high 90s availability", it's total hours, minus the downtime, would be the percentage of up-time or availability.

Q. Okay. So, what I did, and I'm not going to share the documents, I went to the ISO, the New York ISO queue, and also looked at four quarters of FERC data, transactional data --
A. (Mandli) Uh-huh.
Q. -- for four of your projects. That would Ellenburg, Clinton, Altona and Chateaugay. Those four projects are in Upstate New York?
A. (Mandli) Can you repeat the four projects that --
Q. Ellenburg, Clinton, Altona and Chateaugay.
A. (Mandli) That is correct. They're all up in northern New York, yes.
Q. And, the information I have is that Ellenburg came on line March 31st, '08?
A. (Mandli) Yes.
Q. Clinton -- According to, again, the FERC data, that's

when you first started reporting production?
A. (Mandli) That's when it first started producing test power was in March, yes.
Q. Okay.
A. (Mandli) Of '08, yes.
Q. Clinton, April 8th, '08?
A. (Mandli) That is collect.
Q. Altona, December 23rd, '08?

A. (Mandli) Yes.
Q. And, Chateaugay, November 26, '08?
A. (Mandli) Those are correct dates, yes.
Q. And, looking at your FERC data, it appears you had a significant failure on the Clinton and Ellenburg projects, where they were down beginning September 28th, and not on line again until November 24th, is that correct?
A. (Mandli) Begging your pardon, it wasn't a failure. That was actually work on the Ryan Substation, in order to be connected into the NYPA 230 lines in the north country. We had to take an outage. That included taking the Ryan Substation, which Clinton and Ellenburg and Chateaugay all transfer their power into the Ryan 2 Substation.
Q. Okay. So, it was a substation that was down, but you're considering the turbines as still having been available?
A. (Mandli) The availability that we calculate is only when they're actually connected to the grid and available. No. So, those fall out of the availability

calculations for the turbines.
Q. What does that mean?
A. (Mandli) Because it was outside of the actual control

of the turbine operator. Because it was a shutdown that was mandated for the collection system connection into the 230 lines in the north country.
Q. I just want to make sure I'm understanding here. Then, when you're saying that the turbines were "available in the high 90s", you are eliminating most of the month of November, all of the month of October, and a portion of September?
A. (Mandli) That is correct, because it was uncontrolled by the turbine operator. It was dictated by the NY-ISO, the NYPA, which is the transmission owner in the north country.
Q. Okay. So, it's not entirely clear what you mean -- an "availability" may not necessarily mean what other people are thinking. Is that fair to say?
A. (Mandli) The definition of "turbine availability" is the amount of time that the turbine is available when it's connected to the grid. And, if the grid is not there, then that doesn't get calculated in the turbine availability calculation.
Q. And, the problems with that substation had nothing to do with poor quality?
A. (Mandli) They did not have anything to do with poor quality. It had to do with the fact that we were

connecting three projects into a three-ring bus, three-ring bus that connects into the NYPA 230s. And, there was also a segmentation of the 230 line between the Willis Substation, which is in -- a little west of Ryan, and then also the Plattsburgh Substation, which is in the Town of Plattsburgh. So, we actually, besides building a three-ring substation bus, we actually segmented the line and put relays into the 230 line for NYPA, so that they could segment that line.

Q. When the turbines are shut down during icing conditions, is that factored into the availability numbers?

A. (Mandli) Yes, it is. That is a factored-in amount. And, we estimate a certain amount of downtime every year for icing. Of course, the summer months, you don't have any icing, but we estimate a certain percentage in time for downtime during the winter months.

Q. What is that number?

A. (Mandli) It's less than two percent of the total availability.

Q. That's what you're factoring in for the New York sites?

A. (Mandli) Yes, ma'am.

Q. And, what are you factoring in for this site?

A. (Mandli) Right now, I don't have those numbers, because I don't have the actual availability breakouts. But it's somewhere at less than two percent of the total availability.

Q. You're anticipating --
A. (Mandli) For the winter months.
Q. You're anticipating less icing conditioning -- icing conditions will not have those turbines down very much?
A. (Mandli) I didn't say that we're not anticipating icing. What I said is, we have an estimate of downtime for icing. And, at this point, through 2008, we've had two icing events in the north country.
Q. I'm sorry, what?
A. (Mandli) We've had two icing events in the north country.
Q. And, where? North country, New York or North Country --
A. (Mandli) That's northern New York, yes. And, which would be the four projects we're talking about. The same projects that are on that 230 collection system in the northern New York corridor.
Q. And, how long did they last?
A. (Mandli) We had turbines down at Chateaugay was the park that was mostly affected. It was down for maybe

five hours. And, then, the blades had let the ice off enough so they could operate the turbines.
Q. And, that happened twice?
A. (Mandli) Once at Chateaugay and once at Ellenburg.
Q. Have you submitted any information to this Committee or to the parties that substantiate your claims that the turbines have been available at 90 percent or better?
A. (Mandli) I have not presented actual availability calculations for the portfolio.

Q. So, it's just your saying that today then and in your testimony?
A. (Mandli) No, I report that to our investors and the owners, which have been the banks, on a monthly basis.
Q. But do you have anything that you can make available?
A. (Mandli) At present, I don't have that with me, no.
Q. Do you know much about the Vestas V90 or do you install --
A. (Mandli) Yes, I do.
CHAIRMAN GETZ: Yes, just one moment. Let's let Ms. Linowes finish her question before we jump in, Mr. Mandli.
WITNESS MANDLI: I'm sorry.
BY MS. LINOWES:
Q. The Vestas, V, as in "Victor", 90 turbine --

CHAIRMAN GETZ: If you could just repeat your question.
MS. LINOWES: Oh, sure.
BY MS. LINOWES:
Q. Have you installed the Vestas V90 turbine? Has Noble?
A. (Mandli) I have not installed the -- well, I'm not, first of all, I'm not construction, so I haven't installed any turbines --
Q. No.
A. (Mandli) -- for Noble. But we do not and have not installed any V90s to present.
Q. Do you know what the failure rates on those turbines are?
A. (Mandli) Actually, I know quite a bit about the Vestas

fleet, because I worked for Vestas for about -- the precursor to Vestas, I worked for NEG Micon for six years, and then a year with Vestas. And, I know quite a bit about the Vestas fleet, ma'am.

Q. Do you know of any that have been installed at 3,500 foot elevations?

A. (Mandli) I do not know the actual locations that they have installed V90s. But I do know there's over a thousand V90s installed in the world at this current time.

Q. But you don't know of any that have been installed in conditions that you'll be installing these?

A. (Mandli) Not the V90s, per se. But I do know that they have a lot of experience in West Virginia with another turbine that Vestas produces. It's a V82 high wind version, which is a 72 meter rotor, and that's in West Virginia.

Q. Are you legally required to report all turbine failures? And, is there any authority at the state level, a public service board, public utilities commission, site evaluation committee, where you report turbine failures?

A. (Mandli) I'm not sure what the laws say. But, when we do have a turbine failure, we report to the local communities, we report it to the NY-ISO, we report it to the transmission owners to let them know of an incident.

Q. So, if you have a blade break, lightning strike, gear failure, those are all reported?

A. (Mandli) If the event takes a turbine off line, we do report them to the NY-ISO, which is who we schedule our power through in New York.
Q. But, other than that -- other than that, do you report your failures to OSHA?

A. (Mandli) OSHA is, if there is a person or an injury involved, then it is reported to OSHA.
Q. So, is there any one place that any party can go and locate all of the failures at any of the wind projects you've put in place?
A. (Mandli) Are you asking the question "is there a location, a central repository, where every failure" --
Q. Yes. Right.
A. (Mandli) At this point, no, there is not.
Q. If I were to go to the NY-ISO, the New York-ISO, would that be considered confidential information?
A. (Mandli) I cannot answer that. I don't know. I'm not sure what information the NY-ISO makes public.
Q. Okay. So, again, with regard to the 90 percent availability --
A. (Mandli) We do not report turbine availability to the NY-ISO.
Q. One of the packages -- one of the exhibits I provided for you, it's IWA-X-2, and that, in the back of it, it should have a photograph as well. Do you see that? That's not actually attached to it.
A. (Mandli) Are you referring to Page 2 of 2 on Wind Action, "shocked by turbine collapse"?
Q. No, I'm sorry, this package here, the first article at

the top is "Problems at Wind Farm".

A. (Mandli) Yes, ma'am, I see that. But you said "the last page there should be a photo."

Q. There should be a photograph that's actually not attached to that. Do you see the photograph? It's part of it.

A. (Mandli) Is this the photo?

Q. Yes, that's it.

A. (Mandli) Yes, I have that photo.

Q. That's part of that exhibit.

A. (Mandli) Okay.

Q. Do you recognize that photograph?

A. (Mandli) Yes, I recognize that photograph. Yes, ma'am.

Q. Do you want to speak to that?

A. (Mandli) That was what I was going to open up with today, and we decided to wait. On Friday, the March 6th, we experienced an incident at one of our wind farms in Altona, New York, which is about 20 miles west of Plattsburgh. We currently have GE and our engineers investigating the actual failure. One turbine collapsed. That is what you're seeing in this picture. I cannot report anything to do with cause at this point, because it's in the process of being investigated. We have had over 1,300 hours of

engineering time so far doing an investigation. We started the investigation as soon as we got GE engineers on site on Friday. And, as I mentioned

earlier, anything I say at this point, as far as cause, would be out of line, because they are still doing the investigation.

Q. That's okay. I'm not really interested in that. I'm mostly interested in the fact that -- now that turbine, I believe you'd agree that the Altona Project came on line on December 23rd?

A. (Mandli) Yes, ma'am.

Q. So, that turbine has been up for a couple of months?

A. (Mandli) That turbine has been up for a couple months, but actually didn't come on line until I believe it was the first week in January, the 3rd of January.

Q. Okay. The last article in that package of articles, I believe it's the last article, let me just double check.

CHAIRMAN GETZ: Well, actually, let me just interrupt for a second, Ms. Linowes, because I think we may get some confusion here. The package that I have looks like there's an Exhibit 1, that's a Mechanical Operating and Maintenance Manual.

MS. LINOWES: That's correct.

CHAIRMAN GETZ: And, then, there's an Exhibit 2, looks, in the title, "Problems at wind farm could derail acquisition".

MS. LINOWES: Correct.

CHAIRMAN GETZ: And, then, if I understand you correctly, you would like to introduce the single-page photograph as "Exhibit Number 3".

MS. LINOWES: That should -- No, that

should be part of this whole package.

CHAIRMAN GETZ: Okay. The photograph then will be --

MS. LINOWES: It is part of 2.

CHAIRMAN GETZ: -- part 2 -- to Exhibit 2. But, then, I have -- well, I see three documents, one's Exhibit 4, one's Exhibit 6, and one's Exhibit 9.

MS. LINOWES: Correct.

CHAIRMAN GETZ: Okay.

MS. LINOWES: The numbers are odd. Mainly because I -- it doesn't mean that there is a 3, 5 and 7 and 8 missing. It just means that I didn't want to accidently duplicate a number. So, I picked some random numbers to ensure uniqueness.

CHAIRMAN GETZ: Okay. All right. So,

with that in mind, now you're turning to which exhibit?

MS. LINOWES: I'm still on Exhibit 2.

CHAIRMAN GETZ: Okay. Thank you.

BY MS. LINOWES:

Q. And, at the last article of Exhibit 2, what this is, in Exhibit 2, is a package of turbine failures that have been reported in the United States in the last 18 months or less. And, the last article of that set, of that package, is entitled "Residents shocked by wind turbine collapse." Do you see that, Mr. Mandli?

A. (Mandli) I have that in front of me, yes, ma'am.

Q. That paragraph that I have, I have others, but the photograph that I have provided for you does not show

the scorch marks around the turbine nacelle at the time that it hit, had contact with the ground or sometime thereabouts, it started on fire. Are you aware of that?

A. (Mandli) Yes, we are aware of that. Once the turbine failed, we actually secured the site. The nacelle was smoldering at the time when we got to the site. We called the fire department. And, the fire department actually put out the small fire in the nacelle.

Q. I'll bring the photographs with me tomorrow, so people could get a sense of how large the fire might have

been. But I have a question for you, how --

MR. PATCH: Mr. Chairman, I just -- I mean, if she's going to bring the photographs, I don't know if she's planning to use them to cross-examine some other panel other than these. So, I guess I'd like to reserve my right to object to those, if she's just going to show up and present them to the Committee.

MS. LINOWES: Mr. Chairman, my apologies. I'm just referring to the word "small" fire. I think that's a quantitative -- qualitative that may not be accurate.

CHAIRMAN GETZ: Okay. Though, it does raise the issues of authenticity, of a photograph taken off a website. And, it's one thing to use it to ask questions of the witness, does he know about this event. But, then, if you wanted to essentially try to introduce it in a direct way, to make some conclusion of fact based on that particular photograph, I think we may run into --

MS. LINOWES: Okay.

CHAIRMAN GETZ: -- some problems. But we'll address the issue when we get to it.

MS. LINOWES: Thank you. Sure, I understand. This, for the record, I spoke directly with the photographer. These were not just found on the Web.

BY MS. LINOWES:

Q. Mr. Mandli, what was the distance from the -- between the closest fire department and that failed turbine?

A. (Mandli) Ma'am, I don't know the actual distances from -- I know that two different fire departments responded. And, the actual distance from the fire departments, I don't have that answer.

Q. Do you know what the response time was?

A. (Mandli) I just -- No, I don't. I don't know the exact answer.

Q. What is the protocol in the event of a fire on a turbine?

A. (Mandli) What we do is we secure the site, make sure that all of our people and all personnel are far away, and we call the 911 number. And, prior to building any projects, we set up an Emergency Response Program, that includes fire, rescue, etcetera, clean-ups, spill clean-ups, when it comes to a spill. And, that's all determined as we're setting up a project.

Q. And, do you know if there was an oil spill on this turbine?

A. (Mandli) Yes, there was, ma'am.

Q. Do you know how many gallons were spilt?

A. (Mandli) No, I don't.

Q. Do you know how many gallons are in this GE turbine?
A. (Mandli) Yes, GE has essentially 100 gallons of gear oil that's in its gear box.
Q. So, there's potentially 100 gallons?
A. (Mandli) One hundred gallons of, yes, oil. Yes.

CHAIRMAN GETZ: Ms. Linowes, I just want to note for the record that Mr. Janelle has had to leave the hearing. He is at the Legislature involved in the -- he's instrumental with the Department of Transportation's acquisition of Stimulus funds for the State of New Hampshire. He will be returning for the afternoon hearings. I just wanted to get that on the record. So, please continue.

MS. LINOWES: Mr. Chairman, while we're at this point, I have lots of questions. Please feel free to interrupt me at anytime when I start a new topic or whatever you feel that we should be breaking for lunch.

CHAIRMAN GETZ: Well, at some point, we're going to have to make that call. I guess, do you have an idea of whether it's -- how much cross you have?

MS. LINOWES: I can tell you the number of topics. I have six topics.

CHAIRMAN GETZ: But you expect --

MS. LINOWES: It's going to be at least

an hour.

CHAIRMAN GETZ: Okay. Well, let's -- this may be a good time then to take the lunch recess.

MS. LINOWES: If I may finish up just on this last, I just have a couple of questions on this line of questioning, and then we can break at that time?

CHAIRMAN GETZ: Please.

MS. LINOWES: Thank you.

BY MS. LINOWES:

Q. Mr. Mandli, I want to draw your attention -- oh, actually, before I do that, in terms of this project site, what is the distance from the furthest turbine from Dummer Pond Road to a fire department?

A. (Decker) I mean, there's multiple fire departments. I'm sorry, there's multiple fire departments in Coos County. I believe there's a fire department in Colebrook. There's also a fire --

Q. I'm sorry, I can't hear you.

A. (Decker) There's a fire department in Milan and Colebrook. We've met with the Coos Commissioners, as well as the Town of Dummer, to establish, you know, what Dan had talked about, in terms of a emergency rescue or fire safety program. I do not have the distance calculated between Firehouse A and the

turbines.

Q. Would you agree that it's remote?

A. (Decker) I mean, it depends on the calculation.

Q. Do you know?

A. (Decker) I don't know what the answer is.

Q. Is it 10 miles?

A. (Decker) It could be. Let's see, 15 miles. I mean, if you want --

CHAIRMAN GETZ: Mr. Decker, if you could speak up please. Get closer to the mike.

BY THE WITNESS:

A. (Decker) There's, let's see, the fire department in Milan, I mean, could be 15 to 20 miles. It depends on what the definition of "remote" is and how long they think they could do to respond.

BY MS. LINOWES:

Q. Okay. It's conceivable that such a failure can occur at the top of Kelsey and no one will notice it for 24 hours?

A. (Mandli) That is incorrect, because every turbine is monitored 24 hour/7. We have a Monitoring Center in Plattsburgh that watches the SCADA system. For people that aren't familiar, "SCADA" stands for Supervisor Control and Data Acquisition System. And, every park

we have is tied to the SCADA system. When people are on-site, they're watching the turbines during the day in the office. But, at evenings, every turbine is monitored by our Control Center in Plattsburgh.

Q. So, Saturday night, 2:00 in the morning, a turbine falls over and starts a fire --

A. (Mandli) You better believe it. In fact, I get a call --

CHAIRMAN GETZ: Mr. Mandli, let's let Ms. Linowes finish the question. Ms. Linowes.

MS. LINOWES: Thank you.

