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            State of Maine
            Department of Conservation
                Maine Land Use Regulation Commission
                    Public Hearing
            September 19, 2007 through September 21, 2007
                    Zoning Petition ZP 702, Maine Mountain Power, LLC
Held at the Sugarloaf Grand Summit Conference Center
    Carrabassett Valley, Maine
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(The hearing commenced on September 19, 2007 at 8:37 a.m.)

THE CHAIR: Good morning, everyone. Are we all ready to go, everybody?

MR. THALER: Yes.
THE CHAIR: Mr. Plouffe, are you all set?
MR. PLOUFFE: Yes.
THE CHAIR: Well, good morning everyone. We'd like to get started here. We're still missing one of our attorneys, but I assume that she's going to be here. Obviously, as you know, we have a little other business to dispose of before we start the hearing, so we'll do that first and then move on to the hearing.

First off, I guess I would ask the commissioners who are present to introduce themselves as we always do. I think you probably all know us, but we'll follow procedure here. So Gwen, why don't we start with you, please.

MS. HILTON: Gwen Hilton, Starks, Maine.
MS. KURTZ: Rebecca Kurtz, Rangeley Plantation.
MR. SCHAEFER: Steve Schaefer, Grand Lake Stream.
MR. REID: Jerry Reid from the attorney general's
office.
MR. HARVEY: Bart Harvey, Millinocket.
MS. CARROLL: I'm Catherine Carroll, the Commission staff director.

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MR. LAVERTY: Ed Laverty, Medford.
MR. WIGHT: Steve Wight, Newry.
MS. SPENCER-FAMOUS: Marcia Spencer-Famous, LURC staff in Augusta.

MS. MACALUSO: Melissa Macaluso, LURC staff.
MR. HARVEY: And our court reporter.
THE REPORTER: Lisa Fitzgerald.
THE CHAIR: Thank you, Lisa. All right, I guess
obviously, as you all know, we had some issues with ex parte communications and there's been a lot of memos going back and forth on that. I guess to start the hearing we're going to try to at least deal with that issue to the extent that we can today. I'm going to ask Jerry Reid just to start that rolling and then we'll go from there. So Jerry.

MR. REID: Thank you, Mr. Chair. Let me just say a few things by way of background to get us started here this morning.

The issue of some alleged procedural irregularities
affecting this proceeding first kind of came up at the
August 1st Commission meeting in Greenville when several Commission members put public statements on the record that they had been contacted in a way that was at least potentially inappropriate and raised concerns about ex parte communications relevant to the Maine Mountain Power and TransCanada proceedings.

At that point Chair Harvey asked the parties to those two proceedings to submit written comments on whether those communications were unlawful, whether they felt they were harmed by those communications, and if so, what they would like to see done about it.

Shortly after that, those three parties submitted
Freedom of Information Act requests with the Department of
Conservation and LURC asking for copies of all documents that are potentially relevant to those disclosures made at the
Greenville Commission meeting, and although LURC and DOC worked
diligently to try to turn those documents over as quickly as possible, the first, for your request, was not fully responded to until right around the time of the deadline for submission of comments right either shortly before August 31st or a few days after that.

There were three sets of comments submitted by Maine Mountain Power, TransCanada, and the Coalition of Environmental Intervenors in the Maine Mountain Power proceeding by August 31st, but after that, Attorney Plouffe, on behalf of the Coalition of Environmental Intervenors in this case submitted a second letter, September 13th.

That letter outlined in some detail a new set of concerns that Attorney Plouffe had based on the large part of his review of those documents and also made several requests, including that this morning each Commission member again speak
on the record as to whether they feel they can participate objectively and impartially in this proceeding.

The letter also requested two Commission members, Commissioner Wight and Commissioner Schaefer, consider recusing themselves from this proceeding, and the letter also requested that the Commission deliberate -- at least initially -- on this matter without having a staff recommendation before it. That last issue is not one that we need to resolve at the outset of the hearing, although I'm happy to talk about it with commissioners if that's your pleasure. We could also defer that to the conclusion of the hearing. But the other two issues we do need to resolve right away.

I have asked each commissioner to come prepared this morning and make a statement as to whether they feel under all the circumstances we have here and those circumstances include both the disclosures that were made at the August 1st Greenville Commission meeting, as well as concerns that were outlined in detail in Mr. Plouffe's letter, whether they feel they can participate objectively and impartially on all issues that will be coming up during this proceeding.

I've also asked Commissioner Schaeffer and Commissioner Wight to speak directly to the question of recusal, and the other thing I should mention is, we have a letter that was distributed to all Commission members from Attorney Thaler on behalf of Maine Mountain Power that responds
to Attorney Plouffe's letter, the September 13th letter, and makes certain points in response, including from the perspective of Maine Mountain Power recusals are not warranted in the case of Commission members Wight and Schaefer.

So with that, I would defer to you, Chair Harvey, on specifically how you would like to proceed. I would give every Commission member a chance to speak.

THE CHAIR: I think what we'll do is just go down the line. We'll start down with Gwen and you can each make whatever statement you like. The comment -- obviously Jim Nadeau is not able to be with us today but I believe Jerry will speak on his behalf based on some communications that they had.

Why don't we start with Gwen and we'll move right down the table.

MS. HILTON: I do feel that I am able to participate in the wind power projects in an unbiased, impartial and objective way. I have not been swayed or influenced one way or the another by another person through ex parte communication or otherwise.

MS. KURTZ: I feel that I reviewed all of the materials regarding the procedural issues we're discussing, and I believe I remain unbiased and impartial regarding this wind power application, as well as the other wind power applications that the Commission is considering.

## MR. SCHAEFER: I have read Mr. Plouffe's

September 13th letter and understand that he is requesting either that I recuse myself from ZP 702 or state publicly how I can be impartial.

His concern appears to be based on comments I made to Steve Wight in a phone call from Steve Wight in January. Steve Wight's notes from that conversation apparently describe me as wanting to help the applicant and help with the rewrite.

I voted to deny the application in January -- I, along with majority of my fellow commissioners -- voted to accept the revised application in June. That, I guess, could be interpreted as helping the applicant.

Those actions and comments are on the record and I stand by them. I never intended to nor did I ever help the applicant in any other way that is not fully reflected in the public record.

However, the vote on this revised proposal will be determined by the upcoming hearing and careful analysis of the testimony and, if any, staff recommendations. I go into this hearing with an open mind as always and will do my best. I didn't know how I was going to vote in January; I don't know how I'm going to vote on the upcoming proposal.

With that being said, I am respectfully declining to recuse myself.

MR. REID: I do have a statement that was e-mailed to me from Commissioner Nadeau, who I understand is going to be in
attendance tomorrow. It says, To my fellow commissioners, the applicant, intervenors, and public, due to the increased publicity and comments made since August 1 regarding Maine Mountain Power's application, which also includes comments made between commissioners, I would like to go on the record by making a public statement as follows:

I would like to make it clear to everyone that as decision maker on Maine Mountain Power's application that throughout the process of reaching a decision, I will remain unbiased, impartial, and objective throughout the proceedings.

THE CHAIR: Thank you. I think I can echo those comments. We've obviously been through a lot of discussion here but my -- the oath that we all took to do this job with an open mind and unbiased view still applies, as far as I'm concerned, and I believe that I will do this with an open mind, and let this public record that we're hopefully going to generate here in the next couple of days speak for itself and lead us. I intend to keep an open mind about it. Thank you.

MR. LAVERTY: I'm Ed Laverty. I've spoken on the public record previously about concerns I had regarding potential ex parte communications.

As I said then, I will say now, that I do not feel that they have in any way affected my ability to cooperate in this hearing and the decision regarding this application objectively and impartially.

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I would also just like to say for the record that while this whole discussion of ex parte communication has been unfortunate and rather painful, I think its resolution as we move forward will actually enhance the legitimacy and credibility of the regulatory process, not only as it applies to the Maine Mountain Power application before us, but in subsequent LURC proceedings in the near future.

I look on this as painful optimism.
MR. WIGHT: I'm Steve Wight. I, too, consider myself to be impartial and able to participate in these proceedings; however, the letter sent by Attorney Bill Plouffe to Chairman Harvey on September 13, forwarded to me on September 17th, and sent to the press on the same date has caused me deep concern.

In that letter Attorney Plouffe detailed communications from LURC and commissioners obtained through the provision of the Freedom of Information Act. Mr. Plouffe described the communications as forming an incomplete picture of an egregious plot, collusion, involving me and various others.

Saying it was missing many of the puzzle pieces, he developed what he called a working hypothesis. From my science class days, I know that hypothesis is a theory to be proven.
Mr. Plouffe, lacking the necessary evidence to prove his hypothesis proceeded to create a fictional account of what
might have happened or ways notes could have been interpreted.
In this fictional account, he has misinterpreted notes from the telephone conversation between Attorney Jeff Thaler and Catherine Carroll as an indication that I held conversations with Applicant Harley Lee, and I was further working as an agent of an nefarious coalition in State government to aid this coalition in their "joint goal of an approval" of the original application of Maine Mountain Power, the one which the Commission had already turned down by a vote of $6: 1$ on January 24th.

The letter continues the fictional account with words such as "if," "I suspect," and "apparently," used to attempt to string together the hypothesis. There are two sides to every story.

Unfortunately, Mr. Plouffe has spread his version far and wide, creating an extremely difficult atmosphere in which the Commission must go forward with its work. Therefore, in the interest of the integrity of the process before us and on the advice of LURC counsel, Assistant AG Jerry Reid, I have made the painful decision to bow out to the tactics I have been confronted by and recuse myself from the proceedings of ZP 702.

THE CHAIR: I thank you, Steve, and others.
MR. THALER: Mr. Chairman. This is Jeff Thaler, attorney for Maine Mountain Power. I'd like the opportunity to briefly make a statement on behalf of the applicant.

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THE CHAIR: Why don't you come down front, Jeff.
MR. THALER: Thank you. Mr. Chairman and members of the Commission, I'm Jeff Thaler, attorney for Maine Mountain Power. Some of the representatives are over to the right, my client.

I think that Ed Laverty's phrase about painful optimism best describes what we hope and trust will happen going forward, but we do need to, as the applicant states for the record, some concerns about what's brought us here today and what we just heard.

We know that you, the commissioners, are public servants dealing with a growing workload without a growing salary, at least last I knew. We know that and we appreciate your efforts in listening to the evidence about our project.

We're very troubled and disturbed by accusations and efforts that appear aimed at pressuring commissioners and LURC staff who have said anything positive about this project over the last year, publicly or privately.

Last January each of you publicly stated your views on this project, and Mr. Wight stated his support. That doesn't make him biased or an advocate for that project, just as six of you stated concerns about the two-mountain project, and that doesn't make you biased against Maine Mountain Power.

We think that -- for Mr. Plouffe, for example, in his letter, which I again I appreciate Jerry at the end of his
comments mentioned my response, my response was that we are still being produced documents from LURC and DOC. I was going to bring before you the volumes so far. We've had some of them produced on CD. They're eight boxes high, so I've been preparing for this hearing. I haven't gone through all the boxes, I confess, but I didn't want to see a rush to conclusions here that from Mr. Plouffe were suppositions and guesses and frankly selective portions of the record as we have them.

It's wrong and unfair, for example, to suggest that Commissioner Schaeffer -- and I appreciate your decision not to recuse yourself -- talking about redrafting of the decision when it was Mr. Plouffe's own client, himself, last January who held a press conference a couple days before the meeting and at the meeting attacked the format of the decision. The drafting and the format of it was an issue they raised, not us.

Likewise, for Mr. Plouffe in his letter to say that a meeting held by three commissioners -- Mr. Laverty, Mr. Nadeau, and Mr. Schaefer -- with LURC staff to talk about energy issues generally and what you wanted to learn from the State expert agencies -- DEP, PUC, and others -- what questions you had in his letter, he said that was unlawful.