BY MS. LINOWES:

Q. There's no one on-site. You notify someone who notifies someone who notifies someone that theres a fire potentially?

A. (Mandli) We have technicians in the evening, they're on call. They have to be able to respond in 15 minutes to get to the site. So, we, once we have an event, whether it's a turbine shutdown under normal conditions, somebody's contacted shortly after it happens.

Q. And, are they equipped with fire suppression?

A. (Mandli) They're technicians. They go to the tower to make sure that the turbine shutdown correctly, and they

will make a decision.

Q. Are they equipped with fire suppression?

A. (Mandli) They are not equipped with fire suppression. Our technicians are trained to operate wind turbines.

Q. And, then, the last set of questions along this line, there is another exhibit there, which is the IWA-X-1, that's entitled "Mechanical Operating and Maintenance Manual" for the V90s. Are you familiar with this document?

A. (Mandli) Yes.

Q. Okay. You've seen it.

MR. PATCH: Mr. Chairman, it's my understanding, from talking to the representatives of the Applicant that are here today, that this is, in fact, confidential and proprietary information. And, maybe it would be helpful if Ms. Linowes explained on the record

where she obtained it.

MS. LINOWES: Yes, Mr. Chairman. I'd be happy to do that. One of the wind projects in New York, the Applicant, it was not Noble Environmental, had submitted this document as part of either the SEQRA process in New York for reviewing wind projects or it was the environmental review. So, it was available on the website for that wind project.

CHAIRMAN GETZ: Mr. Patch.

MR. PATCH: I don't know how to verify that. But I just thought it was important that that be on the record. Obviously, we're not producing this. And, I think it ought to be clear that, you know, we're not doing anything to violate any confidential provisions that might exist with Vestas.

CHAIRMAN GETZ: Okay. Thank you. Please proceed.

MS. LINOWES: Thank you, Mr. Chairman.

BY MS. LINOWES:

Q. But I believe, Mr. Mandli, was it you who said that you're familiar with this document?

A. (Mandli) Yes, I am familiar with this document.

Q. I want to call your attention to, it's the third page in the document, this is not the full document, it's not a very big document. But there's a specific section I wanted to refer to. This would be, let's see, I guess it would be the fourth page, the one that has Page -- it's called "Page 3 of 32", it has a section called "Introduction" and then a section called

"Stay and Traffic by the Turbine". Do you see that?
A. (Mandli) Yes. I can see that, yes.
Q. Okay. And, if you can, can you just read the first

paragraph of that section titled "Stay and Traffic by the Turbine".
A. (Mandli) First of all, it's in Denglish. But it says "Do not stay within a radius of 400 meters from the turbine unless it's necessary." Is that as far as you want me to read?
Q. Yes. And, then, -- that would be fine. And, then, the first sentence of the second paragraph, I'll read that "Make sure that children do not stay by or play nearby the turbine." Does that distance of 1,300 feet seem unusual to you?
A. (Mandli) No, it isn't.
Q. Do you know the distance of the turbines to the Cohos Trail?
A. (Mandli) I don't know that distance, but can you answer that?
A. (Decker) You're talking about the Cohos Trail? The Cohos Trail does intersect the Dixville turbines. And, we have reached out to the Cohos trekkers to ensure proper safety measures for that trail, should it be moved.
Q. Should it be used?
A. (Decker) Should it be moved.
Q. Oh, you're suggesting that it be moved?

A. (Decker) For safety concerns in the wintertime, we are looking at that, as well as working with I think the gentleman's name is "Peter", who represents the Cohos trekkers, to figure out, you know, a safe measure of distance from the trail.
Q. Would you agree that the manufacturer's document stating "1,300 feet" is a pretty reasonable setback?
A. (Mandli) It seems reasonable for this size turbine, yes.
Q. I believe, and, Mr. Decker, you said at "wintertime", this document doesn't appear to make a -- differentiate between summer, winter or seasons, is that true?
A. (Decker) I was just thinking about that because I'm seeing snow outside the window out there. But it just does not apply.
Q. I believe the concern might be things like blade throw and other components falling off the turbines?
A. (Decker) For the duration of the year, I guess is what you're looking for. So, yes.
Q. You agree? Okay. So, I believe, and I apologize, I don't have it in front of me, but I believe in the documentation for the actual Application, you state that you're "looking into signage to warn people that they're coming upon a wind energy operating facility",

and I believe you state the signage be a thousand feet, is that true? Do you recall that?
A. (Decker) Yes, I do.
Q. So, again, where did you get the thousand feet?
A. (Decker) The thousand feet is my experience in northern

New York where towns have adopted setbacks, from town laws that I've helped work on in New York. 500 feet or 1,000 feet were kind of metrics that we've used there. The same metrics we thought would be applicable in New Hampshire.

Q. Okay. But I'm going to talk a little bit later about ice and ice throws. But, again, I would argue that certainly 500 feet is considerably shorter than 1,300 feet, do you agree?

A. (Mandli) Yes. I notice the difference between the distances, I agree.

Q. And, a thousand feet is shorter than 1,300 feet?

A. (Decker) A thousand feet is shorter than 1,300 feet.

MS. LINOWES: Okay. Thank you. No more questions, on that topic. Thank you.

CHAIRMAN GETZ: All right. Then, let's take the lunch recess, and we will resume at 1:30. Thank you, everyone.

(Whereupon a lunch recess was taken at

12:20 p.m. and the hearing reconvened at 1:36 p.m.)

CHAIRMAN GETZ: Okay. Good afternoon, everyone. We're going to resume the hearings in Site Evaluation Committee Docket 2008-04. When we left off, we were hearing cross-examination from Ms. Linowes. But I understand there's a proposal from the Applicant?

MR. PATCH: Yes. Thank you, Mr. Chairman. Mr. Hessler, who is scheduled to testify on a panel after this panel is done, has a scheduling problem,

he can't be here tomorrow, couldn't be here until the end of the week. So, what we were hoping to do was to interrupt the cross of this panel, take Mr. Hessler and Mr. Borkowski, and then go back to finish the cross. Because it's my understanding that Ms. Linowes has I think maybe five other categories that she wishes to cross about, and then Mr. Roth has cross after that of the three-member panel that was here this morning.

CHAIRMAN GETZ: Okay. Have you discussed this proposal with the other parties?

MR. PATCH: I haven't discussed with all of the parties, but I did discuss with Mr. Roth and Ms. Linowes, and they indicated they did not have a problem.

CHAIRMAN GETZ: Mr. Roth.

MR. ROTH: That's true. And, I'm sure he will also not object to Mr. Lloyd-Evans appearing, maybe he will, but I hope not, on the 19th.

CHAIRMAN GETZ: Okay. So, I take it then there's no objection to proceeding with the Hessler/Borkowski panel at this time?

(No verbal response)

CHAIRMAN GETZ: Then, let's proceed.

MR. PATCH: Okay. Thank you.

(Whereupon David Hessler and Matthew Borkowski was duly sworn and cautioned by the Court Reporter.)

DAVID HESSLER, SWORN

MATTHEW BORKOWSKI, SWORN

DIRECT EXAMINATION

BY MR. PATCH:
Q. Mr. Hessler, I'm going to start with you. Please state your name for the record.
A. (Hessler) David Hessler.
Q. Are you the same David Hessler who submitted prefiled testimony in this docket, which has been marked as "Petitioner's Exhibit 19"?
A. (Hessler) Yes, I am.
MR. PATCH: And, for the Committee,

that's Volume 1, Tab (i).
BY MR. PATCH:
Q. Do you have any corrections or updates to your prefiled testimony?
A. (Hessler) No, I don't.
Q. If you were asked the same questions today with regard to Exhibit 19 under oath, would your answers be the same as those contained in Exhibit 19?
A. (Hessler) Yes.
Q. Mr. Borkowski, please state your name for the record.
A. (Borkowski) Matthew Borkowski.
Q. Are you the same Matthew Borkowski who submitted prefiled testimony in this docket, which has been marked as "Petitioner's Exhibit 20"?
A. (Borkowski) Yes, sir.
MR. PATCH: And, for the Committee,
that's Volume 1, Tab (j).
BY MR. PATCH:
Q. Do you have any corrections or updates to the prefiled testimony?

A. (Borkowski) I do not.
Q. If you were asked the same questions contained in Exhibit 20 today under oath, would your answers be the same?

A. (Borkowski) Yes.

MR. PATCH: The witnesses are available for cross-examination.

CHAIRMAN GETZ: Okay. Thank you. Mr. Mullholand?

MR. MULLHOLAND: I have no questions. Thank you.

CHAIRMAN GETZ: Dr. Publicover?

DR. PUBLICOVER: No questions.

CHAIRMAN GETZ: Mr. Gabler?

MR. GABLER: No questions.

CHAIRMAN GETZ: Is Mr. Seiler here?

MR. SEILER: No.

CHAIRMAN GETZ: Ms. Keene?

MS. KEENE: No questions.

CHAIRMAN GETZ: Mr. Odell?

MR. ODELL: No questions.

CHAIRMAN GETZ: Ms. Linowes?

MS. LINOWES: Yes, Mr. Chairman. Thank you.

CROSS-EXAMINATION

BY MS. LINOWES:
Q. Mr. Hessler and Mr. Borkowski, most of my questions are related to sound and noise levels. And, I'm going to

be referencing cross-examination Exhibit IWA-X-4. I believe I gave you a copy of that?

A. (Borkowski) Yes.

Q. Mr. Hessler, do you recognize that page?

A. (Hessler) Yes, I do.

Q. And, could you tell us what that is?

A. (Hessler) It's an excerpt from ISO Standard 9613, which is a methodology for calculating sound propagation.

Q. For modeling it?

A. (Hessler) Yes.

Q. Is that the model, the Cadna/A software modeling that you used for this project?

A. (Hessler) Yes. Yes. The software that we use is just an automated version of the standard essentially.

Q. Okay. Thanks. Now, on that document, you see that there are -- there's a table there?

A. (Hessler) Uh-huh.

Q. That references, I guess, error rates. Would you say that was what is represented there?

A. (Hessler) Yes. It's indicating the uncertainty factor associated with the calculations.

Q. Now, so this is, based on this standard, the ISO Standard, it has, and those -- hope everyone has a copy, for heights of 5 meters to 30 meters, is

30 meters elevated above the ground the highest level that the ISO Standard operates on?

A. (Hessler) No. It's the highest elevation for a source

where specific uncertainty values are given by the standard.

Q. Thank you. And, so, -- And, then, for the distances out, this would be the location of the receptor. So, you have the noise source, at a maximum elevation of 30 meters, and the receptor to a maximum distance of a thousand meters, is that correct?

A. (Hessler) That's correct.

Q. Okay. Mr. Hessler, what's the height of the hub on a turbine?

A. (Hessler) About 80 meters.

Q. So, you were actually operating outside of the limits of the ISO Standard?

A. (Hessler) No, the standard doesn't preclude sources that are higher than 30 meters, except for aircraft in flight. It just doesn't give an uncertainty value for sources that are higher than 30 meters and receptors that are further than a thousand meters.

Q. Okay. And, I'll come back to that in a second. So, the distance of the receptors, was it more than -- of the six locations I believe you had receptors, it was

more than a thousand meters?

A. (Hessler) Oh, yes. Yes, the nearest receptors to this project are miles away.

Q. Okay. So, Mr. Hessler, while you say that it doesn't give an uncertainty figure for the standard, you used a modeling methodology, a modeling software that has established limits, is that correct? Of 30 meters for the source of the noise and a thousand meters for the

distance for the receptor?
A. (Hessler) The standard is not limited to these heights and distances. It's just -- That's the range in which a specific uncertainty factor is given.
Q. Mr. Hessler, I appreciate that. I recognize you can put any kind of information into a software program and get any kind of information out. And, I'm trying to get an understanding of how valid the information you have out is. You're using a software -- you're using a model that has limits to it, and it appears, if I understand you correctly, you're using information that exceeds the limits of the model, is that correct?
A. (Hessler) No, no. The standard doesn't preclude calculating sound levels beyond a thousand meters away. It just doesn't give the accuracy of that.
Q. So, what is the accuracy of the information you're

giving?
A. (Hessler) It would be higher than this plus or minus three.
Q. A thousand decibels? A hundred decibels? What are we talking about?

MR. PATCH: Mr. Chairman, I wish Ms. Linowes would let Mr. Hessler answer the questions first before interrupting him.

MS. LINOWES: Thanks. My apologies, Mr. Chairman.

BY THE WITNESS:
A. (Hessler) Well, I think it's important to point out that this ISO Standard outlines methods for calculating

acoustical losses due to distance, due to ground absorption, due to air absorption, due to barriers, foliage, all kinds of things. But the key loss that's of interest here is the loss due to distance from the source to the receptor. And that, even though it's part of the standard, that is simply an axiomatic law of physics. That a sound radiates out from a source in a spherical pattern. And, as the surface area of the sphere gets bigger and bigger, the energy in it gets spread out and it diminishes. So, the sound, over a long propagation path, must diminish significantly.

It's called the "Inverse Square Law". All the other factors in the standard are minor, compared to distance loss.

So, a receptor that's miles away, the energy left in the sound is minuscule at that distance. So, it doesn't matter really what the uncertainty is. The sound is so small at that point that it doesn't really matter. For instance, theoretically, --

BY MS. LINOWES:

Q. I understand. I think we understand what you're saying. And, I'm trying to get to the fact that, in fact, your model is -- is it safe to conclude that what matters is the distance of the homes to the turbine, and, in fact, your model is relatively meaningless?

A. (Hessler) No. No. We could calculate the impact of the project in this courtroom, theoretically. And, the uncertainty factor associated with that would be hundreds of dB. But I think it's intuitively obvious

that there's not going to be an impact at this kind of distance. And, it's not too different at two or three miles away.

Q. Okay. Now, I just have two quick questions, and I don't want to belabor this topic. On Pages 2 through 8 of your document, this would be Appendix 28 of the

initial set of documents, this would be your noise study, "Environmental Sound Survey and Noise Impact Assessment".

A. (Hessler) Okay.

Q. Do you have that?

A. (Hessler) Yes.

Q. I was taking particular note of the locations where you had sited the six noise receptors.

A. (Hessler) Uh-huh.

Q. And, one in Figure 2.2.1 on Page 2, and one on 2.2.5 -- Figure 2.2.5 on Page 4.

MR. IACOPINO: Ms. Linowes, let me just point out that the exhibit that you're actually referring in our record is Petitioner Exhibit 1.3, which is the third volume of the Application, and that's Appendix 28 in that filing.

MS. LINOWES: Thank you.

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

BY MS. LINOWES:

Q. Is it typical for you to put a noise receptor where it's surrounded by leaves and could potentially pick up noise from the leaves while the wind is blowing through

it? And, equally so, is it typical for you to place a

receptor right by a road? Is that where people sleep?
A. (Hessler) Yes. What we seek to do in these surveys is to monitor at a lot of positions or a number of positions in a variety of settings that are representative of where people live around the project. The one by the road is there because the nearest house in that direction is right on that road, right behind the monitoring position. And, the other one, the first one you referred to, and that's near some houses in the other direction from the site. That's just typical of that area where those houses are.
Q. But, Mr. Hessler, this is my last question. Is that the appropriate methodology of capturing background noise, where it's surrounded by leaves? That's rather odd, wouldn't you say?
A. (Hessler) Well, there were some bushes there. But, when we analyzed the data, what we found was that the sound levels at essentially all of these positions was almost the same over the entire survey period. There was no significant difference between the site that had some leaves near it and the other positions.
Q. Well, that's when your averaging. Is that LD Eq or is that LD 90?
A. (Hessler) We look at the L90, the real background that

happens when the wind is at a lull and no cars are going by, that sort of thing.

MS. LINOWES: Thank you, Mr. Chairman.
CHAIRMAN GETZ: Thank you. Mr. Roth.
MR. ROTH: I have no questions.
CHAIRMAN GETZ: Thank you. Questions from the subcommittee?
MR. ROTH: Excuse me, Mr. Chairman. Would my questions at this point be limited to Mr. Hessler or to either witness?
CHAIRMAN GETZ: Either witness.
MR. ROTH: Oh. Okay. I thought we were just doing him. And, I do have a couple of questions for Mr. Borkowski.
CHAIRMAN GETZ: Okay. Let's get that straight then. I've been going through all the parties providing an opportunity to address the panel. Are you done with your questions with the panel, Ms. Linowes?
MS. LINOWES: Yes, I am. Thank you.
MR. ROTH: Okay. I just have two questions for Mr. Borkowski.
BY MR. ROTH:
Q. In doing -- In your work on shadow flicker, do you have an occasion to interpret other kinds of visual

phenomena that might occur with respect to the wind turbines?
A. (Borkowski) Could you give an example?
Q. Well, for example, if, you know, think about when you're -- if you're in an airplane, and you're landing at an airport and the Sun shines off of car windshields, that sort of phenomenons. What would that

be called?
A. (Borkowski) Such as Sun glint, I believe?
Q. Yes.
A. (Borkowski) That's not taken into account with any of the shadow flicker modeling.
Q. Okay. But, in terms of your expertise and your understanding of visual impacts or effects, do you have any knowledge about that sort of thing?
A. (Borkowski) Very limited. It pretty much strictly encompasses the model that's used to compute the shadow flicker. So, I'm not terribly familiar with other sources of visual stimuli, I guess.
Q. So, if I were to ask you to look at this exhibit, and this is Exhibit, in Volume 6, it's 55(d), as in dog.
MR. IACOPINO: Petitioner 2.2.
BY MR. ROTH:
Q. And, it's Viewpoint Number 19 from Lake Umbagog, and if

I can show this to you.
A. (Borkowski) Uh-huh.
Q. And, this is apparently, and this is reassuring, I suppose, there are visual -- they have created the image of turbines along this ridge here. You can't really see them.
A. (Borkowski) Correct.
Q. And, this data here indicates that this view to the turbines is approximately 13 miles.
A. (Borkowski) Uh-huh.
Q. Okay? Do you have any reason to believe that, from this view from Lake Umbagog, that there would ever be

an occasion when a person looking that way would see a glint or a shine from the turbines themselves?