What he doesn't say in his letter is that two days earlier Commissioners Kurtz and Hilton had the same meeting with LURC staff on the same topics and all the discussions that

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you had resulted in the August 1 proceeding where you asked questions and you got answers from the PUC and others.

We think it's unfortunate and interesting that
Mr. Plouffe's letter omits that the first meeting that took
place and that it was because two of those commissioners -commissioners Hilton and Kurtz -- happened to be the ones who had direct conversations with Mr. Plouffe's client, Ed Marsthill, which were without notice to anybody else and certainly not to the parties here.

We're not asking for the recusal of any commissioners because of that, but we do need to point out in the record that the only, only hard evidence of any communication on substantive matters in this proceeding between any party and any commissioner about our project was Jody Jones, unsolicited, volunteering, telling the commissioners on that site visit Audubon's position on wind power, the identical position that's the first sentence of her prefiled testimony in this case.
That was wrong and that was unlawful.
But we're not asking for recusal of anybody who was exposed to that by Ms. Jones because we have trust and faith in each of you in terms of your impartiality and objectivity on this project.

This is a situation where you've all sworn oaths when you became commissioners, you made statements on the record on August 1, and we take at face value and place our faith in your
hands that you mean what you say. We think it's regrettable that other parties or party won't take those statements or doesn't appear to do so at face value.

Let me just say in conclusion -- and I appreciate your consideration this morning -- we have from Day 1 on this project wanted it to be evaluated, considered, and decided on the merits. That's why we're here, that's what you're here for. We want it decided on the evidence in our application, in our prefiled, and in the testimony and questioning you're going to have over the next couple of days.

We don't want any commissioner or staff member to feel that they shouldn't ask a question that might appear critical of an opposing intervenor because somehow that might look biased, and we're afraid that Mr. Plouffe's letter was intended to have that effect, to make you bend over backwards and thus appear more critical and distant from us than them. I certainly ask you not to do that and I trust that you won't based on your comments this morning.

We think that it's regrettable that Mr. Wight has recused himself, but we respect his decision and we respect his concern for the integrity of the process, and we agree, this has been a painful discussion for anyone, and one that in my 30 years in practicing law and many years in front of this Commission and the Board of Environmental Protection I've never seen the type of accusations -- or at the planning board level

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in this state -- that have been made in that letter.
We believe and trust that you will be unbiased, that you will be even-handed, and that you'll consider all the evidence and whether we have provided you sufficient evidence to be granted approval of the preliminary development plan and the rezoning.

We're ready to show you we deserve such approval and I thank you for your time, Mr. Chairman.

THE CHAIR: Thank you. I assume that Mr. Plouffe might want to make some comments.

Yes, he does.
MR. PLOUFFE: Thank you very much. I knew what -- I knew that writing my two letters would not be well received. It's very difficult to represent groups and make a decision to do what I did. It's very difficult for Steve Wight to do what you did, Steve, and I appreciate what you did. You've been on this Commission for 20 years and it's a tremendous amount of service.

I had my jaw dropped at the Greenville High School when I heard Ed Laverty say what he said. I knew nothing about any of these things, nothing.

In my many years of appearing before boards and commissions at the State level and at the local level, I had never heard what I heard Ed Laverty say happened.

I was just trying to in the end find out the truth,
what happened, and I had actually hoped this morning that beyond just what Jerry said responding to what Bill Plouffe said in the pieces of the puzzle that he got from the Freedom of Access Act, there may have been a more thorough discussion of what has happened in this case for two years.

What I found in my Freedom of Access Act request was extremely disturbing to me, but I don't have all the pieces of the puzzle. I happened to interpret some cryptic notes and think maybe this is what happened? Yes. If that's not what happened, I wanted to hear about it.

I was just trying to get out in the public what is going on here apparently out of the public hearing and sight to some extent.

Do people make mistakes in these processes?
Absolutely, yes. I represent a number of municipalities with planning boards and boards of appeals. Do those people, my clients, make mistakes sometimes along these lines? Sometimes. But some of the things that were done in this case I've never seen done at a municipal level.

I was just trying to get what is the truth, get it out all in the open, let's decide how to address it, and then let's move forward. I was doing it not just for this case but for the future perceptions of this agency by members of the public as you go into some very, very difficult proceedings.

I consider the next several months maybe watershed 16
months for this agency. What you have to do with the CLUP, Plum Creek, other wind power projects are so important, and it's really important that everyone feels that everything is being done in the public.

It was not easy for me and my client to do what we did. I appreciate your taking it up. I very much appreciate the disclosures that were made in Greenville and the advice that Jerry Reid has given to you.

THE CHAIR: Thank you. Any other commissioners feel they need to say any more on this subject? Are we ready to move ahead?

MR. THALER: Mr. Chairman, if we're ready to move ahead, there was a point of procedure I think the parties just want to address, and I know Amy Mills, I guess, is not here, but while Jerry's here, just about redirect, recross, and rebuttal so all the parties will know the ground rules ahead of time.

THE CHAIR: Amy, where are you? Hiding in the back. Come right down front. This is your question. I don't think we're going to bring Jerry into it.

MR. THALER: I wasn't trying to put Jerry on the spot.

THE CHAIR: Who's going to participate in this discussion, Jeff, this procedural discussion? Is Mr. Plouffe?

MR. THALER: It was just a clarification.

THE CHAIR: Okay. Well, ask your question. It sounds like it's not a yes or no answer on my part.

MR. THALER: At least one may be.
THE CHAIR: Okay.
MR. THALER: I think all parties just want to know ahead of time before we start whether there will be the opportunity for redirect and recross-examination after questioning is completed of a party as blocked out in the time or not.

THE CHAIR: Did we redress this is any of the prehearing orders?

MR. THALER: The prehearing order quoted the rules that -- I don't have it right in front of me to quote -- it
says parties can have redirect and recross unless the discretion of the chair says no or not. It's in your discretion ultimately. We just want you to exercise your discretion before we all get started so we know we're on the same page.

THE CHAIR: You're asking me to exercise my discretion on something I don't know about; right?

MR. THALER: Well, I'll let you consult with your attorney.

THE CHAIR: I think that -- not being an attorney -it's hard to sort through rebuttal and closing statements and all that, but I believe that -- obviously you'll all have an

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opportunity to provide a closing statement at the end of the hearing, I believe that's correct, if you want to make one to us. Obviously, a limited amount of closing statements are provided to us.

Your question has to do with an individual witness, the way I understand it, and whether or not you can -- you can cross-examine him, your own witness I guess, based on if Mr. Plouffe does something you don't like to elicit an answer that you're uncomfortable with, you can go back and ask your witness a question that may, in your mind, could correct or correct the record I guess is what you're saying.

MR. THALER: Right, redirect normally. Bill and I just consulted with the other parties who again are sharing our position. But it's a situation where the parties -- we don't do direct examination in a typical way where we question or examine our witnesses and then cross happens and then redirect as in court.

The witnesses come before you, present a summary of their prefiled, and in that summary they can, as we did a year ago and was provided for in the rule, respond to prefiled statements of others that we're already aware of.

Then there's cross-examination. If bill, for example -- using a hypothetical -- were cross-examining one of my panels and maybe a witness wasn't able to finish an answer or there was something that needed to be clarified, then
redirect, I would be able to get up and just clarify certain points and then sit down, that would be redirect.

Rebuttal -- and we needed to clarify this point as well from the procedural order and then the aftermath of that -- normally as we understand it is -- we've all got prefiled testimony, so it's not like a typical trial, and we're all -- in some respects witnesses can rebut what was prefiled during their presentations in questions and answers.

Rebuttal at the end of the hearing is after, for example, again, hypothetically, my clients are questioned, we're done, tomorrow something comes up or some of Bill's witnesses say things that weren't in the prefiled and that therefore we couldn't know were going to be said, that we'd like to be able to briefly address at the end of the hearing in rebuttal to that before we all leave here.

That rebuttal then indicates only the things that are new arising at the hearing that people didn't know about beforehand. You don't get a second bite of things that were prefiled.

Bill, do you generally agree?
So I think there is room built in the schedule for rebuttal at the end, but it's not supposed to be people lying in wait until the end to talk about things that were prefiled is what I'm getting at.

So rebuttal at the end should be fairly limited and

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focused.
THE CHAIR: Your question had to do with --
MR. THALER: Redirect.
THE CHAIR: During cross-examination of witnesses what happens after you're done cross-examining Bill's witness? Does Bill have the right to come back and ask and pose a question of his own witness is what it amounts to?

MR. THALER: Correct; and same for me or any other party.

THE CHAIR: Obviously the rules speak to that and allow it to happen by leave; is that correct?

MR. THALER: That is absolutely correct. I will just clarify for the record, the procedural order actually didn't address this issue. It had it in the title but didn't discuss it.

THE CHAIR: Well, I think that, you know, I guess in discussing with Amy that we'll leave it by my leave. Obviously if there's some compelling reason and you can convince me of that, I'll be happy to allow you to do that but hopefully don't take advantage of it because we're just going to just -- and it obviously has to be very relevant to the testimony that was just given I think. Isn't that how this works?

MR. THALER: That's fair, and I can certainly live with that, and I think it's appropriate that at the time, if, for example, when all the questioning is done by the panel,

I'll come up and say, Mr. Chairman, I would like to ask redirect of Witness A or B on a certain topic and you can exercise your discretion.

THE CHAIR: Okay. I'll try to do that for you. Is that okay? As I say, we're committed to building as complete a record as we can, so we're obviously not going to try to limit it, but I don't want to get the thing extended out forever either.

MR. THALER: We don't either. And we would love to see this finish on time and ahead of schedule and under budget on Friday. Thank you.

THE CHAIR: Well, are there any other things?
Obviously to start this session I have to read into the record a formal opening statement, so I will do that.

This is the opening statement on Zoning Petition ZP 702, Maine Mountain Power, LLC, Redington Township, Wyman Township, Franklin County.

Good morning everyone. My name is Bart Harvey and
I'm the chairman of the Land Use Regulation Commission and the presiding officer of the hearing.

Commission members present today for the hearing,
Gwen Hilton, Rebecca Kurtz, Steve Schaefer, Ed Laverty;
Commission counsel, Amy Mills; staff members present, Catherine
Carroll, director; Marcia Spencer-Famous, senior planner; and Melissa Macaluso; our court reporter is Lisa Fitzgerald.

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Today's hearing is being held pursuant to the provisions of Title 12 MRSA Section 685-A, and the hearing will be conducted in accordance with Chapter 5 of the Commissions for the Conduct of Public Hearings.

This hearing is being held to receive testimony in the matter of Zoning Petition ZP 702 submitted by Maine Mountain Power, LLC, to rezone 487 acres of Redington Township, Franklin County from a mountain area protection subdistrict to a planned development subdistrict to develop a wind power facility.

Within the planned development subdistrict, the wind power facility would include 18 turbines on Black Nubble Mountain, access roads, and underground utility lines.

The petitioner's adjacent parcel on the Redington Pond Range would be restricted from development as a wind farm.
Outside the planned development subdistrict in Redington
Township and Wyman Township, the wind power facility would
include access roads, utility lines, a substation, and a
maintenance building.
The purpose of this hearing is to allow the petitioner, intervenors, and government agencies to present summaries of their prefiled direct testimony and evidence as to whether the development proposal meets the criteria for amendment to land use boundaries as specified in Title 12 MRSA Section 685-A Subsection 8-A of the Commission's statute and
the relevant provisions of the Commission's land use district and standards.

We will first hear from the Commission staff, who will provide a brief overview of the proposal and administrative history. Representatives of the petitioner will then provide a summary of their proposal and their prefiled testimony.

Following, the petition of witnesses from the National Park Service and the intervenors will present summaries of their prefiled testimony.

The State soil scientist and representatives of the Maine Public Utilities Commission and Maine Department of Inland Fisheries \& Wildlife will be available to answer questions about their review comments.

At the conclusion of the testimony from each witness, cross-examination may be conducted first by the Commission, then by the staff, next by the petitioner, and finally by the intervenors. However, Commission members, staff, and counsel for the Commission may ask questions at any time.

This just gets to the issue we just spoke about. Before the testimony is presented, anyone requesting time for rebuttal at the end of the hearing should indicate their wish to do so, and the request will be taken under consideration as the hearing proceeds, and I think Amy is suggesting that we need to hear from you at this point or -- when I finish reading 24
this -- as to whether you anticipate you want rebuttal time at the end of the hearing. That would be sometime Thursday or Friday.

All witnesses must be sworn and will be required before they give testimony to state for the record their name, residence, business, or professional affiliation, the nature of their interest in the hearing, and whether or not they represent another individual, firm, or other legal entity for the purpose of the hearing.

In addition to being transcribed, we will be recording the proceedings today, so I would request that you speak clearly and use a microphone.

All questions and testimony must be relevant to the Commission's criteria for rezoning, criteria for approval of this project. Irrelevant and unduly repetitious material will be excluded.

The record will remain open for comments after the hearing as is typical and I will -- we will discuss -- I'll read that into the record at the end of the hearing. We'll talk about the timing, the closing dates and all that.

If you want to receive -- for people attending the hearing that want to receive a copy of the final action taken by the Commission as a result of this hearing may leave their names and addresses with the staff.

I guess at this time I need to swear in any witnesses
who plan to testify today. I don't know how far we're going to get today, but I'll probably have to do this again tomorrow.
(Witnesses were sworn en masse.)
THE CHAIR: We'll have to do this again tomorrow.
We're going to start by asking Marcia to do the administrative
history and offer the exhibits for the record. When she's done that, if anybody -- the rebuttal testimony question, if anybody wants to respond to that, I would appreciate it. And then we'll have some idea of what's going to happen at the end of the hearing.

Marcia.
MS. SPENCER-FAMOUS: Do you want to do the rebuttal right now?

THE CHAIR: If people are ready to indicate to me. I'm assuming they're all going to want to do rebuttal. It's almost a given. I don't know why I bothered to ask.

MR. THALER: I guess, Mr. Chairman, for the applicant consistent with what we just discussed, I don't know if anybody knows for sure whether they will need rebuttal because we don't know if anything new will come up during the hearing, but I think, for myself -- and suspect you're probably right -- I'd at least like to reserve the opportunity.

THE CHAIR: I understand. That's why I say it's probably a question that doesn't need to be asked.

MR. PLOUFFE: I agree.
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THE CHAIR: At this point, just to make it simple, I'm going to assume that everybody's going to want to do a rebuttal and we'll allow you to do that.

MR. THALER: Thank you.
THE CHAIR: Marcia.
MS. SPENCER-FAMOUS: I'm not going to read the entire
Exhibit 20 because it's six pages long, but I am offering the
entire thing to be filed. As an explanation, the record includes everything from last year, everything in between. This was as I was advised by our AG and that's all in the record.

I'll start reading with Item 9 of the administrative history, which is a reopening of the record. There are copies available for everyone of this entire staff statement that's going to be entered into the file.

I also have copies available of the exhibits' list, which also is an expanded version of last year's just added on to the end of it. I've distributed those to the commissioners. I've also distributed to the commissioners that additional public comment that came in the last couple of days that didn't go into their Commission packets because I had said that I would previously. There are also copies of those for anyone who would like a copy.

Reopening of the record. On May 9th, 2007 the petitioner submitted a request to reopen the record to allow a
revised proposal for an 18 -turbine wind farm on Black Nubble Mountain.

On June 6, 2007 staff recommended that the record be reopened and after deliberation the Commission voted to reopen the record.

The Commission set June 20th, 2007 as the date for the prehearing conference. On June 20th a prehearing conference was held. The prehearing conference summary and memorandum were sent to the parties on July 17th, 2007.

The parties previously granted intervenor status in 2006 would continue but no opportunity for new parties to request intervenor status was provided.

In 2006 Central Maine Power and the Coalition to
Reduce Dependence on Foreign Oil dropped their intervenor status. In August of 2007, intervenor Western Mountains Foundation requested its status be changed to interested matter. In 2007 intervenors Natural Resources of Council of Maine and Conservation Law Foundation expressed support for the revised proposal.

On July 12th the petitioner submitted a revised proposal to rezone 487 acres on Black Nubble Mountain from a mountain area protection subdistrict and soil and geology subdistrict to a planned development subdistrict to develop a 54-megawatt Black Nubble wind farm.

The proposal also includes a provision to restrict
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from wind power the petitioner's 517-acre parcel on Redington Pond Range. The proposed wind farm would include 18 3-megawatt turbines, 6.5 miles of new gravel access road, upgrades of existing land management road, above- and below-ground 34.5 kV and 115 kV utility lines, a new substation, and a maintenance and operations building, and other associated activities and structures.

The turbine towers would be 253 feet in height. At the tip of the blade extending upward, the height would be 410 feet. During construction approximately 63 acres would be cleared above 2700 feet in elevation. Of the 63 acres, 51 would be disturbed, as well as cleared, and prepared for construction, approximately 30 acres above 2700 feet in elevation would remain unvegetated. Approximately 423 acres of the petitioner's 487 -acre parcel -- or 89 percent -- would not be affected by the project.

On August 2nd prefiled testimony was submitted by the party. An objection to one section of the prefiled testimony submitted by intervenor Appalachian Trail Conservancy was submitted by the petitioner.

Intervenor TransCanada did not prefile testimony but sent a letter stating its position about the issue of transmission congestion.

Three procedural orders regarding the hearing testimony were sent to the parties on August 9th, 20th, and

September 11th. The final hearing schedule was distributed to the parties on September 13th, 2007.

The matter being considered at this time is the rezoning parcel on Black Nubble Mountain and the associated preliminary development plan. A final development plan and the permit to construct will be considered only if the rezoning is approved.

This is a continuation of the record that closed August 21st, 2006. The revised proposal for a 54 -megawatt wind farm is now being considered. The original proposal submitted in 2006 was a 90 -megawatt wind farm and all materials received by LURC relating to Zoning Petition ZP 702 from the time the record closed in August 2006 until the record was reopened on June 6, 2007 are included in the exhibits.

I am now offering Exhibits 1 through 27 to the file.
THE CHAIR: Does anybody need us to read to you all those exhibits or are you all satisfied?

MR. THALER: We will trust you they are what she says they are. We'll get copies later today.

THE CHAIR: Thank you. Is that it, Marcia, for you?
MS. SPENCER-FAMOUS: That's it.
THE CHAIR: Well, I believe then that we are
prepared -- now at the point where the applicant will be presenting their testimony, and I guess we're going to have them come up front here.

MR. THALER: Yes, Mr. Chairman.
THE CHAIR: Why don't you come right up here.
MR. THALER: We have four people on our other two panels. If you wanted to break when these two panels are done

THE CHAIR: I'll ask Lisa when we get there if she needs to take a few minutes. We'll give her 5 minutes. You can take a few minutes to reshuffle the deck.

MR. THALER: That's why it might be appropriate --
THE CHAIR: We won't count that time against you,
then.
MR. THALER: Thank you very much.
Mr. Chairman, I think if you're ready, we're ready to proceed, and Randy Mann will start us off.

MR. MANN: Good morning Mr. Chairman, commissioners, and LURC staff. My name is Randy Mann, I'm responsible for wind energy development at Edison Mission Energy. I'm speaking today on behalf of Maine Mountain Power.

On behalf of our team, I would like to first say thank you very much for taking the time to listen to us today and the opportunity to present the Black Nubble project.

It will be a 54 -megawatt wind project using 18
3-megawatt wind turbines on the Black Nubble Mountain. The project represents an investment of over $\$ 100$ million in Franklin County and western Maine.

We've assembled a really top-notch team to bring this project to fruition. It includes my company, Edison Mission, which is one of the largest owners and developers of wind projects in the US; we've also got Harley Lee and Endless Energy Corporation, a development company here in Maine. Vestas, the No. 1 wind turbine manufacturer in the world, and Sargent Corporation, it's highly experienced with building roads, including for wind projects, in the mountains of Maine. It's a good team; I think you're familiar with most of those companies.

Why wind energy? Quite simply wind energy is the most cost effective, most valuable source of renewable energy and that's why it's growing rapidly across the country, but you can't build it everywhere. You need to have certain features, including a great wind resource. The western mountains of Maine have that resource and that's why we're here today. Just so you know, this is a picture of the same type of wind turbine that we're proposing to deploy up on the Black Nubble Mountain.

How does our project benefit Maine? Quite simply our project generates clean renewable energy and will generate enough energy to serve about 21,000 homes here in Maine.

What that does is really two things: First of all, it helps Maine diversify away from its overreliance on fossil fuels and natural gas generation. We'll talk about why that's really important.

The second thing that our project will do is it will reduce air pollution, about 400,000 pounds per day of emissions, and those are emissions that cause smog, acid rain, global warming. Our project will reduce those emissions and benefit Maine.

I know that you remember that we were here last year to talk about a two-mountain project and we heard you loud and clear that that project was too big, you didn't want to see it on Redington Mountain because you were concerned about that peak, and you didn't want to see it so close to the Appalachian Trail.

We heard you loud and clear, we listened, we went back and thought about it, and worked very hard to reconfigure our project so that we could take into account your concerns. What we have today is a smaller project, it will leave Redington Mountain untouched and untouched from wind development, we have one mountain only three times as far away from the Appalachian Trail, but it will still deliver significant air pollution and economic benefits to Maine.

Here are the numbers. It's an eye test of a chart but it's got a couple of key numbers in there that I want you to focus on. One is that because we have this smaller footprint on Black Nubble only, we're disturbing a lot less acreage. Clearing above 2700 feet is less than half.

We're also needing to build a lot fewer roads, almost
half as many new roads. So really, in moving away from Redington Mountain, we have very significantly down-sized the footprint of our project but we still deliver those important air pollution benefits.

We'll talk today about how we chose the Black Nubble site, and my partner, Harley, has spent over a decade looking at more than a dozen sites for potential wind energy development across New England.

We settled on Black Nubble because it's got great wind regime, because it's very close to high-voltage transmission system that's necessary to get the power out to Maine consumers, and there aren't that many places where we're close to the high-voltage transmission system and you have that outstanding resources. Moreover, we're close to existing development, we're close to logging roads, and we'll make use of those in our project.

Again, we're close to development. This is just a list of some of the things that are in the same neighborhood as the Black Nubble project: Ski resorts, logging, logging roads, biomass power plant. A lot of development in this area, and that's important to us as wind power developers because, again, we are able to use some of those existing roads, some of those existing transmission lines, power substations to help our project get power to market and minimize the disturbance to the environment.

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We've engaged a whole series of experts to help us design this project and plan this project so that we'll have a minimal effect on the environment. You're going to hear from a lot of those experts today in each of these areas. As you listen to them, what you'll be hearing are all the ideas and steps that we've taken to try to develop this project again with the least impact on the environment that we can have.

We'll have experts talking about soils, we'll have experts talking about wetlands, we'll have experts talking about wildlife, and as you'll hear from them, you'll hear their conclusions that we've minimized the impact on each of these areas developed in the project.

We'll also talk about how we're not touching the Redington Mountain and leaving that site undisturbed from wind development.