A. (Borkowski) I can't say with any, I guess, definitive answer that "it's not possible". What I do know is that the Vestas turbines I believe include basically a paint that is -- the purpose of it is to minimize Sun glint in these sorts of instances. So, I would expect an instance that you can observe such a glint from 13, 14 pipelines away would be rather rare.

MR. ROTH: Okay. Thank you. That's all I have.

CHAIRMAN GETZ: Mr. Scott.

DIR. SCOTT: I have questions for Mr. Hessler regarding back to the noise, yes, the noise sound levels.

WITNESS HESSLER: Yes.

BY DIR. SCOTT:

Q. You mentioned that the nearest receptors were miles away. Would you be able to estimate roughly what the expected noise level would be at the nearest receptor?

A. (Hessler) I believe it's in the neighborhood of 30 to -- somewhere between 30 and 25 dBA, as I recall.

DIR. SCOTT: Okay. That's it.

BY MR. HARRINGTON:

Q. This is another sound question for Mr. Hessler. You had mentioned the "Inverse Square Rule" having to do with the dissipation of sound and distance. Is it correct to assume that if, let's assume that there was absolutely no vegetation, no trees, no buildings or

anything that would dampen the sound, that that would give you the maximum amount of sound level at a particular distance?

A. (Hessler) That's right. And, in fact, that's the way we calculate it in the model. We just neglect foliage and pretty much everything else, other than ground absorption, which is a -- it's a real phenomenon,

although the magnitude of it is very small over a long distance.

Q. So, for the most part, when you make your statement saying that the -- well, "the sound level is going to drop off below background before it reaches the nearest residence", that sounds like a very conservative statement. They're talking about the maximum possible sound?

A. (Hessler) Yes, that's right. We're taking the turbine level at its highest measured performance during an 8 meter per second wind, and then projecting that out.

Q. So, and any of the assumptions you would make with regard to foliage, absorption, and so forth, since you're saying you're not taking credit for that, we know there would be some, so your numbers are probably going to be higher than the actual?

A. (Hessler) Yes. Yes, we want to be sure that we're not underestimating the sound level at anyone's house. We take great pains to do that.

Q. Did you do any modeling of the sound levels on the Cohos Trail, which I guess we haven't established exactly how far that is from the turbines, but I know

it's in the vicinity of it?
A. (Hessler) Well, we plotted the expected maximum sound

levels all over the site area out to 36 dBA, which is the background level. So, we have mapped it over where this trail goes, but I'm not familiar with the trail.
Q. Okay. Well, maybe that's something we could get to later. I'd be just curious as to what the level was. What's the level of the sound, let's say, in the immediate vicinity of the turbines, within say the 50 foot - outside of the fenced area, which is 50 feet?
A. (Hessler) Yes, usually what I've measured is somewhere 55 to 57, standing right at the base.
Q. Changing that into something that we can all relate with a little bit better, what would 55-57 decibels be similar to?
A. (Hessler) That's not particularly loud. You could easily carry on a conversation over top of that. Certainly not deafening or anything.

MR. HARRINGTON: Okay. Thank you.

WITNESS HESSLER: Okay. You're welcome.

CHAIRMAN GETZ: Mr. Scott.

BY DIR. SCOTT:
Q. Mr. Hessler, again, just for, again, so that I can get my head around what dBAs are. And, I know you don't have your measurement tools here, can estimate, obviously we have a fan in the background, what level

we're hearing right now?
A. (Hessler) Forty-three, something like that.
DIR. SCOTT: Okay. And, again, I know you don't have a measurement tool. Thank you.
MR. ROTH: Can you guess his age?
[Laughter]
WITNESS HESSLER: I'm not going to go there.
MR. HARRINGTON: He can't count that high.
CHAIRMAN GETZ: But, I want to follow up, Mr. Harrington, on your question, are you asking for a record request or the witness --
MR. HARRINGTON: Yes, I would like to have -- know what the levels of the sound were along the Cohos Trail, and whatever the closest proximity it comes to with any particular wind turbine.
CHAIRMAN GETZ: Mr. Patch.
MR. PATCH: Mr. Chairman, actually, I had one question on redirect. But I think, if you look at Appendix 28, which is in Volume 3, which is Petitioner 1.3, at the very end of Mr. Hessler's report is the plot that he was referring to. And, I don't think it's clear from that map where the trail is, but perhaps we could

produce that and superimpose on that the trail. Would that be helpful?
MR. HARRINGTON: That's all I'm looking for. That will be fine. Thank you.
MR. PATCH: So, we'll take a record

request on that.

CHAIRMAN GETZ: Okay. And, let's reserve Petitioner Exhibit 42 for the response to Mr. Harrington's question.

(Petitioner Exhibit 42 reserved)

CHAIRMAN GETZ: Any other questions from -- Mr. Kent.

BY DR. KENT:

Q. Mr. Hessler, do you have any idea of what the effects, if any, would be on the wildlife in the vicinity of the tower?

A. (Hessler) No, that would be for a wildlife expert to comment on. I can only report what the actual levels are, but I don't know what the effects of that would be.

Q. Mr. Borkowski, same question. Do you have any idea if there is any effects on wildlife from shadow flicker?

A. (Borkowski) And, the same answer, it's nothing I can comment on, but only the actual analysis that was done.

DR. KENT: Okay. Thank you.

CHAIRMAN GETZ: Anything further?

(No verbal response)

CHAIRMAN GETZ: Okay. Hearing nothing, then opportunity for redirect?

MR. PATCH: No thank you. The plot's already been mentioned. So, I think I'm all set. Thank you.

CHAIRMAN GETZ: Okay. Then, the witnesses are excused. Thank you, gentlemen. Okay. So,

then, let's resume with the panel of Lyons, Decker, and Mandli please. And, I'll just note, gentlemen, you're still under oath.

(Whereupon Mark Lyons, Pip Decker, and Daniel Mandli were recalled to the stand, having been previously sworn.)

MS. LINOWES: Mr. Chairman, while they're getting ready, I just wanted to let you know that I'm holding all of my questions that have to do with the System Impact Study till the end. And, I haven't spoken with Mr. Roth, but I believe his questions, in terms of confidential, come at the beginning. So, if there's a decision to be made, perhaps we could do it, is go to the nonpublic to address this part before my starting those

questions. That's up to you, though.

CHAIRMAN GETZ: Okay. Thank you. I think we're ready.

MS. LINOWES: Okay.

CHAIRMAN GETZ: And, Mr. Decker, if you could just make sure that you're close to the mike.

WITNESS DECKER: Sound good?

CHAIRMAN GETZ: Thank you.

WITNESS DECKER: All right.

MARK LYONS, Previously sworn
PIP DECKER, Previously sworn
DANIEL MANDLI, Previously sworn
CROSS-EXAMINATION (Resumed)

BY MS. LINOWES:

Q. Mr. Lyons, are you a real estate appraiser?

A. (Lyons) No, I am not.
Q. Do you have experience in that?
A. (Lyons) No, I don't.
Q. Okay. And, do you have experience in evaluating, granting property tax abatements associated with adjacent land uses and potential negative impacts on homes or other real estate?
A. (Lyons) No.
Q. And, Mr. Decker, the same questions for you.

A. (Decker) I'm not a real estate appraiser. And, "no" to the second question as well.
Q. Okay. I want to direct your attention to Page 98 of the GRP Application.
MS. LINOWES: And, Mike, I don't know what the exact -- I haven't mapped these to the -- but it must be the first exhibit.
MR. IACOPINO: Volume 1?
MS. LINOWES: Yes.
MR. IACOPINO: That would be Petitioner's 1.1.
BY MS. LINOWES:
Q. And, this would be Page 98, the section entitled "Property Values". Before I go down my line of questions, is there any other information, other than your reference to this section in your testimony, Mr. Decker, that talks about property values, to your knowledge?
A. (Decker) I believe there is reference in the supplemental filing that Ross Gittell provided.

Q. Okay. But that is -- that's the document we talked about today?
A. (Decker) Yes.
Q. Okay. You make -- well, let me ask you this question.

Who wrote this section of the document that I referenced?
A. (Decker) This was prepared by myself, Chip Readling, reviewed by people that work within Noble Environmental Power.
Q. Okay. Then, I'll direct my questions to you. But, if anyone else on the panel knows the answer, I would appreciate hearing from you. You make a statement in there that says "Based on national studies, windparks have been shown to have no adverse impact on property values." Do you see that? Do you recall writing that?
A. (Decker) Yes, I recall either writing it, reviewing it, or preparing it for submission.
Q. Okay. And, what is the basis of that assertion?
A. (Decker) Well, the assertion is supported by the documents that we have provided under the appendices: The Effect of Wind Development on Property Values, Impacts of Wind Mill Visibility on Property Values, as well as there's -- there are the two studies that I just noted.
Q. And, are those reports commonly referred to as the "Repp Report" and the "Hoen Report", is that what you're talking about? Or, are those different documents?

A. (Decker) No, those are the documents.

MS. LINOWES: Okay. And, those are, for the record, again, Mike, my apologies, but I have them as Appendix 30a and 30b of the original submission.

WITNESS DECKER: It says here that it's "31" and "32" in the left-hand column.

BY MS. LINOWES:

Q. But those are the Repp Report and the Ben Hoen Report of Madison County?

A. (Decker) Yes, 30a and 30b, that is correct.

Q. Did you read both of those reports?

A. (Decker) Have I? Yes, I have.

Q. Okay. Now, I'm going to make comment particularly about the Repp Report.

MR. IACOPINO: All right. And, these reports are contained in Exhibit Petitioner 1.3. In Appendix 30a and 30b, are those the ones you're referring to, Ms. Linowes?

MS. LINOWES: Yes, that's right.

BY MS. LINOWES:

Q. On Page 16 of the Hoen Report, which would be 30b, he identifies four flaws in the Repp Report. And, I'm going to just read one sentence out of there, and then I'll talk about them. He said, "Combined, these four

omissions in rigor render the results of the Repp Report extremely weak, if not entirely misleading." And, let me go through those. Mr. Decker, according to Ben Hoen, the Repp Report says -- it states "the study

makes the erroneous assumption that the properties in the 5-mile radii of the wind facility can see the windfarm, when many houses' views in fact were obstructed." Do you recall reading that in the Hoen Report in reference to the Repp Report?

A. (Decker) Yes, I recall reading the report.

Q. Do you recall reading his statement that says "the analysis" of the Repp Report "did not control for distance to the turbines but made the assumption that the viewshed effect was the same for homes five miles from the windfarm and those in the immediate proximity to the turbines." Do you remember reading that?

A. (Decker) Yes.

Q. And, do you remember the third -- I'll just reference it. The third one, is the sales transaction included in those transactions that were -- they were "not arms-length", they involved "divorces, sales between family members", etcetera. As a result, the report "included transactions that do not represent the agreement between a willing buyer and a willing

seller". Do you recall that being one of the four flaws -- those three being the total of four flaws on the Repp Report, do you recall that?

A. (Decker) Yes.

Q. Okay. Now, onto Mr. Hoen's report, this would be 30b, are you aware of Mr. Hoen's own admission that his study was limited to Fenner, New York, and communities similar to Fenner, New York?

A. (Decker) Yes.

Q. Is there anywhere in your testimony or in your documentation that you have submitted to the Committee that identifies how this project site and the surrounding communities are similar to Fenner, New York?
A. (Decker) I don't believe I made a direct connection between Fenner and this project.
Q. Have you been -- Oh, I'm sorry.
A. (Decker) Have I been to Fenner? Yes, I have.
Q. How would you describe Fenner, New York?
A. (Decker) I would describe Fenner as, you know, it's a mountainous place. There are other projects being proposed over there. I think the turbines are very close to people's homes by comparison to here. When I was there I had to park off the side of the road and

talk with some of the local landowners that have windmills on their property. One gentleman said he made more money selling T-shirts --
Q. Mr. Decker, --
A. (Decker) Sure.
Q. -- I didn't ask you that.
A. (Decker) All right. Okay. I'm sorry. It was a fun trip, if you want to hear about it?
Q. I don't.
A. (Decker) Okay. All right. I'll keep it in my diary then.
Q. You would not describe Fenner as Fenner describes itself as a "farming community"?
A. (Decker) I believe Fenner is a farming community, based

on my trip.
Q. Are you aware of the fact that the turbines in Fenner are nearly 100 feet shorter than the turbines proposed for this site?
A. (Decker) Yes.
Q. In spite of Mr. Hoen's statements about the Repp Report and his own document, you apparently have concluded it's appropriate for you to look at his studies and the Repp Report and draw the conclusion that property value impacts in the areas surrounding the GRP property site

will not be impacted. What is the basis for that?
A. (Decker) I'm going to defer to Mark Lyons on this.
A. (Lyons) If I might, since you invited us to kind of chip in. I'd just like to clarify that the statement in the Application about these reports is simply that we were not aware of any reports that indicated that there is an impact on property values. And, that's not to say that we are offering these particular studies as evidence of impact on property values in Coos County. We're simply looking at the available literature, and finding an absence of any study, though, there are many studies on the issue, none of them have drawn a connection between windfarm visibility and impact on property values. So, I just want to clarify that we are not offering these reports as evidence about impact on property values in Coos.
Q. Okay. I want to make sure that, I would like to have one correction to the record here, I appreciate your saying "there are many studies out there". But, until

you qualify each one of those studies and identified who paid for them in those projects which were looked at, I think that to draw a -- you've cited two, those are the only two that should be referenced today.

A. (Lyons) Well, actually, --

Q. If you want to go into a full discussion of the others --

A. (Lyons) Actually, I'd be happy to produce the others. There are about a half a dozen that I'm aware of. But the point again here, and I can see there is still some confusion, is that there are zero that we are aware of that indicate a negative impact on property values. So, we're not defending any particular study. We're just pointing out the fact that we can't find any that have determined that windpark visibility has a negative impact on property values.

Q. Mr. Lyons, I believe your attempting to make a broad conclusion without proper reporting of -- without supplying the information.

MR. PATCH: Mr. Chairman, --

BY THE WITNESS:

A. (Lyons) I think we testified to what we're aware of.

MR. PATCH: Mr. Chairman, I'm afraid Ms. Linowes is commenting, not asking a question. If she's going to editorialize on every response to a question that has been provided by the witnesses, I don't think that's appropriate.

CHAIRMAN GETZ: Ms. Linowes, if you have other materials that would impeach his statement, then

you're more than welcome to --

MS. LINOWES: Well, I was not --

CHAIRMAN GETZ: Well, I bet we're going to have another big problem this afternoon because we're all talking over one another. Let's have one person talking at a time. So, if you have other testimony that you want to impeach the witness with, you can do that. But he's given you -- they have given you their explanation of why they have presented these studies. So, if we could proceed.

MS. LINOWES: Mr. Chairman, I do have a piece of information that I'd be interested in supplying, but I'm wondering how much to go into this, because we've already established that neither Mr. Lyons nor Mr. Decker is an experienced appraiser. To the extent that they have put paragraphs in here, I would argue that they be given very limited weight.

CHAIRMAN GETZ: Well, then, you'll have an opportunity at the end of the hearings to make your closing arguments or raise those issues on brief. Let's try to deal with the proper scope of cross-examination. If you have questions to them about the Application or their testimony on property values, let's get to that.

MS. LINOWES: Okay. Well, actually, I

will -- I'll move on from this then.

BY MS. LINOWES:

Q. Okay. The next, I want to ask you a couple questions about the FAA findings, substation and icing. For this, if you could look at Volume 6, Appendix 41.

MR. IACOPINO: That would be Petitioner 2.2.

BY MS. LINOWES:

Q. These are the appendices that were included as part of the supplemental testimony, February 28th.

MR. IACOPINO: I'm sorry, which appendix, Ms. Linowes?

MS. LINOWES: That's 41.

BY MS. LINOWES:

Q. And, to the panel, I believe that these -- there are 33 "Determinations of No Hazard to Air Navigation Reports" from the FAA, dated February 3rd, 2009. Is that correct?

A. (Decker) Yes.

Q. Mr. Decker, what is the height of these turbines, including the blade?

A. (Decker) I think it's approximately 416 feet, tip to toe.

Q. And, what is the height that apparently was submitted

to the FAA for the Determination of Hazard Report?

A. (Decker) I did not personally submit those.

Q. I didn't ask you that question.

A. (Decker) I can -- Let's see.

A. (Lyons) A record request.

A. (Decker) We generally submit a height that's actually higher than the turbines themselves.

Q. Mr. Decker, I'm just asking you to read the report that we have 33 of, what is the height?

MR. PATCH: Maybe, Ms. Linowes, if you have a cite, you could point him to that.

BY MS. LINOWES:

Q. On the document, the first page, the first -- the very first, this would be for Wind Turbine T1, location Millsfield, gives latitude, longitude. What is the height immediately below that?

A. (Decker) It says "389 feet".

Q. And, all 33 say the same, if you scan through?

A. (Decker) Yes, I believe so.

Q. So, is there a reason why there's a difference between the 416 feet for the height and the 389 which was submitted to FAA?