Wind turbines are big, we know that. I like to think of them as being majestic. When you're standing right up close to them, they're big. But because this is a wooded area, a mountainous area, our visual expert will show you that from over 95 percent of the area surrounding this project, you won't be able to see the turbines. When you do see them, they'll explain to you the size that they'll be, small.

We also know that this project -- that the Appalachian Trail runs through this area, it's an important feature of the land here. By moving our project off of

Redington and onto Black Nubble only, we're three times as far away from the Appalachian Trail. Our visual experts will show you the views that you can see from the Appalachian Trail of this project. I think you'll see that the project is visible only from a view places on the Appalachian Trail and then it's a small view.

Our project will generate a lot of benefits to the local community. There's jobs, construction jobs, operating jobs, and we're going to make it a priority to hire locally to fill those jobs. That's just good business practice for us.

We also have significant tax payments that we'll be making, about half a million dollars a year. Again, leaving much of the mountain untouched, all of Redington and most of Black Nubble, and that will enable the mountains to be maintained for recreational uses that they've been generally used for.

We've been really gratified and excited that the public has recognized the benefits of our project. Independent polling has shown that supporters outnumber opponents of this project 9:1. We've also got thousands of people signing petitions in support of the project, and many of Maine's leading organizations have come out supporting this project. Some of those organizations are here today to testify in support of the project.

In summary, we're here because the mountains of
western Maine have a really strong wind resource, and in particular, the Black Nubble site is a very good place to develop wind. It's got the wind regime, it's got proximity to transmission, it's got proximity to the fringe of the LURC jurisdiction, and it will enable us to reduce Maine's dependence on fossil fuels and to reduce air pollution that comes into Maine.

We have a well-designed project, we think it attempts to minimize the impact on the environment, and we've got a good team pulled together to bring this project to fruition here in Maine.

With that we're going to start with Panel 1. It will include myself, Harley Lee from Endless Energy, John Hanisch from ARCADIS, and Steve Garwood from PowerGrid Strategies, and also Matt Most from Edison Mission Corporation.

We're going to be talking about demonstrating need, best reasonably available site, the benefits of the project, how the project is consistent with the LURC standards, and the public support that this project has gained. Matt.

MR. MOST: Thanks Randy. Good morning, my name is Matthew Most, and I'm with Edition Mission Group. I have nearly ten years in the power and emission allowance markets. I've been working with Edison Mission subsidiary companies.

As a Maine native, I'm real excited to come home to support this project and try to demonstrate the needs that this
project helps to accomplish. As we all heard at the August 1st meeting with a panel of Maine regulatory experts, Maine has a need to decrease its overreliance on fossil fuels, a need to reduce electricity prices and volatility of electricity prices, a challenging goal to meet a very aggressive and local energy portfolio standard, and finally, also an aggressive goal to meet Maine's obligations under the Regional Greenhouse Gas Initiative.

As the PUC pointed out, there's a crucial need to decrease the region's reliance on fossil fuel generation and to reduce the electricity costs and price volatility that we're seeing in the electricity system delivered in Maine.

This chart points out exactly what the source of that problem is. This chart was presented by the OEIS at the August 1st meeting. As you can see, there's a significant reliance on fossil fuels in Maine. The yellow and the purple areas show the oil and natural gas components, the fuel components that go into the generation mix for power generation here in Maine.

Natural gas is a very volatile product. Natural gas experiences this volatility largely due to the fact that it's a commodity that's difficult to store. As a result, it makes the supply of natural gas a challenge. The supply of natural gas can be affected by winter weather for heating demand, it can be affected by summer weather for air conditioning demand.

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It's affected dramatically by hurricanes where hurricanes disrupt the supply of natural gas by affecting the Gulf of Mexico and the intensity of our natural gas project there.

And finally, natural gas is impacted by oil pricing, since natural gas and oil can be substitutes for each other in our homes for heating purposes and for power generation.

Now, since natural gas is such a volatile commodity, it makes power prices very volatile. As you see in the chart, the yellow portion of the chart shows that natural gas makes up the bulk of our electricity generation in this part of the country. So as a result we see power pricing move dramatically with natural gas.

Now, any renewable resources that we can add to the mix of the supply of electricity in this area has a tendency to reduce the amount of that fossil fuel that is consumed to make electricity and thus reduce that dependence, reduce that volatility effect, and reduce costs.

Maine is also challenged with very aggressive
Renewable Energy Act. Maine has shown some real aggressive leadership on this issue. Maine is requiring a 10 percent increase in the amount of renewable generation that is consumed in the state of Maine.

Now, this Act requires up to 25 projects of the size that we're talking about here today. It's a very sizable goal,
and projects like the Black Nubble project were pointed out by the PUC of the precise type of project that's required in order to meet this aggressive new law.

Finally, the Regional Greenhouse Gas Initiative is another area where Maine is demonstrating aggressive leadership really for the entire country, and the standard here is a 10-percent reduction in greenhouse gas emissions by 2018.

Now, again, at the August 1st meeting
Commissioner Littell pointed out that we need to do everything
we possibly can in order to meet this aggressive goal, and that includes, importantly, the development of renewable energy sources simply because they have the ability to displace or replace fossil fuel-based electricity generation.

MR. LEE: My name is Harley Lee from Endless Energy. I'm going to talk about why we think Black Nubble is the best reasonably available site, and I'll give you the selection criteria we used, a little bit of background on some of the sites we've looked at, and then finally, why we think it's the best reasonably available site.

Also, I want to point out, this PowerPoint, we will have a handout of this available to give to you after we're done.

The siting criteria we used, first and foremost, is the strong wind resource. By having a strong wind resource, it allows you to produce more power using fewer turbines and do it
economically. It's the single biggest driver of economics of wind. Being close to high voltage power lines is extremely important.

We looked at some sites that were distant from power lines, and the footprint of the power line alone would have been twice the entire footprint of our project. So it's easy to overlook that. We looked at sites, but the power line oftentimes can be a big, big driver. So one of the advantages of our site is that we are so close.

Close to access roads, obviously is helpful. The topography is important, it's easy to look at a wind resource map and says there's 500 sites or something like that. But the overall vast majority of sites simply aren't site appropriate for wind development, constructability.

And finally land available for purchase and nearby land for easements. We mentioned those criteria. Obviously there's permitting criteria. LURC emphasizes adjacency. They like to see new development near existing development, and obviously if you could be on the fringe, it helps preserve the core of the jurisdiction, and we're on the extreme fringe for this site, environmental suitability, and compatibility of land use patterns.

This map shows some of the sites we've looked at. There's basically two categories. We looked at several coastal sites throughout New England and mountain sites, and in the
middle we also did a measurement program for Madison Electric. We've done pretty much what the wind resource map shows, is that the ridges really are much, much stronger than the coast, and the coastal site, although you can generate some power, you won't be able to generate a large amount of economical power.

This is the wind resource map. You've probably seen this a few times by now. The key point to mention here is that people look at this map and say, oh, we should do it on the coast, but those are really offshore resource ratios, those lines, and there's not a single offshore wind farm in the US. The water is too deep there, it's really not practical.

What that leaves you with is the best resources on the ridges, but unfortunately most of the population, as well as the load that Maine is closer to the coast, you get most of the power lines down there and the wind up here, and if you look at the intersection of power lines and wind resource, you've got one major power line that feeds this area, and that explains one of the big drivers of why we're here is because it has that combination of power line and wind resource.

This is an aerial photo of the area. Once again, we worked very hard to be adjacent to the existing development. There's the Sugarloaf Ski Resort right out -- well, we're in it -- golf course, condos, parking lot, sewage lagoon, and on the other side of our project we've got the Saddleback Resort, we have the Navy base here with helipads and torture chambers 42
and interesting things going on and machine gun fire.
Once again, that power line mentioned comes in here and as I said before, it's very close to our site. As I said before, it's very easy to overlook the proximity of the power line. That's a very important factor.

So in summary, we think we found a good wind resource on Black Nubble, it's topographically suitable, it's close to power lines, there's existing access where you go up to the mountain and partway up, that allows us to extend that road to get to Black Nubble, and we're able -- it's private property -we were able to negotiate a purchase of it, and we were able, also, to get easements.

Meeting LURC's criteria, once again, it's near existing development and the Navy base and other development. It's right on the fringe. It's compatible with nearby uses.

I know a big concern of yours is the trail, and I think it's important to note that the Western Mountains Foundation, when they were talking to us about the right-of-way, they didn't want to go around the mountain, they wanted to go right up and over it though -- it would actually be between the turbines. It's not that unusual.

Mars Hill is part of the International Appalachian Trail, so those turbines are right in the International Trail. And in California, the Pacific Crest Trail, I've hiked that section with the Sierra Club. It goes right through the middle
of the turbines. Hiking and wind, I don't think, are incompatible at all.

Finally, we figured there would be significantly less impacts with a single-mountain project than the two-mountain project, and our biologist will be explaining that more a little later.

MR. GARWOOD: Good morning. I'm Steve Garwood, independent consultant. I've been engaged by Edison Mission Energy to assist on transmission access/intertransmission matters.

I testified on behalf of the earlier Redington project and I serve in the same capacity on the new proposed Black Nubble project.

As I explained in my testimony -- and as I believe you are all aware -- Central Maine Power Company had conducted system impact study at the direction of the Independent System Operator of New England. Without going into all the details of that study, that study was to assess the impacts to the reliability of the grid from the proposed 90 -megawatt project. They concluded that that project could safely reliably -- even if connected to the grid with a few modest upgrades -- the ISO New England has approved that study as being applicable to Black Nubble.

One of the questions regarding transmission access I understand that has come up by several commissioners and

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perhaps others is whether there will be sufficient transmission capacity to accommodate the full output of this proposed project and do so in a way that doesn't adversely effect the dispatchability of some of the existing generating resources in the area, namely, the biomass plant, Boralex, and the Wyman hydro and Harrison hydro stations.

Although the impact study wasn't done for the purpose of assessing congestion, the study does contain information that allows you to get some sense of whether congestion could pose a problem.

I reviewed the study for that purpose and concluded that there is sufficient transmission capacity to support a full output of this project and not do so in an adverse way to affect the dispatchability of those other existing resources.

I have a chart here that tries to demonstrate that. In this area here you see the existing generation, plus the proposed project, which gives you a maximum generation capacity of 259 megawatts.

Transmission capacity, which is shown by the dark green bar and the whiter shade bar in the middle varies seasonally, so I'm showing figures for winter season conditions and summer season conditions.

This darker shorter bar represents the net generation in each of the two seasons that is available to be exported out of what we call the Wyman hydro export area. And as you can
see, it is far less than the existing transmission capacity of the system from 115 kV lines that radiate away from the Wyman hydro area.

So in the winter season, with all three lines in service, there's 587 megawatts of transmission capacity, only needed to export 229 megawatts of net generation.

The middle bar represents what you have for capacity if you were to lose one of the three lines, so sort of a worse case condition. Even with one line out of service, you still have 428 megawatts, which is far in excess of that needed to export the generation from these facilities in the area. Those conditions prevail in both winter and summer seasons.

Thank you.
THE CHAIR: Mr. Garwood, there was a difference between the total capacity to generate and the amount that was being sent out. What is the difference?

MR. GARWOOD: You have load, add losses that consume some of the power in each of the areas, so for instance, there's a small amount of load that is consumed from the Bigelow substation for instance.

So even today, full output capability I believe of the biomass plant is 47 megawatts, 2 megawatts of that is actually consumed locally. So if you look at the studies that are done by CMP, they show that you only have about 45 megawatts from that bioplant actually coming down the line from

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Bigelow to the Wyman hydro station.
THE CHAIR: You're basically saying that they provide the power for the local region, the people, like this facility or the town of Eustis or Stratton and that sort of thing?

MR. GARWOOD: Exactly.
MR. HANISCH: 229 here is the total amount of power that's being generated by Black Nubble, the biomass, the hydro, and the two hydros.

The air fills up, you get 229 after you take off what's being bleeded for the local area. The capacity of the transmission lines have 570 megawatts, so there's plenty of capacity.

You can get more than this 229 out. That's important for my part of the presentation because I'm going to talk to you about the air quality benefits.

If you couldn't get it out -- if this bar was bigger than this bar, then you would be displacing electricity from one of those other four facilities. Since this bar is lower
than this bar, it can all get out, so you're not displacing electricity. That was a big concern at the last hearing.

What I'm here to talk to you about today and I'm very excited about this -- first of all, I should tell you who I am --

THE CHAIR: Please.
MR. HANISCH: I'm John Hanisch and I'm with ARCADIS,
and I'm also the project manager for this wind farm. I'm a recognized national air quality expert.

I'm very excited, as I said. First of all, in response to what we heard you say, we've reduced the footprint.
But at the same time, we have reduced the visibility, the environmental impact, but we still have very strong environmental and economic benefits.

We document in our revised application that we will be displacing 30 fossil fuel fired power plants. And as Commissioner Littell said, there is a clear air quality benefit to displacing dirtier generation with clean Maine energy.

We'll also -- because of that, because we will be displacing fossil fuel, we will be reducing -- and this is all in the application and in our prefiled -- we'll be reducing over 40,000 pounds of air pollution per day. That's equivalent to the taking 12,000 cars off the road, and it's also equivalent to burning over 26,000 gallons of oil per day.

One of our big concerns up here and across the world is global warming. Our application provides information from several studies that show global warming is changing Maine's character. Many of those studies talk about the impacts it will have 50 years from now, but some of those studies talk about the impacts that are being observed today right here in Maine. Right here in Sugarloaf the ski season is being reduced.

As the Union of Concerned Scientists say in a 2007
report, which is part of our submittal, the song of the
Bicknell's thrush could eventually be muted across the entire region as the suitable habitat gradually disappears because of loss of trees and the right environment.

Our wind farm -- and every wind farm we build in Maine -- will help fight against global warming.

As Commissioner Littell has stated, he believes global warming is the largest threat facing our environment today. The ecological and human health impacts are potentially devastating to Maine's character and the quality of life. Wind power will help us protect that habitat.

MR. MANN: In addition to those air quality benefits that John just described, there are economic benefits. First, by reducing Maine's dependence on fossil fuels, we help to mitigate and minimize electric price volatility in price increases here in Maine.

Second, there are good, well paying jobs available for local people, and we're talking about approximately 80 jobs during construction, and then five to ten long-term jobs during operation, and we'll be giving priority for local hiring as I described.

And the third important economic benefit is property taxes. This project will be paying about a half a million dollars a year in property taxes. very confident about the revenue situation: First, there's an

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increasing public policy push for renewable energy, and Matt talked today about the RGGI rule, he also talked about the Maine RPS requirement, and those things -- along with other similar policies -- are causing the value of renewable energy credits to increase. That's an important component of the revenue source of the wind farm, not just our wind but any wind farm. That's continuing to increase.

Second is that a wind project, just like any other power generator, gets paid for making capacity available. The market price for that capacity component has gone up and we expect will continue to go up in part because it's so difficult to site projects here in New England and in the northeast.

The third component -- it's probably the most important one -- is that, again, public policy is recognizing the importance of restricting carbon emissions. What this does is it makes it more expensive, more difficult to generate power from fossil fuels because those are the sources that create carbon emissions.

And so by restricting carbon emissions -- and we expect those restrictions to continue to increase over the life of this project -- it creates higher electricity prices that can be realized by zero emissions facilities like the Black Nubble project.

So for those reasons, we're confident that this project will be economically viable.

MR. LEE: I'm Harley Lee, again. I'm going to talk about the four areas of LURC standards where we believe we are consistent with them: Air resource goals, potential equivalent protection, undue adverse impact, and the principal values of LURC.

First under air resource goals, as we've mentioned before, we're going to pull 400,000 pounds of pollution per day out of the air, which we think this is clearly consistent with this goal.

Potential equivalent level of protection, I guess in order to get a rezoning to DEP, my understanding is we need to provide protection available under the existing P-MA standard. Under that P-MA standard, timber harvesting is allowed in the P-MA, Level 2 roads, mountain resorts -- like the one we're at here and also Saddleback -- and utility facilities. We believe that our project will have similar or lower impacts than those already allowed activities.

This is obviously a picture of our host site here, and I love this picture and I love Saddleback as well, and a lot of people do. But there are pretty significant impacts between the two mountains. It's 1800 acres of development, and our project is a tiny fraction of that. So it's an interesting perspective to keep. This is the second highest mountain in Maine.

Saddleback, there's a great deal of existing
development and more coming, and once again, we're a tiny fraction of that and we're located halfway between these two mountains.

We also believe that we worked very hard to minimize the impacts. We've reduced the number of turbines by using a higher capacity turbine. We looked at some smaller machines, but we would have required a third more turbines and produced a third less energy. So we're using high capacity turbines, which makes the most of a site. It gives us more footprint, too.

We're using existing roads, and we worked very, very hard to site the roads to minimize visibility, and we're using special transport trucks, which allows us to have a narrower road -- rear steering, and front steering, too, for that matter -- in the higher elevations. We're very careful to place those so that we minimize cuts-and-fills.

We've also minimized the clearing of each turbine pad. You visited Mars Hill and saw some of the turbine pads there. We're actually $1 / 8$ the size of the turbine pads. Our engineer will go into that in more detail.

One of the reasons we're able to do that is when we assemble the turbines, instead of putting the whole rotor together, which requires a football field size, we're taking one blade at a time and lifting it up. That allows us to have a much, much smaller footprint.

One of our drivers from the start is to minimize the footprint, and that's one of the steps we've taken, and our engineers will show you some graphics of that.

Turbine bases are varied. The power lines are varied. We're using smaller transmission lines coming down the mountain before we get to where the bigger line is, which reduces the footprint, and we tried to put the power lines in clearcuts as much as possible.

Finally, we've designed and redesigned and redesigned over and over again the roads and transmission lines. We started with about 20 acres of wetland impact and we've gotten it all they way down to $3 / 100$ of an acre. So we're pretty proud of that.

On-site mitigation. Black Nubble, about 90 percent will not be developed. As you know, a key feature of this proposal before you is that our other mountain, Redington, will be restricted from development on the entire 517 acres.

MR. MANN: Randy Mann again. We know that commissioners have asked some questions and expressed some concerns about decommissioning and I'd like to allay those concerns today.

First of all, we think that this project will be generating clean renewable energy on the Black Nubble site for several decades; however, when it becomes time to decommission the project, Edison will guarantee that Maine Mountain Power, 54
the project company, has the financial resources necessary to decommission. In our application there's some detail about how we'll do that decommissioning, but I would like to allay your fears, this is important for us as well, and we'll guarantee that the funds will be there to do that decommissioning.

MR. LEE: Harley, again. Finally, I just wanted to point out consistency with LURC, we're also consistent, we believe that the values of the jurisdiction. One of the nice things about wind and wood working together is that the property that is the least valuable to forestry companies is most valuable to us.

If the trees are squiggly and bent over because of the wind, they have a very low value for timber companies and a very high value for the wind companies. I think there are nice synergies there and it helps the forestry people because they can get rid of low value land, and it helps us because we can produce a lot of clean energy.

Diverse and recreational activities, I mentioned before, the Western Mountains Foundation wanted one of their trails right through the project. We've minimized the impact on sensitive natural resources, we'll discuss later, and we've located on the fringe to preserve the core of the jurisdiction.

MR. MANN: I want to talk for a minute about the broad public support that our project has garnered.

First of all, in poling of Maine residents, we have
found that 65 percent of residents in Maine are in support of our project, and this is 9:1 supporters outnumbering opponents. As I mentioned before, we've also collected several thousand signatures on petitions in support of the project.

This next slide is a little bit too small to see, maybe, but what it's showing you is that this support is diverse and consistent across all different types of people.

We've got local residents, skiers, snowmobilers, hunters, hikers, et cetera, all showing similar numbers of support in favor of the project. We're very pleased with that broad show of support.

In terms of Maine's organizations, several of these organizations are here today to testify in support of the project. I'm not going to read them all, but I would like to point out that the Franklin County commissioners have recently endorsed this project, and we think that shows the support that this project will have important environmental and economic benefits for Franklin County.

MR. LEE: Harley again. Since we came before you last, we've received permits for this project. I want to give you an update on that. Maine DEP has issued both the NRPA, as well as site walk permits. We received our permit from Army Corps of Engineers, and right here in the Town of Carrabassett Valley we received a permit for the portion of the power line that goes through the project, and FAA permits for lighting.

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Finally in closing, I would like to say we believe we meet the LURC criteria. We talked about demonstrated need. You heard a lot about that on August 1st. We put it at the best reasonably available site as I've described. There are very strong economic and environmental benefits, it's consistent with LURC standards, and there's 9:1 public support for the project.

MR. HANISCH: Now we'll be moving on to Panel 2.
MR. ANDERSON: Good morning, my name is Dwight
Anderson. I'm a professional civil engineer with
DeLuca-Hoffman, we're a Maine firm. I'm here today with Al Frick and Tim Folster. Al is with Albert Frick Associates, and Tim is with Sargent Corporation. We're here today to talk to you about engineering, design, and the construction of the Black Nubble wind farm project.

We have prepared a well-planned preliminary design which incorporates input from numerous engineering, construction, and natural resource experts, as well as consultation of State agencies.

Roadways and turbine sites both have been designed to fit harmoniously into the existing environment. We will be preserving the natural equilibrium of vegetations, soils, seeps, slopes, and soil hydrology of the project area. We'll also preserve the natural character of the ridgeline.

DeLuca-Hoffman has been involved in this project for

## starting up at Route 16. That red line is actually an existing

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road, IP road, that leads all the way down to the project site here. And the black lines in here are actually proposed roads, so you can see the significant use of the existing roads that we're proposing to limit the actual project impacts to get into the site and build this project.

We've also, during our fieldwork last summer and fall, identified some wetlands in that area of the access road. I actually swept down around those wetlands to avoid them in that area, as well as some steep slopes further up. We actually moved that alignment, too, to improve our preliminary design that's been submitted.

We followed the natural mountain topography and also used a narrow road spec as Harley mentioned, which requires a 32-foot wide travel surface during construction, which we will be reducing to 12 feet, the post construction condition, and allowing that area to revegetate. We've also consulted with State agencies during this process.

Again, we've limited the area of disturbance in clearing to the greatest extent we could. We also have used a variety of soil stabilization measures to protect the slopes and soils from erosion and ensure safety of the project. We have extensive storm water controls that will be in place.

The next slide that you see actually shows a detail of the trapped rock sandwich. Actually a measure of it we'll be using. You can see the seeps on this side.

When we encounter that soil hydrology in the seeps of the mountain, we'll actually be implementing this trapped rock sandwich or cross piping to convey flows from top side under the roadway and back to the other side to preserve that soil hydrology and that's an important aspect of the design that we worked on, again, with a State soil scientist.

Our erosion control techniques will ensure that we have no unnecessary impact of slopes or soils on Black Nubble, and these techniques are actually best management practices that we use often from the Maine Department of Environmental Protection.

Indigenous erosion control mix will be used, and that mix will actually promote the natural revegetation before the project is constructed.

This slide shows a typical turbine clearing both during and after construction. What's important here is you can see the dashed lines on both sides of the road and that represents the 32 -foot wide surface during construction. We'll actually allow that to revegetate and leave only a 12 -foot wide strip down the middle after construction.