A. (Decker) I can follow up as a record request the difference in the height.

Q. Is that an error that's there?

A. (Decker) I don't believe so.

Q. I'm sorry, you do not believe so?

A. (Decker) I do not believe so.

CHAIRMAN GETZ: Well, let's treat this this way. I take the answer to be is you don't know why it's -- what the source of the 389 feet is. And, I guess we can make a record request, if there's an explanation for how they got to the 389 feet. So, let's reserve Exhibit Number -- Petitioner's Exhibit Number 43, for an explanation about the heights used in the FAA filings.

(Petitioner's Exhibit 43 reserved)

BY MS. LINOWES:

Q. Mr. Decker or Mr. Lyons or Mandli, on the turbines that you had submitted a request for a hazard determination on in Clinton, Ellenburg, Altona, do you know if the heights that were issued were identical to the heights that you're telling us today represent the height of the turbine?

A. (Lyons) I don't know the answer to that.

Q. Okay. There are only 33 hazard determination forms here. Can you tell us whether the crane that is used to erect the turbines or dismantle the turbines is taller than the height of the turbine at any point when

it's extended?

A. (Mandli) No, it is not.

Q. At no point does the crane extend above the height of the turbine?

A. (Mandli) No, ma'am. Because, when they lift the rotor, the highest point is the top -- is the highest part of the rotor.

Q. Okay.

A. (Mandli) The crane never gets up higher than the total height of the turbine with the rotor.

Q. Okay. And, now, I want to now go back to the GRP Application, again, the original document that you have submitted with the prefiled testimony. If you could look on Page 54 of that document. These questions have to do with the substation. Now, I'm having some difficulty actually reading this, maybe it's because of the copy. But I believe in that elevation view for the

substation, it says the substation is "45 feet" tall, is that correct?

A. (Decker) So, what we're depicting here is the grounding wires on the right-hand side is 45 feet tall. But, then, the shield wires and -- the shield wire, and then go across, I guess, heading west on the page to the fence.

Q. But the highest point is 45 feet, would that be correct? Am I reading that right?

A. (Decker) That's right.

Q. Is that substation lit or will it be lit?

A. (Decker) The substation will not be lit at night. We will be employing "dark skies" protocols. This is in concurrence with the agreement that we have with the Town of Dummer. So that it will deploy motion sensor technology. So that, if you get to the substation, the lights will turn on for safety precautions, obviously, but it will not be lit otherwise.

Q. And, will it make noise?

A. (Mandli) There is some noise on the substation transformers.

Q. Have you modeled that noise?

A. (Decker) No?

A. (Mandli) No.

Q. Do you know how loud it is?

A. (Mandli) I do not know that answer right off.

Q. Nor do you know how far that noise will carry?

A. (Mandli) No, I don't. I'm sorry.

Q. Do you know the proximity of the substation to any

homes?

A. (Decker) I think the nearest home is 1.6 miles away

from the switchyard. But we would have to confirm that for you.

Q. Is this located in the switchyard?

A. (Decker) No, it's not. I'm talking -- Are you talking about electrical facilities generally as a switchyard in a substation? The substation, the nearest home would be over eight miles direct line of sight from the project site to the nearest residence, if not further.

Q. Okay. Now, the next set of questions I want to ask you about have to -- reference the IWA-X-6 cross document that I had mentioned. You should have a copy of this. This is an e-mail that was provided to us by Randall Swisher of AWEA. Are you familiar with Randall Swisher?

A. (Mandli) He's the ex-president of AWEA, American Wind Energy Association, yes.

Q. Okay. Thank you. And, the e-mail is details an experience of John Zimmerman in Vermont, when he was standing near turbines in two locations. And, the one I'm interested in is the Searsburg wind energy facility in Vermont. And, I just want to -- we talked a little bit when you were up here earlier about setback distances. You had mentioned "a thousand feet", and we talked about Vestas for "1,300 feet". I just want to

read you the quote here and get your comments on it.

And, this is on the back page. He says "While the Boeing study was academic, the danger from ice being released from rotor blades overhead is real, and a hard hat is not going to provide you with much comfort." Do you see that?

A. (Mandli) Yes.

Q. Okay. And, then, he goes onto say "When there is heavy rime ice built up on the blades and the machines are running, you instinctively [instinctually?] want to stay away. They roar loudly and sound scary. Probably you would feel safe within a half mile danger zone however." Does that surprise you?

A. (Mandli) Yes, it does. This is one man's opinion at Searsburg. I've never been at the Searsburg site, but I have been on other sites.

Q. These turbines, are you aware, are 198 feet tall?

A. (Mandli) Yes, they're old Zond, Z-o-n-d, 500 kilowatt machines. They're almost 13 years old. It's a dated technology, probably late '90s technology.

Q. The blade ice does not build up on the blades in the same fashion today?

A. (Mandli) The difference between, if I may, the difference between the Zond 700 or the 750 or the 500

and the Vestas V90, which we are proposing, is that the Vestas machine shuts itself down when it senses ice on its rotors.

Q. Do you know what the tolerance is for that?

A. (Mandli) I don't know the exact logic for the tolerance. But what they do is they watch for

deterioration in the actual power curve performance. And, when it sees a certain percentage of power curve performance deterioration, the machine shuts it down. It also looks for ambient temperature conditions, and it monitors ambient temperature conditions for icing events. Probably the safest turbine available on the market right now from an icing standpoint.

Q. Mr. Mandli, I would like to direct you to an article in that packet that I had given, which is "IWA-X-2". This would be the article before the last, the very last article in that section, was called -- what you want to reference, about Altona "residents shocked by turbine collapse." And, then, there's an article just before that called "Sensor fails to stop ice-terror wind turbine." Do you see that?

A. (Mandli) What's difficult about this document is there isn't any page. So, what am I doing? Am I counting back from the back --

Q. Counting back from the back, yes. It's the third page from the back.

A. (Mandli) Oh. The "Sensor fails to stop ice terror"?

Q. Correct.

A. (Mandli) Yes.

Q. Are you familiar with that incident, what's happened in the UK in January?

A. (Mandli) I am not familiar with the incident that happened in the UK. I operate turbines in North America. So, I focus mostly on turbines that Noble runs.

Q. Are you aware that the British Wind Energy Association is changing its position on the -- the idea that the wind turbines shut them down, because they're finding that, in fact, it's not? They don't shut themselves --
A. (Mandli) I have no information or data that indicates that the British Wind Energy Association doesn't trust the shutdowns. No, I don't.
Q. Okay. Then, if I may, with regard to shutdowns, without knowing the tolerance, how long will the turbines run before you notice that there is a reduction in performance in comparison to the wind speeds up in the area?
A. (Mandli) On the GE fleet that we actually operate

currently, we know it instantly when we have any type of accumulation on the blades, because we see a dramatic drop-off on the power curves.
Q. So, you're saying that ice will build up, and then you'll start to see how much ice?
A. (Mandli) Without going out and doing a scientific analysis of the actual buildup on the blades, it's very difficult to determine how much ice or what weight of ice or what thickness of ice.
Q. So, it could conceivably run for five, ten minutes, a half hour?
A. (Mandli) I don't know that answer.

WITNESS LYONS: Can we take a data request on this? This sounds like a good question for us to put directly to the turbine vendor. I'm sure they have this information.

MS. LINOWES: That would be wonderful.
CHAIRMAN GETZ: Okay. Well, let's reserve Exhibit Number 44 for the record response.
(Petitioner Exhibit 44 reserved)
MS. GEIGER: Could we please get clarity on exactly what she's looking for?
CHAIRMAN GETZ: Okay. Ms. Linowes, would you like to frame the question you'd like them to

respond to.
MS. LINOWES: Oh, yes. I'm looking for the amount of the tolerance at which the turbines will shut down when ice builds up on the blades; the amount of time they can conceivably run --
CHAIRMAN GETZ: Well, let me ask this of Mr. Mandli. I took the question to be "how much icing before the automatic interrupt occurs?" Is that --
WITNESS MANDLI: Yes, I agree. I think that's a good question that we can refer to Vestas on their turbine.
CHAIRMAN GETZ: All right. Thank you.
MS. LINOWES: Thank you, Mr. Chairman.
WITNESS LYONS: Could I?
CHAIRMAN GETZ: Mr. Lyons.
WITNESS LYONS: Could I also point out that in the article that we're being referred to here, they don't make mention of any specific model or technology of the machine.
MS. LINOWES: I can get you that, if you would like to see it.

WITNESS LYONS: Okay. Thank you.
CHAIRMAN GETZ: Okay. Ms. Linowes.
BY MS. LINOWES:

Q. Yes. Okay, the next set of questions has to do with the environmental benefit of the project. In the GRP Application again, this would be Volume 1, at Pages 59 through 61, you spend a far amount of time, actually, I'm assuming, Mr. Decker, you might have written part of this? A fair amount of time spent on the environmental benefit of this project, again, Page 59 through 61?
A. (Decker) Yes.
A. (Lyons) And, I worked on this as well.
Q. I'm sorry, you did that?
A. (Lyons) Yes.
A. (Decker) Yes.
Q. Oh, both of you?
A. (Decker) Yes.
Q. Okay. You also make -- You make an assertion in your testimony that the Project will result in reduced emissions?
A. (Decker) Yes.
Q. Is that what the environmental benefit is of this Project?
A. (Lyons) That's one of them.
Q. Are there others?
A. (Lyons) The fact that you get electricity without any

pollution.
Q. That's not the same thing?
A. (Lyons) No. I think the first is that you get energy without any pollution. And, the other is that, within a specific electric grid, it's displacing -- it's kind of a quantification, I suppose -- I suppose it is similar, but it's a more conservative quantification of the actual displacement.
Q. Actual displacement of?
A. (Lyons) Of emissions that would otherwise have occurred.
Q. Okay. What type of analysis did GRP perform to determine the emission reductions?
A. (Lyons) It took a fairly conservative approach, and assumed that, based on the marginal emissions rates, as published by the ISO, and since this Application was done, we've actually used the more recent report, the 2006 report. And, the ISO provides marginal emission calculations for power generators in the ISO system. And, we assumed that we were only displacing marginal generators, which is probably a conservative case, because they tend to be the less polluting of the generation stock.
Q. Okay. So, you did not use any real wind data collected

from your met towers and conduct a New England wide analysis to determine which power plants are likely to back down at the time when your project is producing?
A. (Decker) Well, we used real wind data to determine the

projected megawatt output over the course of a year, and that went into our calculations. But we did not go in terms of who's backing down on a case-by-case basis to --

Q. So, you just looked at the ISO's marginal emissions?

A. (Decker) To determine the expected input? That is correct.

A. (Lyons) Yes.

Q. So, you're expecting this to back down natural gas, possibly oil, is that right?

A. (Lyons) Yes.

Q. Based on the physical location of the wind plant, and the fact that the North Country largely has renewable generators, did you look into the possibility that this Project was actually backing out renewable generation?

A. (Decker) Well, I think the big thing about renewables, on a broad scale, is that they are price takers, by comparison to those who set the market, which is natural gas. So, renewable generators can price in lower and therefore accept a smaller price for power,

because they're using renewable resources, which are cheaper than fossil fuels.

A. (Lyons) Excuse me. When you refer to the "renewable resources", are you talking about hydro?

Q. Yes.

A. (Lyons) Yes. I don't think that those were assumed to be on the margin. So, we wouldn't be displacing them.

Q. Okay. So, now, I just want to make sure I'm clear. You stated average capacity factors of 35 percent, is

that what you're saying? Average?
A. (Decker) Yes.
Q. What do you anticipate it being at 2:00 in the afternoon in the middle of August?
A. (Decker) An average capacity factor over the course of the year is determined by multiplying the number of hours in the day by the number of days in the year, and then you have to figure out what the percentage of those megawatt-hours is going to be if we're running at full capacity. So, on a certain day, we could be producing a higher or lower, it just depends on the exact day and the wind resource at that time.
Q. So, you didn't look at summer resource at all?
A. (Decker) No. This was -- This is projected over the course of a year, what will be displaced over the

course of a year for another generating unit.
Q. Okay. So, now, in your testimony, and I believe also in the document, you state that "The Project will provide an incremental air pollution control benefit." Correct?
A. (Decker) Yes.
Q. And, that you reference nitric oxide, SO2, CO2, is that correct?
A. (Decker) Yes.
Q. Are these emissions subject to cap-and-trade in New England?
A. (Decker) It is my understanding that they are not. Renewable generators qualify for Renewable Credits -- Renewable Energy Credits only. But we would certainly

love to qualify for additional units. But my understanding is that we would not qualify for those, for those expected --

Q. I'm sorry. So, you're saying that nitric oxide, sulfuric oxide, and CO2 are not subject to cap-and-trade in New England?

A. (Decker) I believe they are. But Granite Reliable Power will not be able to capture those positive benefits that we are creating under the current cap-and-trade system in New England. Is that what

you're looking for?

Q. I don't understand your --

A. (Decker) Are they subject about what we're displacing?

Q. Is there a policy in place in the New England region that places a -- has a Cap-and-Trade Program for NOx SOx and CO2?

A. (Decker) You're talking about RGGE?

Q. That's CO2.

A. (Lyons) Yes. I'm not an expert on it, but I think it exists, yes.

Q. Okay. It's hard to go on with these questions, if you're not sure, okay.

A. (Lyons) Well, let's say it does exist.

Q. Does or does not?

A. (Lyons) Let's say that those emissions are subject to cap-and-trade in New England.

Q. Okay. Is that -- well, in the Cap-and-Trade Program, is that a policy -- does that policy, is it independent of the generators that are on the system or within the

NEPOOL system?
A. (Decker) I mean, --
A. (Lyons) Excuse me. I don't know how -- what the mechanics of the Cap-and-Trade Program are. But I think our point is that, when we're running, another

resource is not. And, that resource would be emitting power pollution, then that much power pollution gets avoided. I don't know what that has to do with the mechanics of the Cap-and-Trade Program.
Q. Let me just -- Let's move slightly away from that then. I believe that you, in your Application, state "if the GRP Project is not built, then there would be a loss of the environmental benefit"?
A. (Lyons) Well, that's kind of a philosophical question, dealing with alternative futures. Wouldn't be a loss of something that there never was. We're saying that --
Q. Let me just quote --
A. (Lyons) -- the existence of this project in this system offers the potential for these emission displacements based on these emission rates.
Q. Mr. Lyons, let me quote from the Application. It says, "the benefits of adding approximately 99 megawatts of clean, renewable electric energy to the power grid would be lost in a no-build situation."
A. (Lyons) Okay.
CHAIRMAN GETZ: And, this is at the first full paragraph, on the top of Page 60?
MS. LINOWES: Yes. Thank you, Mr.

Chairman.

WITNESS LYONS: Right.

BY MS. LINOWES:

Q. Is that your testimony?

A. (Lyons) Yes.

Q. Okay. I will not talk about cap-and-trade, because it will only confuse the issue. But I will say, in your testimony, February 23rd, I believe you stated that you would -- you're "resistent to making any changes to the Project site, because you would lose your position in the ISO queue", is that correct?

A. (Lyons) Yes.

Q. What is in the ISO queue right behind yours for this area?

A. (Lyons) I believe it's a biomass-fired plant.

Q. Uh-huh. In fact, aren't there two biomass facilities that are slated?

A. (Lyons) I believe there are.

Q. So, if your project is not built, and all of the attendant environmental impacts are not made, do we lose the environmental benefits?

A. (Lyons) If the choice is between having our power plant, having our windpark come on line and operate as expected, all things -- all other things being equal,

yes. So, you'd have to hold everything else static. Then, with our power plant, there's a net reduction in air emissions.

Q. But is it not also true that there's a project, a renewable energy project, right behind yours, and, if yours does not get built, there will still be a project that comes in play, and the region, in the New Hampshire -- the State of New Hampshire will not lose?
A. (Lyons) Well, first of all, that is a different future. That's not holding everything else equal. That's adding a new resource. And, I might add, and I certainly don't want to say anything pejorative about biomass plants, because I used to develop them, and I think they're a great thing. But they do have air emissions associated with them. So, I think that any emissions displacement impact of a biomass plant on the New England system would look very different from ours.
Q. Mr. Lyons, in your Application, though, you spent an awful lot of time, or Mr. Decker does, there's an awful lot of time talking about the emissions benefit, because this wind project will offset fossil fuels, and therefore, in a no-build situation, it would be a very bad thing to not have it built. But, in fact, there is a renewable project that can provide a real benefit.

Isn't that not true?
A. (Lyons) Yes, but how do you get energy from a biomass plant? You burn fuel. And, there are emissions that come up the stack. So, there is no burning of fuel with a wind project, there are zero emissions. And, when you measure the impact of -- on emissions, with having a windpark or not having a windpark, the addition from the windpark is zero, and there is a net

displacement of emissions from avoided projects that burn fuel.

Q. Mr. Lyons, --

A. (Lyons) And, if you're avoiding those emissions with another project that burns fuel, I'm just saying that would be a very different analysis.

Q. Mr. Lyons, did you do the analysis to find out what the carbon sink is lost when you cut all the trees to put this project in and take out 13 acres of wetlands?

A. (Lyons) No, I haven't. But I would dare say that it's a lot less than would occur from commercial timber harvesting that would be avoided by this project.

Q. Okay. Thank you. I will move on, onto decommissioning. There was some questions that related to decommissioning, I won't belabor those or go into those at all. But you had provided a decommissioning

schedule as part of Appendix 53 of the Appendix 6 -- or, rather, Volume 6. And, this is towards the end. These pages do not appear to be numbered.