That will actually be -- the area beyond that 12 feet will be covered with that erosion control mix and allowed to revegetate.

We also show this gray -- this is actually riprap that's used on the side slopes beyond to help limit the

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clearing. The crane pad and assembly area is proposed at 50 by 160 here, and that area will be gravelled during construction and allowed to revegetate after construction.

An important note in contrast to the Mars Hill project here, you can see the turbine center here and the blades. What they have done to erect the turbines up at Mars Hill is actually assembled these on the ground and actually picked them in one pick, so that required a large circular staging area for that, which is much larger than what we are proposing here.

It's probably noted we will actually be staging blades on the ground and erecting them one at a time, which allows us to use this much smaller footprint. We have proposed approximately a half an acre beyond the limits of the road for these turbine sites. That ties back to photos you had seen on turbine Site No. 9 up at Mars Hill.

Again, we've designed the roads to fit the natural topography of the ridgeline and the mountainsides to the greatest extent we could, and this project will actually clear only about $1 / 10$-- the roads and turbines will clear only about $1 / 10$ of what's proposed for rezoning.

Again, there's been a lot of drama about this turbine Site No. 9 up at Mars Hill, the clearing associated with it. You see photos in Jody Jones' testimony. I've gone up personally and visited that site to review its impacts and have
looked at the grading associated with our sites.
We're actually $1 / 8$ or less of the earthwork moving required for our sites when compared to that turbine at Site 9 , so it's a stark contrast and we're really not doing anything
like what you see in those photos. I want to make that point. Having been there and seen it, it's not what we're doing.

Again, this photo here is actually an aerial photo looking down on Black Nubble. Black Nubble in the center here.
As you can see, Black Nubble is surrounded by logging roads, the Navy road, Dallas Road in here, other impacts, clearing, you know, clearcuts all around.

So you can see this environment has been affected by humans. It's not a pristine area where it's all surrounded all the way around.

As we move to the next slide, you can see what we've done. Here we have worked closely with Terry DeWan's office. We've actually prepared grading plans for the roads and the site, which actually show accurately what the clearing limits will look like along the ridgeline at the individual turbine sites.

As you can see, we're really just fitting the roads in as we need to get up to the ridge. The impacts are similar to what you see on these other roads, and we're not removing the top of that mountain by any stretch, we're just placing what we need to in here. So you can see the existing roads
around, and again we've just shown what the project will look like once constructed here.

In conclusion, our preliminary design is a result of a collaboration of efforts between engineers, natural resource consultants, and State agencies, as well as construction experts.

This project will preserve the mountain, the soils, the soil hydrology, vegetation. We will not be blowing the top off this mountain. Again, the project is well planned, well designed, and we'll certainly assure that there is no unnecessary impact to the natural resources of that project area. Thank you.

MR. FRICK: Good morning all. My name is Albert Frick. I'm a consulting soil scientist and licensed site evaluator. I've been practicing in Maine for nearly 30 years.

I first started on this project in 1993 with Harley
Lee, and worked with him through Endless Energy and now Maine Mountain Power.

My last field visit to this project was in the fall
of 2006, and at that time the total alignment of the
Black Nubble road was cut out, the centerline, and stationings were set at every 50 feet. We walked the entire road alignment identifying sensitive soil areas, identifying seeps, drainages, underground and intermittent and perennial drainages.

The three most important soil and site limitations
that are found on Black Nubble and which occur in the western mountains of Maine that we respected in the design details was the short growing season, the mountain drainage, and the steep slopes.

For the short growing season we used physical materials such as geotextile fabrics and riprap, and these materials protect the soil immediately once they're in place. So that's full protection.

To address the Maine hydrology with its surface drainage and perched groundwater conditions, we are relying on utilizing the rock sandwich that Dwight explained to us previously to allow the water to be transmitted underneath the roadway and keeping it in sheet flow.

Coupled with that, we're using a very high frequency of cross drainage culverts that are placed in narrow spacing along the roadway to keep the uniform flow of hydrology.

On the mitigation of the steep slopes, we've done a very careful selection of the road alignment to avoid these areas as much as possible.

In those places where we could not avoid the steep slopes, we're using gradient, riprap, and geotextile fabrics.

One important component that Dwight touched on is the toolbox approach. That information was put together by many professionals, DeLuca-Hoffman, civil engineers, experienced engineers with high mountain road construction, excavating
contractors, and we also sat in workshops with LURC staffers, DEP staffers, and the State soil scientist and listened to their concerns and ideas.

So we've incorporated those ideas into the plan. The natural mountain hydrology will be adequately protected through appropriate and very proven techniques.

The access roads, maintenance buildings, and turbine sites are designed and placed appropriately for the underlying soils and hydrology. The erosion and sediment controls will appropriately address the soil characteristics of the site, and revegetation techniques have been proven to be successful in similar settings.

This preliminary plan is a very good plan and the final plan will be even better. When the final plan comes about, it will show which treatments will be applied at specific site locations.

In addition, we'll have the toolbox, which will be used to address expected variations of soil characteristics encountered in the field. So this project will not harm the soil or mountain hydrology on Black Nubble.

MR. FOLSTER: Good morning. My name is Tim Folster. I'm vice president of operations for Sargent Corporation.

Black Nubble wind farm will use experienced Maine construction and engineering experts, including DeLuca-Hoffman, who has designed hundreds of civil projects in the state of

Maine and the Sargent Corporation, who I represent.
We have completed thousands of infrastructure projects in Maine, including hundreds of miles of roadways in our 80 years. We are the only construction firm in the state that has already constructed the infrastructure of a large wind farm project, the Mars Hill wind farm, and we are Mainers, not from away.

Preliminary design is complete and we are at 75 percent of the final design. The design has incorporated engineering techniques to limit the amount of clearing and required earth moving to construct the project. The final design will be completed before construction starts.

The toolbox approach allows us to address the expected variations encountered in the field on a project of this type. Sargent has built many projects using this approach.

The appropriate erosion and sedimentation control measures have been incorporated into the design and procedures are defined to handle the expected variations encountered.

Minimal blasting will be required. This reduction will be accomplished by the use of specialized earth moving. The blasting for Black Nubble wind farm will be much less than required for traditional construction projects of this size and magnitude.

We'll employ Maine Drilling \& Blasting to conduct the 66
blasting that is required. Maine Drilling \& Blasting is a Maine company with over 40 years of experience in drilling and blasting.

Black Nubble wind farm is designed to the fit roads and turbine pads into the mountain topography with the use of engineering and erection techniques.

In conclusion, Black Nubble wind farm is well planned and can be constructed as designed. Black Nubble wind farm will use Maine-based engineering and construction experts. The design of Black Nubble wind project fits within the natural topographical character of Black Nubble, and Sargent's extensive construction experience will ensure that there is no unintended impact to the natural character or resources of the project site.

MR. THALER: Mr. Chairman, that completes our first two panels. If you wanted to take a quick break now.

THE CHAIR: We'll take 5.
(There was a break in the hearing at 10:23 and the hearing resumed at 10:34 a.m.)

THE CHAIR: Who's going to start this one? Are we all set, folks? Go ahead, please, Mr. Thaler.

MR. THALER: Thank you, Mr. Chairman. This will be our Panels 3 and 4, which will be natural resource issues and scenic issues, and we'll start with Woodlot, Steve Pelletier and Brooke Barnes.

MR. PELLETIER: Good morning. I'm Steve Pelletier.
I'm a wildlife biologist and forester with Woodlot
Alternatives.
With me today is Brooke Barnes. Brooke is from Woodlot and has played an instrumental role in the design phase in helping to avoid and minimize a lot of the impacts.

You recall that in our testimony of 2006 was in support of developing the two-mountain Redington project. At that time we firmly believed the project as designed wouldn't pose an undue adverse impact to the local and regional natural resources. The larger benefits outweighed any potential harm that might be caused by the project.

With the elimination of wind development on Redington, ecologically it makes even more sense as any potential impact of resources substantially less than what may have occurred under that two-mountain plant.

My focus today is going to be on these bullets. Essentially, the existing local landscape is industrially fragmented. It is heavily influenced by roads for industrial harvest throughout the area.

The Black Nubble project itself has significantly less ecological impact than the former two-mountain project. Of our State-protected S-1 or S-2 naturally protected communities, only four listed species were observed in the rezoning area. Of those four, there's relatively low value
habitat available for those species.
Potential bird/bat mortality would be limited by a lot of the summit points and high elevation migration patterns we observed on-site and in other studies. And finally, all permanent and temporary wetland impacts are minimal.

In terms of the process itself, there was an early continuous coordination with State agencies, NGOs as to how this project should be evaluated. The initial study plans were reviewed and approved in advance by Maine DEP, IF \& W, Natural Areas, and the US Fish \& Wildlife Service. Plans were also reviewed by Maine Audubon without comment.

The former Redington project was reviewed and the permits have been spelled out by Harley's testimony earlier.

This is just a chart that shows the differences between the two projects. Just some of the high points, the total cleared areas above 2700 feet, 136 acres versus what's now 64 acres.

The total permanent cleared areas above 27-, 85 versus 35 now on Black Nubble. Our total wetland impact for both projects at that time was less than half an acre, .44 ; it's now $3 / 100$ of an acre. There is no bog lemming habitat on Black Nubble as there was on Redington. There is no high value Bicknell's thrush habitat as there is on Redington. Some of the comments about the krummholz, we don't have those kinds of features on Black Nubble. They're only marginally present on

1 Redington.

In terms of the local landscape, as you can clearly see on some of the exhibits that you'll see around here today, the surrounding landscape is heavily impacted by past and ongoing industrial harvest.

Sixty-four percent of the rezoned area above 2700 feet has been clearcut in recent past. Some of these clearcuts extend above 3200 feet. The surrounding landscape, in 64 percent of that rezoned area, is heavily eroded with haul and skid road systems. Black Nubble is not part of an expansive fragmented pristine forest as you've seen in intervenors' comments.

This is an exhibit that was used in 2006 by AMC that was part of their discussion at that time as to what constitutes fragmentation. You'll recall at that time that the discussions focused on Redington Mountain right here, and issues for whether or not there was a break between the north port break or the south part of Redington. There was quite a bit of controversy and discussion about that.

This was the same exhibit they were using at that time. Black Nubble was outside of that fragmented forest. The only thing we've done here is just highlight what the green area was and the yellow. Otherwise than that, it's the same exhibit that was used to demonstrate fragmentation at that time.

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Regarding natural communities, there's no State-protected S-1 and S-2 imperiled natural communities on the project. There's one S-3 community. It's fir-heart-leaved birch, it's relatively small compared to other sites that we see in Maine, and it was characterized because of its size as only good or fair by Natural Areas.

The undisturbed acreage includes areas that have been influenced by spruce budworm resulting in scattered patches, open areas. Not the classic fir waves like you see on Crocker Mountain. There has been extensive avoidance/minimization efforts. Right now we're at permanent impact of 35.1 , or just 2/100 of the 1937 acres about 2700 feet.

Just a couple of quick photos. The site conditions up here, again, not counting the krummholz conditions we have, we have a number of different trees. They're thick because of the growing conditions. Balsam fir, some roughly large diameter trees.

Again, they're not stunted as can be alluded to in some of the intervenors' comments.

We do have some of these open areas as I referred to, spruce budworm. What I want to show on this slide is they are open, naturally occurring, but it's balsam fir regeneration, you can't stop it, it just thrives and grows in there and it's well adapted to these kinds of conditions.

Regarding rare species, Woodlot did identify 18
species that would have the potential to occur within the entire project. It's not saying there are 18 listed species on the summit of Black Nubble. There were no rare plant species observed. Again, balsam fir, fairly limited species diversity.

No rock vole, northern bog lemming habitat. Of the four species that we observed within the rezoned area, three of them were bats species and Bicknell's. I can talk in detail about those a little bit later if you have more questions about those.

Other species that we're seeing up here are going to be found more than were observed, they're going to be found more on the lower elevations, and/or more wide ranging like lynx and golden eagles. They may fly through the area, they may travel through there, but they're not going to be using this as kind of a primary habitat.

With regards to bats, there's a low risk to the local bat populations due to that high elevation terrain. The frequent high wind conditions -- reason why we're there -- the lack of any large diameter roost trees, caves, or rock, cliff outcrops, the kinds of things you see where there's a lot of bat issues in the Appalachian Mountains and in the mid coastal US areas.

We have a lack of preferred foraging habitat. We don't have any of these big large wetlands where you're going to get a lot of insects coming from. And because a lot of the

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bats that are at risk forage within the open canopy, within the canopy, we've got really dense foraging condition and we don't really have good foraging opportunities for bats.

Regarding Bicknell's thrush, the biggest concern today right now is that loss in the Caribbean of their winter habitat. The secondary threat has been documented -- and Audubon points this out as well -- is decline due to these fir/spruce forests due to global warming. Again, the Union of Concerned Scientists in 2007, their report basically is saying that our existing Bicknell's habitat in Maine faces complete elimination because of this threat.

Regarding the project itself, we referenced in 2006 the Vermont Ski Resort Study, and these studies are continuing on, and again in 2007 we're finding there's strong preferences along the edges. There's not real mortality associated with these and there's probably more Bicknell's in the disturbed area.

They are a species that are regionally common here in western Maine. Between the two project areas we looked at, they were regularly observed on Redington, they were not observed -- we spent a great deal of time on Black Nubble without really seeing them. It doesn't say they're not there; the habitat was strongly preferred on Redington.

The project will result in less than 2 percent of the habitat disturbance. Again, 29 acres of that will be
revegetated. That's going to be viable habitat within a ten-year period.

In terms of bird/bat migration, we can back into the details of that as we need to, but our off-site work that we've been doing, this time we conducted well over 70 studies throughout the northeast, and the on-site radar ceilometer/acoustic data basically demonstrates we have a low avian/bat collision risk.

Again, all these studies, when we put them together, we are finding a consistent, 100 percent agreement, with the fact that most migration occurs at high elevation, 1000, 2000 above the turbine blades.

I want to illustrate that here. These are also on the panels in the room. What this represents is there's the ground here and that red line represents -- from the bottom of the graph -- what the top of a turbine blade would be, 125 meters.

Over here on this scale here, this is in meters, and you'll see that within -- generally what we're finding is within 300 to 600 meters most migration occurs, again, between 1000 and 2000 feet. What this represents here, these are the averages of all of these studies. These are the spring studies here. This is an average, and again the average of those ranges, but it's well above the 125 meter height.

We have the same thing again for fall migration.
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Each one of these slides is doing the same thing. We're demonstrating that these are five different landscape conditions, forested landscapes, agricultural, great lakes.

These are five different landscape conditions that we're doing these studies on.

Shifting gears to wetland, extensive alternatives analysis, we are -- in our project design, we have $.03,3 / 100$ of an acre of permanent wetland impact. As has been said before, we have all the permits in hand already.

In summary, we don't have -- we will not be having any undue adverse impacts to these protected natural communities. We don't have S-1, S-2 communities.

We have an existing road system that we can be using, well established, industrial forest conditions, only 35.1 acres of impacts on undeveloped fir-heart-leaved communities. No plants were observed in $3 / 100$ of the wetland impact.

Of the four species that we found in the rezoning area, relatively low value habitat for those. Again, our bird/bat collision risk was limited by what we saw in avoidance and in high-elevation migration.

Personally for me, I grew up in western Maine. These mountains, I'm very much invested in what this habitat represents. It's something I'm very concerned with. A lot of the discussions we're having here today are about the value of these habitats.

I am concerned with the large body of work that's coming out that we're seeing threats of the global warming and what it's doing that this is a good step at help avoiding these kinds of impacts. I just really want to see my children get a chance to see it. Thank you very much.

MR. DeWAN: Chairman Harvey, members of the Commission, my name is Terry DeWan. With me is Amy Bell Segal. We're both licensed landscape architects in the State of Maine, and we'd like to talk about the visual impacts. We know that was a significant concern, we heard that loud and clear the last time we were before the board.

The question is -- there's no question, they will be visible, that there will be an effect on the scenic resource.
The question that we're dealing with today is whether or not there will be an undue adverse effect. We're going to go through the next few minutes and talk about the size, the viewing distance, and other factors to explore whether or not there is this undue adverse effect.

We know that there are three Maine standards that we have to deal with under LURC law that we've looked at under the impact of surrounding areas, we looked at whether or not there were blocked views from water bodies, travel ways, or public property, and the effect on the scenic ridgeline.

The Commission was very informed last time. As a result, our client, Maine Mountain Power, made a very
substantial change. The number of turbines have been reduced from 30 to 18 . The number of mountain sites, from 2 to 1 . The number of rezoned acres have been cut more than half.

Lighting is a significant change. We heard a lot of intervenors expressing a lot of concerns about what it will do to the night sky. The original application there would have been 30 lights on 15 turbines. With the new FAA regulations and reduced number of turbines, it will allow for seven lights on seven turbines.

The closest view from the Appalachian Trail is a filter view on the south of Crocker, a little over a mile. The original application was about a mile away. The new application, in our application now, we're at 3.2 miles.

The original application, there was an open view from Sugarloaf Cirque at 2.3 miles; now the closest open view is at Saddleback Junior at 4 miles.

So the question is really not how large they are. We know they are large elements in the landscape. The question from our perspective is how large will they appear at various viewpoints. And then, how do they relate to surrounding landscape, and how much of the view that you're going to be seeing from these open landscapes will contain them.

Now, we prepared a handout. I think that you all have this chart in front of you. This goes to the question of relative height. If you recall, last time.

THE CHAIR: Excuse me, did everybody that wants one of these get one?

MR. DeWAN: We do have extra copies of them which I believe have been turned in. There's more over there.

MR. THALER: I think all intervenors got them.
THE CHAIR: Okay, thank you.
MR. DeWAN: We developed this concept of relative
height to try to get a handle on how big an element that's
400 -- over 400 feet tall appear from various viewpoints.
Now, this is not meant to be looked at close up.
This is supposed to be looked at at arm's length. At least my arm's length is 24 inches away.

If you hold it out here, if you're -- you'll see there's three different turbines. The one on the left is Saddleback Junior, and this little diagram is .46 , a little bit less than half an inch in height.

This is what -- you're standing on Saddleback Junior holding this card out at arm's length, that's the size of the turbine that you would see. The middle one is Saddleback Mountain, it's about a third of an inch high, again, holding it at this distance. Saddleback Junior -- we'll see some simulations later on -- you're at 5.7.

If you're up in the Bigelows, you're about $2 / 10$ of a inch away at a distance of 9 to 11 miles.

We used this card in a few other locations, but keep
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this in mind it's a way of judging the relative size and therefore whether or not this is considered to be an undue adverse effect.

The view distance related to relative height and visual acuity, the field of view, and atmospheric conditions.

Now, this is a photograph taken from Saddleback Mountain. This is at a distance of 5.7 miles, and this is, again, going back to the card here, this is the middle diagram you see. Don't hold it up to the illustration because you're too far away from it. But if you're standing on Saddleback Mountain, the turbines that you see in the photograph would appear to be about the size as the turbines that you see on the card here.

Now, you've all been to Mars Hill -- I think most of you have been to Mars Hill. The view from Saddleback Mountain that we just saw is, to this particular view, at 5 miles at Mars Hill.

As you can see, you can barely make them out, they are vertical elements on the horizon, it's very difficult to look at the blades at this point. I think this is a good illustration of the concept of relative size.

You heard Dr. Jim Palmer last time talk about the whole concept of visual acuity, and visual acuity has to do with the ability of the eye to make out certain objects. I'd like to read a quote from his prefiled testimony.

The turbines will no longer be visible beyond 8.5 miles. The size of the elements suggest that they are probably going to be visible as recognizable objects for a distance of 4 to 7.5 miles. After that distance, they'll become a blob much like the small letters you cannot identify on the bottom of Snellen eye chart.

The second point we'd like to talk about is this concept of field of view. When you're on a trail, such as the Appalachian Trail, and you have a 360-degree panorama like you see right here, how much of your view is going to be exposed to the turbines? Is it going to be a giant sweep, or is it going to be a fairly narrow point?

Well, we've measured from each of these sensitive viewpoints just exactly what the field of view is. From The Horn, for example, we know that it's an 18-degree field of view, or roughly 5 percent of the entire 360 .

Now, what does that really mean? Well, on The Horn, if you were hold up your hands out like that, again that's 24 inches, this 18-degree field of view, the tip of your pinky to the tip of my thumb is about 7.5 inches. That is equivalent to an 18-degree field of view. Again, if you're standing up there, you'll see turbines from here over to here. It's not the full 360, it's not even a 90-degree view.

This diagram shows the field of view measurements of Saddleback Mountain, The Horns, Saddleback Junior. It's part 80
of our prefiled testimony. We've included information on all these various viewpoints and numerical values.

If you go to the next slide, you know that, for example, on Saddleback Junior we have a 22-degree field of view. The original application, that was probably more like a 45-degree field of view. So there has been a considerable change in the amount of the view that will be occupied by the turbines by going from one mountain to two.

Atmospheric conditions, of course, it's a reality. Some days are spectacular like this, other days they're hazy. Sometimes you can see for long distances. The average visibility is about 6.5 miles or so during most of the summer months.

Let's talk about the general impacts on this 15 -mile study area. We know from our evaluation that the wind turbines will not be visible from 95 percent of the study area. The majority of the views are in the background and at distances beyond that 8.5 miles that Dr. Palmer talked about.

All of the open views of the wind farms are 4 miles or greater, and the planning design, as we've heard already, has minimized the visual impacts to the maximum extent practicable.

From the Appalachian Trail, the wind farm will not be visible from more than 92 percent of the trail, and virtually all the views, some of the background, at distances of over 4

We have prepared a study map. Again, all these diagrams are on the side board over here. This shows that the majority of the views -- here's a 4-mile range, so the distance between mid ground and background. We also looked at 10 miles out here and 15 miles.

As you can see, the majority of the viewpoints are in the background. There are two scenic byways that run through the area, the State Scenic Byway and the National Scenic Byway. There are a couple of viewpoints along these points, one about 8 miles and another one at 10 miles up through here.

If you look at this 8.5 -mile ring that Dr. Palmer talks about, you can see that the majority of the viewpoints on the lakes are outside of that distance. There are a couple of viewpoints, one along Route 16 within 4.5 miles, so for the most part we feel that we have minimized the views from existing roadways and shorelines.

The closest public viewpoint on a public road is on Route 16. At this point we're 4.5 miles away and the relative height is less than half of an inch. This is the way it looks today.

With the wind farm in place, you will see a few of the turbines on top of Black Nubble. The Black Nubble project area actually extends a little off the photograph we provided to you. You can start to see some of them peeking above the 82
treeline.
We think this is a good slide to illustrate one of the criteria that the natural ridgeline be preserved. The ridgeline itself, the form of the ridgeline, will not be altered. I'm going to use that phrase, we're not blowing the top off the mountain. You'll see new elements coming out of it. You will not see defined notches caused by tree cutting or road construction in the profile of the mountain.

This is perhaps a more typical view of what you see along Route 16 where there are views available beyond the road. For the most part when you travel this road and most of the other roads in the area, you're driving through fairly dense forestland, and I think this would probably be a good indication that indicates the dynamic nature of the working forest. You occasionally do find patches of land that have been cut, you are able to get more distant views.