MR. IACOPINO: Which volume?

MS. LINOWES: Volume 6. Appendix 53.

MR. IACOPINO: That would be Petitioner 2.2.

BY MS. LINOWES:

Q. The section of (d) called "Estimate of Decommissioning Costs". And, I'm looking at these numbers, and I see that you do not put full dollar figures in for some of these; some you do, some you don't. Can you explain what it means to have the numbers in parentheses?

A. (Lyons) First of all, I want to explain that these numbers are placeholders. These are numbers that are based on a work in progress. That's why it says they're "preliminary". This whole document is a -- represents proposed conditions to the Coos County Commissioners. It's based on the similar conditions that were agreed upon for the Lempster Project with the Town of Lempster. It's meant to cover the range of issues that were anticipated to be of local concern. And, this document has been provided to the County Commissioners for their review and is currently under

review by them. And, it's very much a draft document. So, whereas the scope of issues seems to be reasonable, and, again, it's derived from Lempster, and the County Commissioners have agreed that it's a reasonable scope of issues, the details are under review by them and will be subject to discussion by us and them. So, you know, I would look at those numbers as blanks at this point. They're subject to review and completion. So, --

Q. Okay. Can you explain what it means to have a number in parentheses, though?

A. (Lyons) It would be a -- It would be a negative number. It would be a negative cost, if you will. It would be a situation where the salvage value exceeded the removal value.

Q. I want to ask you a more global question at the moment, because I think that the reasoning is escaping me at the moment. Can you explain the purpose of the

Decommissioning Security Fund?
A. (Lyons) Yes. The "decommissioning security" is meant to provide the funds for decommissioning, in the instance that there isn't a willing and able party, a responsible party, to pay them when they're needed.
Q. So, would you -- But is it safe to say that no entity

in the State of New Hampshire, any public entity in the State of New Hampshire should assume any costs associated with decommissioning a project? That all of the money should be identified in the -- and set aside in the Decommissioning Fund?
A. (Lyons) Yes. As I discussed with Dr. Publicover this morning, you know, our view is that we should have as accurate an estimate of the net decommissioning costs as possible and have adequate funds to pay those costs at the time that decommissioning is necessary.
Q. And, Mr. Lyons, I know that you talked about Lempster with Dr. Publicover, but are you aware that, in the State of Vermont, in the two projects that have -- or, the one project that's been approved and one that's under consideration, in both cases the State of Vermont has stated that all funds will be available before any construction is undertaken?
A. (Lyons) I was not aware of that.
Q. And, are you aware of the fact that, in the State of Vermont, they absolutely do not allow salvage value or any kind of values to be deducted from the cost of decommissioning?
A. (Lyons) I was not aware of that. I am aware of the

Maine permits, where salvage value is taken into

consideration, and where funding builds up over time.

Q. And, so, just to -- you're saying that these numbers are "invalid" -- or, rather, are "preliminary" and therefore not to be relied upon. But may I ask where these numbers came from and who came up with them and who has validated them?

A. (Lyons) They were derived by an engineering consultant that we hired to begin this process. And, I don't happen to have the name of the people right now. They haven't been validated by anyone, because they are not complete and final. But, again, we would -- we would anticipate, and have discussed with the County Commissioners, that these numbers would be developed jointly with them. You know, our goal is to have accurate numbers. And, again, as we discussed with Dr. Publicover this morning, to have them updated to ensure their accuracy over time. So, it shouldn't be a point of contention.

Q. I absolutely agree with you. So that, if these are preliminary numbers, just to throw something out at you in a preliminary -- rather, in an estimate for decommissioning of a substation, you have a figure here of "$7,097". The Deerfield Project in Vermont, they had estimated that at 125,000. So, do you agree that

there might be some discrepancy?

A. (Lyons) I don't think there's a -- I wouldn't call it a "discrepancy". There may be some differences. I don't know if the -- again, I don't think this number represents anything in particular right now. But, in order to compare this to the -- what substation?
Q. Deerfield.
A. (Lyons) Deerfield?
Q. It's a much smaller project than this.
A. (Lyons) Yes, I don't know what the comparability would be. But we'd certainly like to have that information as we proceed with this process to develop these numbers with the County.
Q. Now, in terms of the schedule, I guess, if I understand you correctly, you're saying that "the numbers are preliminary, but the scope of work is fairly defined." Is that what you're saying?
A. (Lyons) Yes. Well, it's defined insofar as we have proposed it. And, I should say, we have discussed the scope of work with the County Commissioners on a number of occasions, and they have indicated that they believe that this is a reasonable scope of work.
Q. Mr. Lyons, has the County Commissioners ever decommissioning a wind -- decommissioned a wind

project?
A. (Lyons) Probably not, but I don't know.
Q. So, what basis would they have for validating that?
A. (Lyons) It's a matter of reason, I think. That we are proposing the installation of certain pretty well defined facilities. I mean, they amount to tall steel

towers, on concrete foundations and other foundations, connected by electric wires, some of which are underground and some of which are overhead and there are some telephone poles, and then there's a substation. So, I think it's really a matter of reason to say "well, decommissioning implies removing that and then restoring the area. You know, what's a reasonable project removal scope?" I don't think you need to have done it once to be able to figure that out.

Q. Mr. Lyons, I don't see anywhere in the decommissioning schedule that you have there that talks about "removing the roads"?

A. (Lyons) That's correct. And, that's something that we discussed explicitly with them, that we would not propose removing the roads. And, we would leave them their for public and private use.

Q. We will discuss the road, the size of the roads on Wednesday, when Mr. LaFrance is here. But that is a

fairly significant infrastructure that will be left intact.

A. (Lyons) Yes. If I could just respond to that. I think it's important to remember that the roads that we're proposing to put in would be at grade, they would be gravel roads. And, as part our mitigation plan with New Hampshire Fish & Game, at the high elevations, they would be revegetated to 12 feet wide. And, --

Q. Which roads would be revegetated?

A. (Lyons) The access roads at high elevation.

Q. Not those between the turbines?

A. (Lyons) Yes.
A. (Decker) Those are the access roads.
A. (Lyons) Access roads at high elevation, yes. And, so, I think, you know, and this was one of the things we discussed with the Commissioners is that, at some point removing things that are as benign as that actually causes more environmental damage than just leaving them in.
Q. I have no way of validating that. I can appreciate you saying that, but it's beyond what --
A. (Lyons) I mean, it would seem to be a massive environmental disruption to go in and remove all of those roads and all of the culverts and all of the

other wetlands improvements associated with the project.
Q. I can tell you that the other --

MR. PATCH: Mr. Chairman, I'm afraid we're engaging in a debate here, instead of a question and answer. I think the purpose of cross-examination is for Ms. Linowes to ask questions, not for her to provide testimony. I'm fearful that's what she's trying to do.

CHAIRMAN GETZ: Well, I think in this instance there was a question asked and answered, and then another answer along the same lines. I think we're within the bounds of cross for the moment, but let's move ahead.

MS. LINOWES: Okay. Thank you, Mr. Chairman. I have the last set of questions, and then the System Impact Study.

BY MS. LINOWES:

Q. This is a little bit more general. Can you, anyone on the board -- the panel, explain the difference between an energy resource and a capacity resource for electric generation?

A. (Lyons) Yes. A "capacity resource" is a resource that, to some defined extent, can be depended upon to provide electric generation at a given point in time. And, when I say "to some extent", there's kind of a

continuum. Some resources have extremely high capacity value because they can be dispatched on short notice and be fully available in a quick period of time, whenever they're needed. And, you know, a good example of that would be a simple cycle gas turbine.

With a wind energy facility, a wind energy facility is determined to have capacity value at some significant, you know, difference from its nominal generating capacity rating, notwithstanding the fact that it's an intermittent or a stochastic resource. And, the capacity value of the resource is determined by, in this case, by the ISO, in accordance with their methodology.

So, notwithstanding the fact that the wind energy facility is, you know, an intermittent resource, there is some predictability to its availability for generation, and based on the resource and planning and forecasts. And, so, it is given a capacity rating by that formula.

Now, the same resource can be both a capacity resource and an energy resource, of course. A

pure capacity resource would be a generator that is permanently on standby and never actually generates. But it is not -- it's not a matter that you would be

either an energy or a capacity resource. Any given resource can be both.

Q. Okay. So, then, you're saying wind is both an energy and a capacity resource?

A. (Lyons) Yes, ma'am. And, we actually have a bid into the Forward Capacity Market in New England and have qualified for that.

Q. Do you know how much?

A. (Lyons) I don't know that that's a matter for me to say, actually. I think it is confidential. But, in any case, I don't know the number.

Q. Okay. Then, I want to direct you to the last handout, it's IWA-X-9. And, do you recognize this document produced by the Department of Energy July 2008?

A. (Lyons) Uh-huh.

Q. Entitled "20% Wind Energy by 2030". This is, obviously, a subset of that document, it's quite large. I want to direct your attention to the third page in that pamphlet, Section 4.1.6.

A. (Lyons) Uh-huh.

Q. Entitled "Integrating an Energy Resource in a Capacity World". Do you see that?

A. (Lyons) Yes.

Q. Okay. The second sentence, can you read that?

A. (Lyons) Yes, I see that.
Q. Can you read that please?
A. (Lyons) "Capacity resources are" --
Q. No, no. The second sentence.
A. (Lyons) Oh. "Wind is an energy resource, not a capacity resource."
Q. Thank you. And, then, I want to go down to the next page, and I'll read this section for you. Bottom of the page: "Wind power cannot replace the need for many capacity resources, which are generators". Do you see that? It's about the fifth line, sixth line from the bottom. "Wind power cannot replace the need for many capacity resources, which are generators, and dispatchable load that are available to be used when needed to meet peak load. If wind has some capacity value for reliability planning purposes, that should be viewed as a bonus, but not a necessity." Do you see that?
A. (Lyons) I'm sorry, what page are we on?
Q. The next page.
A. (Lyons) Oh, the next page. "Wind power cannot replace the need for many capacity resources, which are generators, and dispatchable load" --
CHAIRMAN GETZ: Well, let's either not

read it or read it, so Mr. Patnaude knows what to do.
WITNESS LYONS: Well, -- I'm sorry.
BY THE WITNESS:
A. (Lyons) It says "If wind has some capacity value", which seems to be a little bit inconsistent with the

statement on the prior page, which said that it had "no capacity value".

BY MS. LINOWES:

Q. No, I believe it's saying that "if, by chance, it happens to generate when we need it, it's purely by accident." It's "a bonus".

A. (Lyons) I see that, yes.

Q. Mr. Lyons, I just have one question for you. Will this project that you're producing -- that you are interested in installing would ever negate the need to build more capacity resources in the New England region?

A. (Lyons) This particular project?

Q. Any wind project or this project?

A. (Lyons) No.

Q. Will a biomass facility that's built in that area potentially negate the need to build another capacity resource in the region?

A. (Lyons) I don't -- I don't know the answer to that. I

know that a biomass project probably has less capacity value, in terms of dispatchability, than a simple cycle gas generator, for instance. So, I don't -- I don't know. I know that biomass projects have more capacity value than wind energy.

MS. LINOWES: Thank you very much. And, my other set of questions relate to the System Impact Study. So, I don't know if you want to go into nonpublic for that?

CHAIRMAN GETZ: Well, is it clear that

that involves confidential information that should be on the confidential record?

MR. PATCH: I believe so, Mr. Chairman. We had submitted an exhibit, for which we had requested confidential treatment. And, it was in Appendix 54, which would have been included with Volume 6, which is Petitioner 2.2. And, that is not the actual System Impact Study, but it's the ISO Status Report on the System Impact Study. And, so, if she has questions about that appendix, then, presumably, they relate to confidential material.

CHAIRMAN GETZ: Okay. Let's handle it this way then. I think this would be a reasonable time to take the afternoon recess. And, then, and we'll also avoid the issue of having to ask people to leave the room.

We'll take a recess. We'll come back at 3:30. We will begin with the materials that are confidential. And, we'd just ask that, if you haven't signed -- if you're not a party and you haven't signed a confidentiality agreement in this proceeding, that you absent yourself from the hearing room. We'll address Ms. Linowes' issues about the ISO study. And, then, we'll -- I guess then we could pick up Mr. Roth's particular question that he had mentioned earlier today, and then we'll finish with questions, we'll go back on the public record, have the Committee ask questions of the panel, and then see if we get to redirect. So, we'll take a recess.

But one piece of housekeeping that I also want to get on the record. The doors out front close at 4:30. We will have somebody at our front doors after

4:30. If you -- And, I'll also put a sign out front, if you leave the building, and somebody is outside the building and wants to come in, there will be a phone number to call at the front desk, and somebody will let you into the building to make sure that there's public access to any hearings that are going to go on after 4:30. Today, I expect to close the day somewhere between 5:00 and 5:30, depending on where we are with the witnesses.

So, with that, we'll take the afternoon

recess. We'll resume at 3:30. Thank you.

(Recess taken at 3:00 p.m.)

(Hearing to resume at 3:30 p.m. under a sealed record.)

* * *

(Pages 151 through 226 of this hearing transcript are contained under separate cover designated as "Confidential".)

(The hearing transcript resumes on the public portion of the record.)

CHAIRMAN GETZ: Okay. We're back on the record. And, we finished the questions that were of a confidential nature. I guess, Mr. Iacopino, is there anyone else that was out of the room that may be --

MR. IACOPINO: Not that I saw. I announced that we were back on the public session when I walked out there. Just the folks that came back in the room.

CHAIRMAN GETZ: Okay. Then, we'll turn to -- do you have any questions for this panel, Mr. Seiler?

MR. SEILER: Yes, I do.

CHAIRMAN GETZ: Okay. Let's hear them.

BY MR. SEILER:

Q. I'd just like to go back to earlier this morning, in the context of the questions earlier this morning, not in the SIS or the financials or anything else. You indicated that you went from "35,000 homes" that would be powered by wind" to "40,000 homes", which is approximately a 15 percent increase in the number of houses that you -- this project would serve. How did you arrive at that figure? Does that increase the

annual estimated energy output of 300 million kilowatt-hours?

A. (Decker) No. What I was doing was providing a clarification that is consistent with the Application itself. I think it is found on Page -- let me find the page number for you, Farrell.

Q. That was in the original Application?

A. (Decker) It's in the original Application. I just incorrectly referenced it. I thought of "35 percent capacity factor" and I said "35,000 homes" when I wrote it. It should say "40" to be consistent with the Application.

Q. Okay. Well, doing quick math, if you had 300 million kilowatt-hours as your annual energy estimate, that's roughly 7,500 kWh per --

A. (Decker) Per household.

Q. -- per household.

A. (Decker) Yes.

Q. That 7,500 kW figure is rather high in terms of what the annual energy consumption of a typical, say, residential customer who lives in New Hampshire, isn't it?

A. (Decker) I believe we used the 750 [7,500?] kW number in how we determined it. But I don't know what -- is

there another number that you are --

Q. Well, to figure it out, I looked at it, I think it comes from OCA, is 6,000 kilowatt-hours.

A. (Decker) Okay.
Q. So, if you divide that 6,000 into 300 million, you're really talking 50,000 homes per year, not 40,000 homes. Would that be feasible?
A. (Decker) Yes. If people are conserving more and we can service more load, yes, that would cover more homes, that would be great.
Q. Okay. Just a couple of quick updates on the Gittell Report. Do you see any changes in the figures that are provided by Ross Gittell in that UNH report?

MR. ROTH: Objection. The Gittell Report is not appropriate for cross-examination. It's not been introduced by anybody yet. I mean, it's in the exhibit binder. But, he's trying to get it clarified or something, but we haven't heard anybody bring it on.

MR. SEILER: I thought it was part of the docket?

CHAIRMAN GETZ: Well, it's been admitted as an exhibit, and there's been an objection to include it, and that objection has been overruled. I'm not sure where Mr. Seiler is going with his question, but --

MR. SEILER: Well, I'm actually --

CHAIRMAN GETZ: Well, Mr. --

MR. SEILER: I'm trying to get a clarification from someone --

CHAIRMAN GETZ: Yes, let me finish talking. Let's do that. It's been a long day, and we've had a lot of people talking over one another. And, Mr. Patnaude is having, I imagine, a real challenge trying

to get all the conversations down on paper.
What I was going to say is, I'm going to permit the question, because the report hasn't been excluded. And, we'll see where the question goes.
BY MR. SEILER:
Q. My understanding is is that there will be six permanent jobs created as a result of this project. Is that -- that's in the Gittell Report, is that correct?
A. (Lyons) Yes.
A. (Decker) Yes.
Q. Okay. Of those six jobs, how many will be permanent jobs after the contract is ended, the O&M contract with your -- with Vestas? In other words, Vestas, I assume, is going to provide one, two, three people of those six jobs?
A. (Mandli) In the beginning, Vestas will probably have

four people on site.
Q. Of the six will be -- four of the six will be Vestas?
A. (Mandli) No, actually, the first three years, we'll have more than six people on-site. Because Vestas will have their folks on-site, probably four technicians and one manager, and we'll start off, that first three years, while they're on-site, with two technicians, a manager, and an admin. So, we'll have four. So, it will be a total of --
Q. So, it will be four from --
CHAIRMAN GETZ: Mr. Seiler, let him finish his answer, so we can get everything on the record.
BY THE WITNESS:

A. (Mandli) I'm sorry. We'll have four people from Noble on-site the first three years. There will be a plant manager, two technicians, and an admin. And, then, Vestas will have their technicians, four, a plant manager, and I don't know if they will have an admin. or not. But, normally, it will be that first three years, because we'll have two crews on-site, we'll have more folks. But, long-term jobs, from year 3 through 25, will be six Noble employees full-time assigned to the Granite Renew -- Reliable Project, sorry.

BY MR. SEILER:

Q. So, the $275,000 payroll is for Noble/GRP people. So, the Vestas people will be covered under your O&M umbrella contract?

A. (Mandli) That is affirmative. The first three years we are relegated to pay Vestas so much per turbine per year while they -- in their warranty period. And, it's a three-year obligation for us to pay them to operate the park. Now, the people that we have on-site will shadow Vestas, but also be reliable for the maintenance of our BOP, which is substations, whatever -- everything else non-turbine.

Q. So, I take it that the six folks who are going to be aggregating to this $275,000 payroll is actually about 50 percent above the average wage in Coos County?

A. (Mandli) I can't answer the average wage. But I know what we're going to be paying for technicians.

Q. Okay. In the Gittell Report, they also talk about -- he also talks about "72 induced jobs", in other words,

these are people who buy groceries or stay in motels or whatever. Is that 72? That's the number that I have.
A. (Decker) Yes, that's using a multiplier effect that Ross Gittell used to describe and calculate the induced economic impacts of this project.
Q. So, those 72 induced jobs are there for the duration of

the Project term, 15, 20 years, whatever the figure is?
A. (Decker) Yes.
Q. Okay. Now, the figure of 500 construction jobs over two years. Is that 250 each year? Is that the 500?
A. (Decker) I believe, yes, you're referring to the construction jobs as being direct and induced, is that correct?
Q. I thought the construction jobs were different. There's a third category of construction short-term, a two year period, 500 jobs?
A. (Lyons) I believe those are 500 full-time equivalents.
Q. Full-time, FTEs, right?
A. (Lyons) Yes.
Q. Full-time equivalents at the site. So, if your Project, as you say in your Application, is going to generate 300 million kilowatt-hours, at what point does the generation of that amount of electricity reduce the need for electrical generation from Merrimack?
A. (Decker) I don't know. I mean, as I described earlier, that wind power is a price taker. And, we are a cheaper source of -- a cheap source of power for power generation. So, once we build the infrastructure, we will sell it to the market at the market rate.

Q. So, in other words, there would be -- at some point,

the electricity generated by your project would be competing for Merrimack power?

A. (Decker) Potentially.

Q. Potentially. I see. I just have a couple of questions on the decommissioning. I'm not really sure if I understand it that, at the end of the period of time, do you scrap out those turbines? I mean, you just kind of take them down, put them in a pile, and somebody hauls them off or?

A. (Lyons) Well, in the case --

A. (Mandli) This is a very good question, because a lot of the projects that are on line right now are less than 10 years old. But the plan is that, after 25 years, they will try to reuse what they can. But, for the most part, we would hope in 25 years we would have better technology. And, the towers that we install for a Vestas V90 or a GE 1.5 are specific to the turbine that you've got on there. So, a lot of that stuff will be scrapped as salvage value.

Q. In other words, strictly as a value of the metal, for example?

A. (Mandli) Exactly. And, there's quite a bit of value there. A lot of these transformers, these pad mounts -- the pad mount transformers that are step-ups, some

of those units have copper in them, and the salvage values, you know, of copper is pretty high.

Q. But those kind of values would fluctuate.
A. (Mandli) Exactly. They're commodity prices.
Q. Would it be -- It seems to be that, for wind turbines, actually, for Vestas turbines that are 25 years old, have a substantial resale value? In other words, as these projects in California are being repowered and being upgraded, people are coming along and taking these, the Vestas machines, say, out of Tehachapi, and actually they might even want to come to New Hampshire, from what I'm told. Is that a possibility in 25 years from now?
A. (Mandli) That's a possibility. There's a cost to the doing that. I know a gentleman in the Dakotas that has actually taken all the V17s, and he's refurbishing them, changing. Yes, there's a possibility that, you know, there's going to be some generation value to these. As far as the big developers now, by that time I hope that we're doing it with smaller rotors and bird-friendly things in 25 years. Who knows what we'll have. But, yes, there's a good possibility that these will be of value to somebody. But I'm not sure what -- what parts are going to be salvageable in 20 years.

Hope to not be around working on them in 25 years. I want to be retired some day.
Q. Well, it's -- I have some information that says that basically the -- what we call "scrapped" or "recyclable", or "resalable" Vestas machines are anywhere from 8 to 10 percent of capital cost in 1985 dollars, when they were installed at the Zond wind

park, in Tehachapi, California. Whereas other models, many of which have gone bankrupt or have been absorbed, are anywhere from 1 to 3 percent of capital value. In other words, the Vestas seems to have a brand that -- a quality that means 25 years from now --

MR. ROTH: Mr. Chairman?

CHAIRMAN GETZ: Yes. I was hoping there was a question here somewhere. But it sounds like --

MR. SEILER: Oh, I see. Oh, you want me to phrase it in a question, okay.

BY MR. SEILER:

Q. Is it possible that 25 years from now the Vestas V90s will have a substantial resale value, as opposed to scrap value?

A. (Mandli) There is a possibility that they will have value.

Q. Any idea how much that might be?

A. (Mandli) Right now I'd be taking a guess. I couldn't tell you.

MR. SEILER: Those are my questions, sir.

CHAIRMAN GETZ: Okay. I think the only -- I assume, Mr. Roth, you have substantial cross, hour or more?

MR. ROTH: Yes.

CHAIRMAN GETZ: So, I don't think there's reason to move into that at this point, that we should probably pick up tomorrow with Mr. Roth for this panel. And, if I -- I don't think I've missed anybody,

but it would be Mr. Roth to finish his cross-examination, then questions from the Committee, and then an opportunity for redirect. My understanding then is after the panel would be Vissering, and then Luhman, and they will be both be available tomorrow?

MS. GEIGER: Yes.

CHAIRMAN GETZ: And, then, if we make some progress, that possibly Pelletier and Gravel on for tomorrow.

MS. GEIGER: Uh-huh.

CHAIRMAN GETZ: And, then, on Wednesday, if we get through all of those witnesses, we'd begin with

LaFrance and Lobdell. I want to try and get a feel for the rest of the week. And, then, we have the -- I guess Mariani and Sanford, Mr. Roth, they will be available on Wednesday?

MR. ROTH: Yes.

CHAIRMAN GETZ: My understanding was Ms. Keene had some concerns about when she could be here. I guess I'd ask counsel --

MR. IACOPINO: Ms. Keene wanted to be present in order to cross-examine the Fish & Game witnesses.

CHAIRMAN GETZ: Would it make sense to try and start Friday morning with -- is it the Staats/Kelly panel, and then move to Ms. Keene after that?

MR. MULLHOLAND: Mr. Chairman, my witnesses can be here Wednesday, Friday, whenever.

CHAIRMAN GETZ: Okay. Well, let's --

and I guess I would ask Mr. Iacopino to reach out to Ms. Keene to see if that works, and then that's the way we would do Friday. And, then, I guess we would need to, depending on how quickly or slowly we move with cross-examination tomorrow and Wednesday, then Dr. Publicover and Ms. Linowes would either be on Wednesday, if possible, and, if not, then on Friday. Does that work

for everyone? Any other thoughts or concerns about scheduling for the remainder of the week?

MR. PATCH: I have one, Mr. Chairman. I just need to check with Mr. Mandli on his availability tomorrow morning.

CHAIRMAN GETZ: Well, let's go off the record for a second for this part.

(Brief off-the-record discussion ensued.)

CHAIRMAN GETZ: Okay. Let's go back on the record. All right. Turning to Mr. Roth then, then he will question Mr. Mandli, in hopes of permitting Mr. Mandli not to reappear tomorrow.

MR. ROTH: Okay.

BY MR. ROTH:

Q. Mr. Mandli, in your testimony you indicated that, I believe, if I understood it correctly, that you used to work for FPL?

A. (Mandli) Yes, sir.

Q. That's Florida Power & Light?

A. (Mandli) Worked for the non-regulated side, FPL Energy, yes, sir.

Q. Okay. Doing renewables?
A. (Mandli) Operating wind generation facilities in the

Midwest, yes.
Q. So, in your capacity working for FPL, did you have any -- obtain knowledge about how FPL financed its projects?
A. (Mandli) Yes, I know how FPL finances their projects.
Q. And, how did they finance their projects?
A. (Mandli) Initially, they're financed off the balance sheet, and then they turn around and debt -- nonrecourse debt finance the projects after they have been operating.
Q. Okay. So, if they finance off the balance sheet, that means, essentially, when they want to begin construction, they have the money, they write checks, right?
A. (Mandli) That is correct, sir.
Q. Okay. Turning your attention to the Altona situation.
A. (Mandli) Yes, sir.
Q. Now, I know you said "it's under investigation" and you didn't want to talk about what you know about it. But you've probably seen that sort of situation happen in other places?
A. (Mandli) What type of situation?
Q. Where a tower collapses and breaks in half like that.
A. (Mandli) I have never seen one come down.

Q. So, I guess I'd ask it, have you seen, and it's on YouTube, there's kind of an interesting video of a Nortrac failure in Denmark last year. Did you see that YouTube video?
A. (Mandli) That's a Nordtank 500.
Q. Nordtank 500?
A. (Mandli) Yes. That's a -- Nordtank was part of NEG-Micon, who I worked for for awhile.
Q. Okay.
A. (Mandli) Yes. I've seen that video, yes.
Q. So, that was one of the turbines that the company you worked for operated or constructed?
A. (Mandli) That was the precursor to NEG-Micon. There was a Nordtank Energy Group, which was NEG. And, then, there was Micon. They combined to make "NEG-Micon".
Q. Okay. For the members of the Committee that haven't seen that video, can you describe it?
A. (Mandli) From the video, because I don't have the root cause analysis, it was a turbine that -- it was a runaway turbine. The rotor sped up to close to 50 RPMs, and, "RPMs", revolutions per minute, and one of the blades hit the tower and took the turbine down. That's a vintage, probably 2000 -- 1997, 1998 turbine. Completely different than what we're putting up today.

It's got stall-regulated blades, which are not variable pitch. And, a stall-regulated blade requires a hydraulic system in the hub to pitch the last third of the blade 90 degrees to the wind to shut down the rotor, slow the rotors down.

Q. And, were there any -- to your knowledge, were there any employees in that turbine tower at the time that happened?
A. (Mandli) There were no -- There were no employees in the tower.
Q. Okay. And, so, the blade struck the tower?
A. (Mandli) Yes, sir.
Q. Okay. And, so, is it possible that something like that is what happened in Altona?
A. (Mandli) Completely different turbine, completely different manufacturer, completely different pitch system.
Q. What could cause a turbine tower to break like that and drop?
A. (Mandli) Could be one of many things. And, I'm not going to speculate on what took the tower down in Altona. I've already said that.
Q. But, in general, what could cause a turbine tower to break. I mean, you said "there are many things". What

are some of them?
A. (Mandli) A meteor strike.
Q. A meteor strike?
A. (Mandli) Yes.
Q. You think that's -- You think that's likely?
A. (Mandli) No.
Q. What else?
A. (Mandli) A malfunction in the control system.
Q. How would a malfunction in the control system cause the tower to break in half?

A. (Mandli) If the turbine doesn't shut down when it's supposed to shut down, in a fault-type condition, it could run out of control.
Q. So, it would overspeed?
A. (Mandli) Yes.
Q. Like what happened in Denmark?
A. (Mandli) Yes. Yes.
Q. Okay. Any other possible explanations?
A. (Mandli) You know, we have never seen a hurricane hit a wind turbine. So, who knows, a hurricane could take -- possibly take a turbine down.
Q. Okay.
A. (Mandli) And, I'm not sure that any of them have been located in hurricane belts.

Q. If a -- Is the stability of the tower, because I look at the towers and it's kind of interesting to me, there's never any guy-wires, and I understand that that's a good thing, but I'm kind of amazed that they stand up. Is it sort of like riding a bicycle in a way, that it's got to be a fairly close balance?
A. (Mandli) You want to get into structures? The structure is held up by the actual shape of the tower. And, it's similar to, if you had a concrete tower, they're designed based on the thickness of the steel and the actual shape of the tower. They're not just strictly a cylinder. They're actually a little conical shape, so the shape in the tower is designed to handle the forces that are calculated to be on the top of the tower.

Q. If the nacelle or the rotor were to become sort of out-of-balance, would that cause the tower to be stressed in a way that it's not designed for?
A. (Mandli) It takes a severe dynamic imbalance to take a tower down.
Q. Okay.
A. (Mandli) It's a -- a normal imbalance that you'll see there, the towers are controlled and they're monitored. It's amazing when you go into a modern wind turbine, a

Vestas or a Siemens or a GE, how many different things they're monitoring at all times. They're more closely monitored than some of the gas turbines that we've got running. So, what they're constantly doing is they're monitoring operating conditions. And, any time an operating condition gets out of the norm, the turbine will shut themselves down. And, they shut themselves down 99.99 percent of the times correctly; sometimes they don't.
Q. Okay. Now, the turbine is, the way you're explaining it, it sounds like the turbine is monitoring itself?
A. (Mandli) It's monitoring itself. And, on top of that, there's a SCADA system that all the turbines come into a main SCADA computer. And, again, the SCADA is an acronym that the power industry uses for "Supervisory Control and Data Acquisition systems. And, they're constantly watching the actual status of your power plant; whether it's a wind turbine or a hydro plant or if it's a combined cycle gas plant.
Q. And, that's done from Plattsburgh, New York?

A. (Mandli) Our Control Center is in Plattsburgh, New York.
Q. And, how does the information that's gathered at the turbine in, you know, for example, at this project, get

communicated to Plattsburgh, New York?
A. (Mandli) All of our projects throughout the United States are interconnected through a T1 transmissions line. We have multiple T1s running into every substation.
Q. Okay. So, is the T1 line out there now?
A. (Mandli) Yes.
Q. Okay. So, --
A. (Mandli) Oh, you mean for the project at Coos?
Q. Yes.
A. (Mandli) I'm not sure. I'm not sure if we've looked at the comms at this point. But we've been able to get T1 lines into every project we've built to this point.
A. (Decker) FairPoint Communication, who is the T1 provider, has been out to the project site with us to discuss and locate how they can get all the T1s required for the V90s to interconnect.
Q. Okay. And, so, you're expecting FairPoint to install the T1 lines for your project?
A. (Decker) They will help put that -- There's a small segment on Dummer Pond Road that they will allow us to cut in. And, then, we will be responsible to put all the fiber optic cable and T1 lines responsible to manage the windpark, you know, from Dummer Pond Road

on, basically, when it gets to the private property, off the main roads.

Q. Okay. So, there's -- just so I, -- you know, there is T1 service up to Dummer Pond Road already?

A. (Decker) Yes. That was my understanding when the FairPoint representative came out there, yes.

Q. Okay. And, what happens if the T1 line or the routers that the T1 lines use aren't working? How do you communicate with it then?

A. (Mandli) And, this is a very good question, because we used to monitor 7,200 turbines from Juno Beach, Florida. And, by the way, there isn't one wind turbine in Florida. What we would do is, if we ever lost comm, or a hurricane came across the peninsula, we would call the sites, and the sites would take over, 24 operations in the sites. And, you would have people in the office watching from the office and monitoring at that point. Now, those types of situations are very small. You know, less than two percent of the time do we ever lose comm. If we lose comm, then you take over back at the site. So, you're always monitoring your turbines 24 hours a day.

Q. When you say "lose comm", you mean "communication"?

A. (Mandli) Communication via a T1.

Q. All right. Now, in terms of the collapse of the tower, what would, I guess here's the -- you're familiar with the project site?

A. (Mandli) Altona?

Q. No, here.
A. (Mandli) Yes, I am.
Q. In Coos?
A. (Mandli) Yes, I am.
Q. And, the project is being constructed on top of a ridge?
A. (Mandli) Yes.
Q. With fairly steep slopes dropping off either side of it, --
A. (Mandli) Yes.
Q. -- and with fairly close proximity to some of these turbines. What would happen if one of those towers went down here?
A. (Mandli) One of the reasons we go for setbacks, and there was a question earlier whether or not I thought the setbacks I had were sufficient. You know, I'm not an expert on determining the setbacks. But that's one of the reasons you, when you build a project, you have setbacks, from the structures and everything. So that, if you ever lose a turbine, you have ample room for it

to come down and come down safely. And, I I'd have to look at each site in respect to the various slopes. I think we're set back enough from the slopes that, even if a turbine comes down, it's going to come straight down to the ground.
Q. So, it wouldn't fall off the cliff, so to speak?
A. (Mandli) Right now, from what I understand, looking at the maps, I'd have to go out and look at the thing, walk the site, but, right now, from looking at the maps

and the topo, it doesn't look as if any of these turbines are at risk of, in the unlikely event, and it's very unlikely, GE has over 130 million operating hours without dropping a tower. So, when you see a guy up here that looks like he hasn't sleep for two days, it's not normal. And, I'm not going to have too many more of these come down on my shift.

Q. Kind of imagine you're not happy about that.

A. (Mandli) The bottom line is, it's not a normal situation. When it does come down, you want to have a setback.

Q. Okay. And, in terms of recovering the turbine and the tower from the site, when it's on the ground like that, how do you do that?

A. (Mandli) Once all the investigation is complete, you

start dismantling the tower. You start cutting it into pieces, and you pick them up on cranes, put them in the trucks, and they will be salvage, pieces salvaged from a scrap point of view.

Q. So, you would have to bring up heavy equipment, a crane?

A. (Mandli) Not as heavy as what you would have to put it up, because we'll take it apart in pieces.

Q. Okay. And, are you familiar with the project in Lackawanna?

A. (Mandli) Steel Winds?

Q. I'm sorry?

A. (Mandli) Is that Steel Winds?

Q. Yes.

A. (Mandli) Yes, I am familiar with that project.
Q. And, are you aware that they had to replace all of the turbines there?
A. (Mandli) Actually, do you know the facts on it or do you want --
Q. No, actually, you could tell me some more about that.
A. (Mandli) Yes. That's a brand-new technology. That's a company called "Clipper".
Q. Clipper.
A. (Mandli) Clipper is brand new to the industry. They

have had some issues with their gearbox. The gearbox design on the Clipper incorporates putting four generators on one gearbox. And, anybody that's a mechanical engineer is going to wonder how the hell you balance four generators across the gearbox, and that's what Clipper is asking themself right now. So, they have had them down once. The first time they took the gearboxes down is because of planetary bearing problems. And, I understand they have some issues with those gearboxes again. But it's a brand-new technology. That turbine hasn't been operating two years yet. They have had some prototypes out in Medicine Bow, out in Wyoming.
Q. So, how many Clippers are out there?
A. (Mandli) Oh, shoot, they have -- my ex-company has got 40 of them. So, there's probably well over 100 Clippers.
Q. So, over 100 Clippers. And, the Steel Wind has had a disproportionate share of problems, apparently?

A. Steel Winds was the first more than one prototype installation. There's eight turbines that are right along there, I think it's Lake Erie.
Q. Okay.
A. (Mandli) They have other problems, too. But, you know,

I'll let you talk to the people from Clipper.
Q. Who's actually going to manage this project after it's constructed?
A. (Mandli) We'll have a plant manager on-site that we'll hire from -- hopefully, from local. And, normally, what I'll do when I hire technicians or plant managers, I look for somebody that has some good technical skills. It's nice to get an engineer. But we'll have a full-time plant manager that's assigned to Granite Reliable.
Q. So, it's not going to be you or Pip?
A. (Mandli) No, no. You don't want me out here. I'm a guy from Florida. I don't like snow.
Q. We have an awful lot of it, don't we?
A. (Mandli) So does the north country in New York. I do like snow, I'm a skier. So, I was just being facetious.
Q. And, now, in your testimony you referred to "faults and trips". What is that?
A. (Mandli) As I mentioned, every turbine that's on the market right now constantly monitors parameters throughout the whole turbine. They're watching temperatures of the gear oil, you're looking at rotational speeds of your big rotor, rotational speeds

of your generator. I could go on and on. There's a bunch of different things that we will constantly watch on the turbines. If any time we get a situation where the turbine is running outside of specifications, let's say, a generator RPMs is supposed at run at 1,400 RPMs, runs 1,500 RPMs. It's going to send a warning and it's going to shut itself down. And, the way most modern turbines shut down, is the first thing they do is they feather their blades, so they're perp -- they're not perpendicular, but parallel with the wind, and it slows down the rotor, and they apply a secondary brake, which is like a disc brake on your car. And, that is what a "trip" or a "fault" is.

Q. Okay.

A. (Mandli) I call those "trips". "Faults" are when you have instabilities on the grid. And, let's say that -- we'll talk about a transmission owner that's not common to you. Let's say NYPA has an instability on their grid. Our turbines can take a certain amount of drop in current or increase in voltage before it shuts itself down to protect its generator and protect its internal systems. So, other trips would be, if there's a lightning strike on a collection system, the circuit will trip off and it will shut all the turbines down.

Q. So, a fair amount can go wrong up there?

A. (Mandli) I'm not sure I understand what you mean by "a

fair amount could go wrong". What is wrong in your opinion?

Q. Well, you know, you get a lightning strike or you get power surges or you can have overspeeds.

A. (Mandli) Yes, but those --

Q. I mean, I'm not trying to put a dark light on it, I'm just -- but it's complicated, right?

A. (Mandli) No. But the thing is, it's the beautiful thing about modern turbine design. Most times, they're checking to see instabilities in the system or events like a lightning strike, lightning strikes will not shut down turbines. They have lightning dissipation systems that each blade has a lightning sensor, and they normally dissipate the lightning down through the blade, down through the tower to ground. And, the system doesn't even see a lightning strike. The only reason we know about it is there's little sensors on either side of the turbine that checks how many times the lightning is struck -- the turbine gets struck by lightning.

But we were talking "availability" earlier. And, the target for most manufacturers to run

availability is above 95 percent. FPL runs in the 97 percent range. Our targets are above 97 percent. Now, you don't just start off at 97 percent. There's a learning curve. And, the first month you shoot for 85, second month 90, 92, 95, and then from then on you're expecting 97 present availability. And, that -- I was questioned about availability. There's system

availability and there's turbine availability. Most manufacturers are measured on turbine availability.

Q. In terms of faults and trips, though, the faults and trips would affect the availability?

A. (Mandli) That is correct.

Q. And, so, your experience in other -- with other facilities has been that, even with the faults and trips, you're doing 97 plus availability?

A. (Mandli) That is correct. That is correct. That is our target. We haven't run 97 percent for months on end yet, with our 2007 fleet or our 2008 fleet, but we're approaching that. Clinton and Ellenburg both ran, one was 97.2 percent availability last month and the other one was 96.16. So, we're getting really close to the availability targets that I'm shooting for.

Q. Okay. And, then, I think we probably already addressed

this one, but you also mentioned "major component change-outs".

A. (Mandli) Yes, sir.

Q. Is that replacing the gearbox or a generator?

A. (Mandli) Quickly, on major components, the definition of "major components", in my eyes, would be gearboxes, which are the heart of the turbine, but also the Achilles Tendon. Because, even when they work, they do phenomenal things, when they go bad, you have to change them out. So, it would be gearboxes, generators, controllers, controllers don't require major cranes. And, then, if you had a blade repair or failure,

sometimes it requires you to take the rotor down and repair a blade.
Q. Okay. And, for a major component change-out, generally, do you need a large crane?
A. (Mandli) Yes. Yes.
Q. Okay. And, has Noble Environmental seen major component change-outs anywhere?
A. (Mandli) The thing that's unfair about that question is we've got such a short amount of time. We've got eight months on the turbines we put on towards the end of 2007. So, no, we have not had a major component change-out. But you don't expect any major component

change-outs in the first five years of operation. Unless, of course, you're Steel Winds.
Q. I mean, that may be good news, that you haven't had a major component change-out?
A. (Mandli) Well, I've got to be careful what I say, because I don't have wood to knock on right now. But, yes, it is good news.
Q. There is some right next to you.
A. (Mandli) Yes. (Witness knocking on the Bench) The bottom line is, when we put together proformas for operations, we look at a certain percentage of major component failures over a 25 year period. And, the proformas that we present to our financial people have a certain percentage of gearbox failures, etcetera, etcetera, based on Wible analysis, I don't know if anybody understands Wible analysis, but it's a failure analysis based on failures on a fleet. And, that's

what we base our failures of main components on a fleet.
Q. And, in your experience with Florida Power & Light, did you do major component change-outs there?
A. (Mandli) You're talking a fleet of about almost 8,000 turbines. Did we change out main components? Yes, we did. And, we had turbines that, when you start asking

about turbines in Vermont, the Zonds, we had Zonds. We had Vestas V17s, which are little -- I think they're 65 kilowatt turbines. We had KBS-30s. Every type of turbine that's known to man we had in our fleet. So, depending on the age of the turbines, yes, we did major component change-outs.
Q. Changing direction a little bit, in terms of your employment in Coos County, you testified that you were looking to hire -- you would have six employees at the facility; a manager, four wind turbine technicians, and administrative assistant, correct?
A. (Mandli) That is correct.
Q. Now, you said you'd "hope to hire the manager locally".
A. (Mandli) Yes,sir.
Q. And, what about the wind turbine technicians?
A. (Mandli) We will hire as many technicians -- a lot of it has to depend on skill levels. If I can't go to an area and I can't find people that have basic electrical skills or mechanical millwright skills, it's really hard to -- you can train people, but you got to have a basis to understand basic electrical and mechanical. So, we like to get people from junior colleges and

23 people with skills.
24 And, to this important, in northern New

1 York, all but one person has come from the communities
2 of Plattsburgh, Altona, Ellenburg, Ellenburg Circle,
3 all around that area. And, that's a really good thing,
4 because this is an extremely competitive business. As
5 soon as I spend the money to train a technician to be a
6 "wind" technician, you could go down to Schenectady
7 right now, where GE's training is, and my folks are
8 being approached as I've sent them down there for
9 training to be hired for other sites. So, it's very
10 competitive. So, if I can hire people from Coos
11 County, people are living in Coos County because they
12 love Coos County. They're less apt to be hired away.
13 And, that's my goal. I want to hire as many people
14 locally as possible, because I want them to work there.
15 Q. Okay.
16 A. (Mandli) And, because -- I was asked a question about
17 wages. We don't -- We don't pay the highest wage in
18 the wind industry, but I'm darn close. Because, once I
19 train a person, it costs me a lot of money to train
20 that person and get them to be a troubleshooter. So,
21 we pay a very competitive salary, and we have a very
22 competitive benefit package.
23 Q. The, last question, maybe anybody can answer. What
24 happened to Mr. Readling?

1 A. (Mandli) Chip Readling?

Q. Yes.
A. (Mandli) Chip Readling, I think, left to pursue other --
A. (Decker) Opportunities.
A. (Mandli) Opportunities, yes. He's a good guy.
Q. Oh, let me -- I'm not finished completely, but, in terms of the Altona, did you go there?
A. (Mandli) Have I been to the site?
Q. Did you go there after the turbine fell?
A. (Mandli) No, I have not been there.
Q. Okay. And, did you look at the -- you looked at the photograph that was provided?
A. (Mandli) Yes, I've seen that photo before I got here today. Yes, sir.
Q. Okay. What's the pink stuff that's around on the snow?
A. (Mandli) That's the regular ground out there that hasn't been -- we finished that project up in December, so they haven't gone back and planted the soil around there. That's the normal soil.
Q. So, this pink color, this area, that's just soil?
A. (Mandli) Yes, it's soil, that you're seeing melting there, we had 50 degrees on Friday. The only fluids that came off that turbine are, if you look to the far

-- can you hold -- I don't have that picture. Where your finger is sticking down there?
Q. Yes.
A. (Mandli) And, you follow it straight down about six inches, there's your nacelle and your rotor.
Q. Oh, over here?

A. (Mandli) Yes. That's the only place we've had any oil spill. And, once we extinguished the fire, we went out there and we've actually sucked up 50, 50 gallons of oil already.
Q. Okay. And, these green things, are that the blades?
A. (Mandli) That's what's left of one of the blades, yes.
Q. Okay.
A. (Mandli) The one thing that I know in one of my answers, they asked about oil spills. We have to have an SPCC Plan. And, "SPCC", the acronym is "Spill Protection, Control and Containment". We will have an SPCC Plan for the project at Granite Reliable. And, what that does is it takes a look at your actual layout of the project. It looks at any of the transformers you've got on site. The beautiful thing about a Vestas V90 is they don't have pad-mount transformers down at the bottom of the tower. And, the pad-mount transformers contain oil. So, there's an issue that

you don't have to worry about the oil containment of a transformer. We don't have that with this project. But they will look at our substation transformer, which is -- I haven't seen the size of this one, but anywheres from 12,000 to 13,000 gallons of mineral oil is a coolant in the transformer. So, when they build that substation, they will build a -- I call it a "swimming pool", it's a containment issue around it that, if there's ever a leak, it contains it into a concrete swimming pool that we can pump out easily. Everything else, you've got turbines

that have fluids in it. And, I was asked the question, "how many gallons in a GE 1.5?" Which is a completely different animal than what we're going to install in Granite. I think it's about 100 gallons of oil. If you do have a turbine go down, that is the limitation of your spill and that oil. And, if there's not a fire, we've got ways to pump the oil out very quickly. But we're not in the business of oil spill remediation. If we have a spill, we have a professional organization that gets called that comes out there, and remediates both the spill, either contains it or pumps the oil up.

Q. With respect to the Spill Prevention Control Plan, --

A. (Mandli) Uh-huh.

Q. -- how come you don't have that now?

A. (Mandli) The reason we don't have it now is, it has to be signed off by a PE in the state. And, they won't sign off on a plan until they can go out there and see where your actual turbine locations are going to be, the design of your actual substation. So, we usually -- the law says that you've got six months after COD to have a finalized SPCC Plan. I can show you copies of SPCC Plans, because it's kind of a boilerplate type of a plan. But I cannot get it stamped and approved by the PE until they have a chance to walk the site and actually see where these turbines are finally built, versus where we said they were going to be built.

Q. And, you don't have a police and emergency plan yet either, right?

A. (Mandli) No, we don't.

Q. And, how come you don't have that now?
A. (Mandli) We want to know where our office is going to be. We want to know how -- because we haven't finalized the plan of where our service building is going to be. But that would be something that a plant manager, when he gets on the site, would set up there. We'd send him to the local fire departments, the police departments, and establish a communication channel

between the local people and the plant manager.
Q. So, that will be done once the project is completed?
A. (Mandli) No, no. Once we start building that project, there will be -- first of all, there will be, what do they call it, a "SWPPP", which is Storm Water Pollution Prevention Plan. There will be a project manager on site that will have the SWPPP, which will have to be approved by the -- what do they call the -- is it DES in New Hampshire, because it's the DEP in New York? So, it will have to be approved before we start construction. And, then, we'll hire our plant manager shortly after they start construction, because I like to have a plant manager on-site to see the actual laying the cable on the ground, doing the overhead wires, etcetera. So, that's something we do as we start the construction process.
Q. So, creating the police and emergency plan is something that you're not going to do until you start construction?
A. (Mandli) That I won't do for my operations. The construction folks will do their own. But then my

plant manager will set up an emergency response plan for our operations.

A. (Lyons) Can I address that, because this is more of a

development function?

MR. ROTH: Maybe we can ask about this again tomorrow, so we can let Mr. Mandli go, because I'm done.

WITNESS MANDLI: Thank you.

CHAIRMAN GETZ: Well, why don't we just finish up the thought.

BY THE WITNESS:

A. (Lyons) I just want to say that we're engaged with the County and local communities right now about a fire and emergency response plan. And, we consider that to be part of the development function. And, it's addressed in the draft conditions that we have provided to the County.

BY MR. ROTH:

Q. Okay. So, if it's part of the development, why isn't it already done?

A. (Decker) Well, we're not the people that are going to be carrying it out. I mean, the development is to establish the contacts, the relationships, and what kind of protocols they're going to see. And, then, we would hand that responsibility over to the Construction Team and the Operations Team. So, as the Development Manager, I build the connection and the resources, and

Dan says "This is what I'm looking for", and we kind of set out the guidelines of how a project works. But, then, as the Construction Team moves in, they then firm up the guidelines and, you know, the specific issue, the protocols that, quite honestly, is more applicable to their trade.

Q. So, when you say -- when Mark said "you're working on it", really, you're just working on kind of the squishy stuff?

A. (Lyons) Well, conceptually. I mean, --

Q. Conceptually, yes.

A. (Lyons) It's mostly a communications function. To make sure that we have good communications between constructors, operators, and the local emergency officials, yes.

MR. ROTH: Okay.

CHAIRMAN GETZ: All right. If we need to follow up on that tomorrow, we can do that. But I know Mr. Harrington had a couple of questions for Mr. Mandli. I'm not sure if anyone else on the Committee does.

MR. HARRINGTON: Yes.

BY MR. HARRINGTON:

Q. Just getting back to I think where we more or less started the day, you had mentioned, I think it was you,

the "90 percent availability factor", and I just want to get clear, because there always seems to be a lot of confusion in these terms as exactly what people mean. When you're using the term availability, let me see if

I've got that right. You're saying that, at the 90 percent availability factor, that means that 10 percent of the time the turbine is not able to run for reasons associated with the turbine itself?

A. (Mandli) That is correct.

Q. Okay. So, where does the substation fit in on that?

A. (Mandli) The substation would -- I am actually responsible for everything from the utility's shutoff back. So, if I have a problem with my substation, then it's my bailiwick and it's a certain percentage of downtime.

Q. Okay. So, that's included in your 10 percent?

A. (Mandli) Yes. In fact, rough and dirty, there's five categories, big categories. There's actual turbine faults would be one of them. There's an amount of time where we have scheduled repairs. Because every turbine has a very clearly defined O&M plan. There is repair time, which would be mainly main component failures, so you budget for some time there. There's grid-type shutouts. Like, let's say, you had to do an overhead

cable repair or something, that would go into that bucket. And, that's four. What did I forget? I can't remember the fifth one. But there's five categories. And, that makes up -- I've got a target for every project, and a certain percentage of loss of availability, we call it "E4", which is a fossil plant type term. And, we track each plant manager in each project versus their goals for availability.

Q. Now, getting back to the scheduled outages or PMs, what

amount of that 10 percent is accounted for by them?
A. (Mandli) It's very small. It's 0.5 percent of the total loss of availability. And, it depends on the platform. GE requires two scheduled visits per year. Siemens and Vestas, which are two different other manufacturers, are --
Q. Well, how about the Vestas plan?
A. (Mandli) Yes, this is a one time per year. And, that's -- there's some concern about us going up there in the winter. And, there's a lot of snow up there. We won't go up there with big stuff, if we don't have to, in the winter. We'll go up there and do inspections, watch, and things like that. But we'll try to schedule our PMs, or our Planned Maintenances, during low wind periods. And, it does two things: It minimizes your

loss of actual production that you'd have while you're doing your PM. But it also is easier to PM a turbine when it's not rockin' and rollin' because you've got 50 mile-per-hour winds.
Q. So, you're including the oil change-outs?
A. (Mandli) Yes.
Q. Inspections, all that, that's all 0.5 percent?
A. (Mandli) 0.5 percent on an annual basis, yes.
Q. So, it's a pretty small number then. The overall capacity factor, and then, again, let's just make sure we get the terms clear here. When I refer to "overall capacity factor", I mean you take the number of hours there are in a year, and you divide it by, you know, you've adjusted for the number of hours that you're

actually producing, and then what percentage of your full capacity you're producing. Do you follow all of that?

A. (Mandli) Yes. The thing -- The thing that makes wind a little more difficult than a normal conventional power plant is we're dependent on the wind. And, --

Q. Right. And, actually -- excuse me.

A. (Mandli) Yes.

Q. You could be running, for example, at 40 percent capacity, for -- if you did that for every hour of the

year, you'd be at 40 percent capacity.

A. (Mandli) Right. And, on a 3-megawatt turbine, that would be 1.2 megawatts. What you look at, and it's interesting, most Midwest to the East part of the turbine, if you look at your plot of capacity factor, it looks like a U. You usually have your highest capacities in the winter cold months, and it drops down in the summer months. And, in some places, it drops down real low. Here, in Coos County, from the winds we're seeing, we see a reduction in the summer. But it's not like you'd see in Wisconsin, where there's a 30 megawatt project, they will go down to 10 percent capacity factors in July, August, September, and they will see 55, 60 in the winter months, on the shoulders.

Q. Well, you anticipated my next question. What is the capacity factor? So, the 35 percent, you're saying, is that means that -- that includes the availability issues --

A. (Mandli) Yes, it's --

Q. -- and the variable part of the wind?
A. (Mandli) Exactly. Exactly.
(Multiple parties speaking at the same time.)
BY MR. HARRINGTON:

Q. So, I just want to get this straight. That the 35 percent incorporates the fact that your machine is not available some of the time, whether it's due to what you count as availability or it's -- you don't include grid inability, if there's a transmission outage or something?
A. (Mandli) No, I don't. If it's outside of my control?
Q. Uh-huh.
A. (Mandli) I don't. But the total capacity factor, what they will do is they will take in a month, let's say you produce 30,000 megawatt-hours in a month, and you divide it by the number of turbines and the number of days and things like that, you'll get an actual average, you'll get a percentage of what your capacity factor is, over what your rated capacity is.
Q. So, it's the percentage over the maximum you could possibly generate --
A. (Mandli) Right. Right.
Q. -- versus what you do?
A. (Mandli) Yes. And, that's the interesting thing, when they do facility studies, a lot of times the facility studies assume that these plants will operate at pretty close to the rated capacity. Well, in the north country, New York, we ran a capacity factor of about 30

percent. So, you're going to see, if you have 300 megawatts up there, you're going to see, you know, 90 to 100 megawatts running 24 hours a days/7 days a week, you don't see the full load.

Q. But you pay for the worst case scenario?

A. (Mandli) Yes. Exactly. Exactly.

Q. Jumping ahead then, I see in the thing you give a range of operating, from 9 miles an hour to 55 miles per hour. I didn't see a temperature range. Is there, because you're talking about an area where it gets pretty cold, so is there --

A. (Mandli) Yes. There's limitation -- It's interesting, because that was the one I forgot. There's a weather outage part of it that comes out of your availability also. I believe the operating parameters for this turbine, and you'll have to correct me, I think it's minus 30 to positive 30 degrees Celsius. Less? Okay, it's minus 40 to positive 30 degrees Celsius. Minus 40 Celsius is minus 40 Fahrenheit. And, that's freakin' cold for a guy from Florida. I've never felt it, but I did feel minus 26 when I was at Plattsburgh about a month ago. But, --

Q. Now, given those temperature ranges, I assume there's got to be some kind of lube oil heaters or something?

A. (Mandli) Yes. There's definitely heaters on the turbines. And, let's say, during the middle of the summer we had a grid outage and we were down for a

couple weeks, and you didn't have power up there, those things would freeze up solid. But the thing is, as soon as you --

Q. Excuse me. Middle of the winter?

A. (Mandli) Yes.

Q. You said "summer".

A. (Mandli) I'm sorry. I haven't slept much in the last couple of days. Middle of winter, if it froze up, the turbines won't come back on line until they see the right temperatures in the control cabinets and the oil, in the bottom of that sump, because they're not going to start up the turbine with frozen oil. So, there's that type of limits. You mentioned "limits", cut-in on these turbines I think is about four meters per second, and they shut down, I'd have to -- off the top of my head, I think it's --

Q. Twenty-five.

A. (Mandli) -- 25 meters per second, which is 56. and some change miles per hour. And, can they run at greater than 56? Yes, you better believe they can. But they calculate life on these turbines at a certain range.

And, the V90s or the GE 1.5 can run at 70, but the thing is, you're putting loads on that nacelle that they would rather not put on it long-term. So, what they'll do in those situations is they will feather their blades and they'll shut themselves down.

Q. Okay. Now, is it safe assume these are not black start units, that you require grid power to --

A. (Mandli) You have to have grid power, yes.

Q. Okay.
A. (Mandli) Asynchronous generators, which require the grid in order to run.
Q. So, you need it for the generators, as well as for the lube oil heaters?
A. (Mandli) That's right.
Q. There was some mention before of "ice throw". And, I guess, there wasn't anything specific, but I assume you have some type of vibration monitoring equipment on these?
A. (Mandli) They do have vibration monitors, what do they call them, accelerometers, which are vibration detectors. And, then, they also have severe vibration detectors, which are -- they're like a cup with a ball in it, and, if it shakes enough, the ball falls off and it shuts the turbine down. So, they have backup

systems, as they do backup systems in the yawing of the turbines also.
Q. Okay. And, I notice in your testimony you spoke briefly about "ice throw".
A. (Mandli) Uh-huh.
Q. And, so, I'm not sure if you're the right person, but you would seem to be the right person to direct this to. In the agreement with this Town of -- I think it's the Town of Dummer, there's this agreement there that says you "won't build any fences that are more than 50 feet away from the facility". So, I assume there's going to be fences around the turbines or how does that work?

A. (Decker) The facilities that we were speaking of -- there are no wind turbines even proposed in the Town of Dummer. What is being proposed is a switchyard station and a substation, --

Q. Okay.

A. (Decker) -- both of which will be fencing. And, they just didn't want big, large fences.

Q. All right. So, that simplifies some things. I guess my question would be, given what was stated earlier today, that there was an exhibit that said that the manufacturer recommends that people should avoid being

within 1,300 feet of the turbine, unless they can't avoid it for some reason, how is it you're going to keep the general public that far away, from I guess one of the potentials is ice throw, certainly within the -- I think they say the ice throw is, you know, within one rotor distance is a possible problem?

A. (Decker) That, just to touch on a larger subject, the terms of access has been a concern here. There are over 100 miles of road network on just the Phillips Brook parcel alone. The road network, the existing road network and the proposed road network, everyone has a clear understanding of what that is, the existing is the 19 miles of road we're upgrading, that the other 12 miles is the roads that we will build. On the proposed new roads, we will have a gate on those new roads. So, essentially, because those roads were not there, and we are building them, we will put a gate to those, because we are using those -- that property for

ourselves. So, that's how we would restrict access.
Q. Okay. I guess a couple of questions on that. One, that doesn't prevent anybody on foot, a gate. And, two, what about snowmobiles?
CHAIRMAN GETZ: Well, do you have more for Mr. Mandli?

MR. HARRINGTON: I don't know. But he was the one who spoke about "ice throws", so that's why I was asking. I can wait until tomorrow if someone else is going to answer the question. So, let me make it that way, --
BY THE WITNESS:
A. (Mandli) Yes, the critical -- I'm sorry. The critical issue here is setback, having setback from known trails. And, what we'll have to do, on an icing condition, we'll have to put up signs that warn people about icing conditions. I'm not sure if we have known snowmobile trails to our sites or --
A. (Decker) There are known snowmobile trails. The one snowmobile trail that we will have a minor impact on is the snowmobile trail that goes over Dixville, down into Colebrook. We have met with the local snowmobile groups, as well as working with Clint Savage with New Hampshire Trails Bureau, to establish a rerouting of some of those, of the trail that goes into Dixville, to ensure connectivity of that snowmobile trail.
BY MR. HARRINGTON:
Q. Okay. I think, from what it sounds like, you would be the one to ask follow-up questions on it tomorrow. I

have one further question, that was on the capacity

factor, getting back to that. I'm assuming, again, this was based on actual met tower studies that you came up with the 35 percent, based on known wind?

A. (Mandli) That is correct. There's three -- I believe three towers? Three towers. So, we've collected data on those three towers. And, our actual capacity factor estimates are based on true wind numbers.

Q. And, what would that be estimated for for July and August again?

A. (Mandli) I'd have to go back and look. I haven't seen the actual profile for every month. I think --

Q. Is it in the submittals? I don't remember that.

A. (Decker) I think that was in a data request.

MR. IACOPINO: I think they were, in response to a data request. That may have been marked.

CHAIRMAN GETZ: Well, these witnesses will be back on tomorrow. So, they can follow up on that and have that information available tomorrow morning.

MR. HARRINGTON: That's all I had.

CHAIRMAN GETZ: Anything else from the Subcommittee?

MR. IACOPINO: I have two quick questions -- I'm sorry, I have two quick questions for Mr. Mandli.

BY MR. IACOPINO:

Q. And, the first one is, does the installation of this project in Coos County require any construction back at your Call Center in Plattsburgh, other than upgrading software?
A. (Mandli) It will be a software upgrade.
Q. And, that's it?
A. (Mandli) That's right. We built the -- We use a software overlay made by a company called "OSIsoft". And, it's a PI system that overlays just about anybody's SCADA system made, and allow us to monitor. We have one operator per 8-hour shift -- 12-hour shift that watches every one of our windparks on a big display wall. And, it's all through OSI. And, then, they have direct connect to everyone on the SCADA systems for control.
MR. IACOPINO: Thank you.
CHAIRMAN GETZ: Mr. Roth, did you have something?
MR. ROTH: Just one question, clarifying something that was said.
BY MR. ROTH:
Q. I think Mr. Decker once referred to something called "real wind", and Mr. Mandli just referred to something

called "true wind". Are either of those things the small "a" actual wind or are they models?
A. (Mandli) Well, the information off the anemometers on the met towers are what it is, that is actual wind speed. And, there are some wind map models that people use to do prospecting for wind projects. They're made

by, oh, gosh, WindLogics is one company. There's an AWS Truewind, that actually have gone through and they have mapped every square mile, maybe not every square mile, but big portions of the United States to see what kind of wind resources there are in various parts of the country.

Q. So, when you referred to "true wind", you were referring to not the actual anemometer data, but wind maps and stuff from the service?

A. (Mandli) Did I say "true wind"?

Q. I think so.

A. (Mandli) That might have been just a -- When I talk about wind, I'm actually measuring wind speeds.

Q. Okay.

A. (Mandli) I don't put a lot of faith in the maps that are sold by third parties.

MR. ROTH: Okay. Thank you.

WITNESS MANDLI: But I'm not a

developer, I'm sorry.

CHAIRMAN GETZ: Okay. So, I think that's -- did you have redirect for, Mr. Mandli.

MR. PATCH: One. I do have one question for him.

REDIRECT EXAMINATION

BY MR. PATCH:

Q. We have premarked conditions that the Department of Environmental Services has recommended.

MR. IACOPINO: 39, 40, and 41.

BY MR. PATCH:

Q. That's right. And, within these conditions, I guess I would ask you -- I'm not sure I see the -- I'm looking for the -- oh, here it is. Okay. This is in Exhibit 39. And, these are conditions pertaining to water quality. I'm going to show you what's marked as "E-10". And, I would just ask if you could read that into the record.

A. (Mandli) "Item E-10: The Applicant shall prepare and submit a Spill Prevention, Control and Countermeasure Plan (SPCC) for the activity in accordance with federal regulations (40 CFR Part 112)." You're just trying to see if guys from Wisconsin can read, aren't you? "The Applicant shall submit the plan to DES Watershed

Bureau" -- "Watershed Management Bureau", I just proved I couldn't, "for review and approval at least 90 days prior to installation of the first turbine. The SPCC Plan shall include, but not be limited to operating procedures to prevent oil spills, countermeasures installed to prevent oil from entering surface waters, countermeasures to contain clean-up and mitigate the effects of an oil spill and facility inspections. The Applicant shall then implement the approved plan."

MR. PATCH: Thank you.

CHAIRMAN GETZ: Mr. Seiler.

MR. SEILER: I just have one question on, I guess, redirect. Well, no, actually --

CHAIRMAN GETZ: We're going to give some leeway here. But let's not make -- as we proceed for the rest of these hearings, this is because we're trying to

accommodate Mr. Mandli's leaving. Typically, you get your one chance on cross. Then, it's the Committee, then it's redirect. We'll give you an opportunity to pursue your question here. But, in the future, if you want to -- going to try to ask recross, then it has to be limited to redirect, you're going to have to establish a basis for it. It's just not going to be a free-flowing forum of whoever happens to have a question at any particular

moment.

So, with that in mind, if you would ask your question.

RECROSS-EXAMINATION

BY MR. SEILER:

Q. Mr. Mandli, you just said that you have little confidence in historical and modeled wind data?

A. (Mandli) Don't listen to me on that. I'm just an operator. I just operate --

Q. Well, if you have a choice between historical, modeled or actual wind data, which would you prefer?

A. (Mandli) If I was going to build a project, it would be on actual wind data.

Q. You put your first anemometer up there on February 26th, if I remember correctly?

A. (Mandli) Uh-huh.

Q. And, is that the basis of your design of the Project?

A. (Mandli) No, no. The design of the Project is based on correlations between those met towers and some other historical data. And, that's the way most wind developers work. Most wind developers will take six

months, a year, two years worth of on-site data, and then try to correlate it to other towers.

Q. So, how many months of wind data did you accumulate at

the site that became an input into the design of the Project itself?

A. (Decker) I think it was most likely -- I believe it was over a year, in terms of the final siting and design. Vestas, in terms of -- they won't start negotiating with you until you have one year minimum of on-site meteorological data before they will have run their own dynamic analysis for the siting of the project. So, that's, you know, a threshold that we crossed to have the -- to get where we are.

Q. So, if I understand you correctly, then it was that anemometer you put up on February 26th of 2008 that became the basis for the information that you provided to Vestas?

A. (Decker) I mean, in addition to other met towers that we have in the meantime. They do look at what else you have done. They also conducted an on-site field visit. We also shared with them some other historical data that was conducted just north of the Project, at the Balsams Ski Area. And, some kind of old, old data that I believe Plymouth State University compiled on Dixville Peak.

Q. So, then, it's fair to say then that it's a combination of historical, modeled, and actual wind data?

A. (Decker) That is correct. We also do look at WindLogic, to kind of verify our map, as well as kind of help out, you know, with the siting, and to ensure that, you know, we're maximizing the wind potential of the Project.
Q. Of those three sources of wind data, historical, modeled, and actual, what percentage is actual data that you collected? That was -- became the input into the windfarm or software, as well as what you gave to Vestas?
A. (Decker) I don't know what the percentage is. It's really driven on ensuring that you have a project site that's suitable (a) for the manufacturer, that they will give you -- they will stand behind your siting, as well as that you're getting the maximum efficiency -- or, I'm sorry, maximum generation for this Project, so that you don't have instances where, if one rotor is facing into the wind, the other one is off, because it was sited right behind it.
Q. Okay. And, in a data response, you indicated that the anemometer that you put in on February 26th actually had "153 days in which it was down", in other words, it wasn't collecting data. So, that means you pretty much had to rely on modeled or historical data for those

inputs?
A. (Decker) But I believe we had -- it went down after we completed the full year at Owlhead. And, then, Fishbrook was up and running. And, I believe the correlations were very similar, because it's just south

of where we were, so that we had a continuous study on the site.

Q. Well, if you put the tower up on February 26, 2008, when did you lock into the design?

A. (Decker) No, the Owlhead met tower I put up, I believe it was February or late, late January in 2007. And, then, in 2008, late 2008, there was an ice occurrence. And, then, you know, that Owlhead met tower is celebrating its -- you know, it's over two years on the Project site. Because, when I first started, when I first got to Lancaster, from northern New York, one of my first things that we did put up was the meteorological tower on Owlhead Mountain.

MR. SEILER: I'm finished.

CHAIRMAN GETZ: Okay. All right. Then, we will recess for the evening. We will resume at 10:00 tomorrow morning. Mr. Roth will be questioning the panel of Mr. Lyons and Mr. Decker. And, then, we will go to questions from the Subcommittee, and then redirect, and

onto Vissering and Luhman. And, let's -- tomorrow I would like a little more follow-up, I still haven't heard what -- the background on the Lloyd-Evans issue and what the requirements are. But let's deal with that tomorrow. So, we'll recess for the evening. Thank you, everyone.

(Whereupon the hearing was adjourned at 6:23 p.m., and the hearing to resume on March 10, 2009, to commence at 10:00 a.m.)

{SEC 2008-04} [Day 1] {03-09-09}