When you're on the Route 16 byway between Oquossoc and Rangeley, a distance of 10 miles, you do get a view. As you can see on the left over here, there are three places along this roadway you do get views between 9 and 12 seconds. For the most part, though, you're looking straight ahead. You're looking at Saddleback Mountain, and the view will be off to the left.

A private viewpoint will be found on Eustis Ridge at a distance of 11 miles; again you can see Black Nubble off to
the right here. At the time from this particular viewpoint you can also see the Boralex plant on the left right here with a stack, which is a little bit taller at 295 feet than our turbine bases, which are 263 feet.

There is also a flashing white light there that calls attention to it. We don't have any lights during the daytime of course.

You also see transmission lines in the area. From this particular viewpoint, though, you also get more of a sweep of the panoramic nature of the landscape with the Bigelow Range off to the left.

The Appalachian Trail. We'll spend some time talking about the effects on the AT. We know that whether you consider the difference between mid ground and background can be 4 or 5 miles as these circles indicate, the fact of the matter is that in using the chart here, that when you're at the viewpoints along here, the turbines will be visible but they'll be seen as very small objects on the landscape.

The Appalachian Trail is one of many scenic resources in the area. As scenic resources, we also included the lakes, we looked at the rivers, we looked at the scenic byways. Of the 34.2 miles within the study area, there's about 8 percent that will have a view of the wind power project.

## We know that as a result of LURC's zoning

application -- zoning designation, there's a 500-foot wide P-RR
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subdistrict that protects the Appalachian Trail right now. For people who have hiked on the Appalachian Trail, from many of the points where you do get the wider views, there are also views of ski areas, golf courses, road, seasonal homes, and so forth. Harley has already used the diagram right here, but the Appalachian Trail is right here. This greenish area through here is the immediate foreground within half a mile of the trail. You can see a portion of Saddleback ski area is within that foreground, as well as a portion of Sugarloaf is within that foreground area.

The green dotted line here is the 4-mile distance that represents the distance between the mid ground and the background. Again, as you can see, there is a lot going on within that area in terms of cultural modifications.

This is an aerial view taken from Google Earth. This is not a view that you would see from the Appalachian Trail; this is a bird's-eye view. It indicates the sort of activity that's partially visible from some portions of the AT. This is the Navy facility, the Dallas Road going down, there's a helicopter landing pad right here, and a lot of other cultural modifications that go along with that.

The original proposal that we presented last year was this slide right here. Again, the Redington project was over here, this is the Black Nubble project. The distance from the turbines to the observers has not changed. At this particular
viewpoint, we're about the same distance from Redington as we are right here. It has changed, though, by reducing from two mountains to one the angle of view. As you can see from the chart here, on the old application there are 34 degrees, or 9 percent of the view; with the new application by dropping Redington, we're down to a 15 -degree angle of view or about 4 percent of the view.

When you're up on any part of Saddleback Mountain, of course, you're not just looking straight ahead. As the diagram on the side of the room over here indicate, you are aware of the grand sweep of the panorama.

It's important in looking at these panoramic views -and I'm sure that all of you will have a chance to look at them later on -- to stand 2 feet away from the board. That's important because that replicates what the eye actually sees. Don't look real close and don't look way back. To get an accurate view, if you remember how we had a site visit a couple of months ago, we held a diagram up when we were out there on Baskahegan Lake. Think of yourself as being at that location holding the diagram out 2 feet away. That will show you what the impacts will be from that particular viewpoint.

That last view -- go back one -- this last view here is looking generally in a northeasterly direction. If you go to this view right here from about the same location of Saddleback Mountain, we're looking southwesterly. At this

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point you can start to see some of the facilities of Saddleback Mountain ski area, one of the ski lifts right here. You can see Rangeley Lake off on the right there.

Looking a little bit to the right from that view, you can see the base lodge down here and some of the ski runs, some of the condominium development, parking areas, and so forth. That's at a distance of 1.5 miles. The Town of Rangeley is back here at about 6 or 7 miles. The Rangeley Airport is over here.

Of course, this Commission has approved just recently a rezoning of D-PD zone for Saddleback Mountain, and this is a portion of the area that has been rezoned, so in the future there will be additional things happening within this.

Once we leave Saddleback Mountain, we travel north and come to Saddleback Junior. This is a view. At this point we'll go back to the handout here, the far left diagram you have in front of you is the turbines that you see right there. At this point you see most of the 18 turbines at a distance of 4 miles. It will appear to be a little bit less than half an inch in height. Again, the panoramic view that you're exposed to at this point is a rather sweeping one as you can see from the illustration right here.

There is a -- the closest view to the Appalachian Trail once you get off of Saddleback Ridge and go down in a northerly direction, there are some views at Poplar Ridge.

This is a distance of 3.2 miles. This is the way it looks right now; this is what it would look like when the turbines might be in place.

This is a better sense of what the view actually looked like, there's a lot of trees in the foreground. You're up in Mount Abram. In the new proposal you're at a distance of about 6.5 miles; the old proposal, you were a lot closer to the nearest views. On Redington they were about 4.1 miles away. Again, the relative height here is a little bit less than a third of an inch.

Saddleback, you're able to see four turbines up on top of the mountain right here.

In some of the prefiled testimony we saw from the intervenors, they had visualizations of the view from North Crocker. There is no view from the top of North Crocker towards the wind power project. This is the very tip of Redington.

When you get to the top of the west peak on the Bigelow Range, you're at a distance of between 9 and 11 miles away. As you can see there are turbines slightly visible off to the right here at a distance of about 10 miles away. The panorama is really the consideration here. When you're looking throughout the entire sweep, you do see where we're sitting right today, Saddleback Mountain above us, the golf course, and so forth.

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I'd like to close with a little discussion about lighting because that has been brought up as a concern. As I pointed out, of the 18 turbines, seven of them will be lit under nacelle. They are pulsing, they're not strobe lights. They gradually go on and gradually go off. At 5 to 10 miles away, they'll appear as very small, almost starlike dots.

The intensity drops below the horizon. The lenses are designed so to minimize the impacts on residential areas.

Some of the intervenors have talked about two very specific places: One at Horns Pond, one of the shelters there at 9.2 miles from the other end of Spaulding.

If you go back to the previous view, again, this is not from The Horns, but this is a view from the Bigelow Ridgeline. The turbines are over there, and we're looking at about a 2-percent field of view at this point. There may be as many as seven very small dots, certainly not as brilliant as the laser pointer right here. At that point you're also seeing the likes of Sugarloaf Mountain.

The other point that was pointed out was Spaulding Mountain. This is a wooded hilltop that people go up to and look over the trees to see the sunset. This is a simulation that we developed that shows what the seven turbines would look like at sunset.

If you look very closely, you can see there are four of the turbines that have very small lights on them. At a
distance of 5 miles it will be appear to be visible, but we don't think in the context of the sunset is going to cause any undue effect.

In conclusion, there are a lot of factors we talked about right here. We looked at the roads and road cuts, we looked at the transmission lines. Dwight Anderson and Tim Folster talked about the care that they've exhibited in design and will be doing in construction. Those will not have the effect of some the impacts that have been talked about for other projects.

They will appear to be very small objects in a very large landscape. They will occupy a relatively small field of view, and the contrast, we feel, is very much diminished by the distance. Therefore, our professional opinions, due to all these factors, the turbines will not have an undue adverse effect on the existing uses of scenic character of the area.

Thank you.
MR. HANISCH: I want to thank you for your time and your patience. This is concluding our testimony. I hope to do a little summary to wrap it all back up. I didn't take out any time for Bart's questions and so we've run out of time.

You have a tough job. You have to balance the need for wind and where the resources, as the CLUP asks you to, with the impacts, the potential impacts of the project.

I hope we provided you with a little bit of comfort
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that we've designed this project to minimize and mitigate those impacts and we will still have a lot of benefits.

Thank you very much.
MR. THALER: Bart, how would you like to -- we next have Commission questioning of the applicant. Do you want us to bring up two panels at a time?

THE CHAIR: Where is the rest of your --
MR. THALER: They're all here. We can bring everybody up if you prefer for the Commission.

THE CHAIR: Well, I assume that some of those people are going to get asked question.

MR. THALER: While we're doing this, why don't we have all our panels come back.

If I could just, for the record, we'll move in as an
exhibit -- are we supposed to be keeping track by number as Maine Mountain Power exhibits for hearing?

MS. SPENCER-FAMOUS: I've got the things as Exhibit 22, anything that you submitted at the hearing. I think the PowerPoint is going to be 22-A.

MR. THALER: Yes, we have the PowerPoints. We're going to give them to everybody.

MS. SPENCER-FAMOUS: Anything associated with that and then anything from there will be 22-B and -C. I'm keeping track of them.

MR. THALER: So we'll call 22-A the PowerPoint. Do
you want to include this tag as 22-A as well.
MS. SPENCER-FAMOUS: Yes, I would.
MR. THALER: So just for the record we'll move into evidence the PowerPoints and the tag, the Terry DeWan visual, as 22-A. I think just for the record, I think we can all agree, Terry just had a slip of the tongue at the end when he said where we're sitting today is Saddleback. I think we can all agree it's Sugarloaf.

THE CHAIR: I would hope that would be the case.
All right, questions from the Commission.
Mr. Laverty.
MR. LAVERTY: Thank you Mr. Chair. I have questions of several people who spoke today beginning with Mr. Hanisch.

Mr. Hanisch, I don't know how to broach this. I'm essentially on the public record as stating with regard to public benefits in terms of air quality that I am willing to accept, I think, the characterization of the Maine Public Utilities Commission, the Governor's office, Office of Energy, various legislative acts, which establish wind power as renewable energy source which is in the best interest to the people of the State of Maine to have developed.

I would hope that we wouldn't get into a specific discussion of this area but nonetheless you broached it. I need to ask you some questions about this.

You said in terms of the application, statements that
you made, in terms of a slide you presented that this project would avoid 400,000 pounds of air pollution daily in the state of Maine.

During the Greenville Air Quality Forum, Commissioner Littell presented a discussion of Regional Greenhouse Gas Initiative, under which Maine complies, and both in terms of his testimony and again in terms of this visual presentation, you made it very clear that RGGI does not give greenhouse gas reduction credits for wind power projects -- he said explicitly on his slide -- because it cannot be demonstrated scientifically that you can relate any particular reduction of greenhouse gasses to a specific production of energy from a wind power project.

Your statement says that 400,000 pounds of air pollutants per day will result from the operation of this project. I would just like to know how you reconcile your statement with the statement of Commissioner Littell and the State requirements of RGGI.

MR. HANISCH: I can try to do that for you. I've been working in air pollution for 33 years. My whole life I've been devoted to try and reduce air pollution, mainly for the EPA, US-EPA, worked on reducing ozone. RGGI is a relatively new program designed to reduce global warming.

You're right, you don't get any credits to use for wind power under the RGGI program. It's designed for power
plants, and it's designed to help rachet down the amount of emissions of $\mathrm{CO}_{2}$ coming from power plants.

This isn't a one-solution problem. This is huge problem. This is a problem throughout the world to reduce global warming. We're not going to solve it here with this project, and we're not going to solve it if we build every project that's been proposed for Maine. But all of us have to do something to reduce emissions.

Just like with the ozone problem, there are people reducing their emissions for ozone, which is preserved in Maine's environment.

MR. LAVERTY: With all due respect, I appreciate that and I would agree with that, but that wasn't my question.

You said specifically 400,000 pounds.
MR. HANISCH: Right. I understand. And what should happen in this case is when we're running, the marginal unit in Maine, which the New England ISO has established as a gas-fired unit with a certain amount of emissions, the amount of emissions from that marginal unit in Maine, that fossil-fuel fired unit, will go down because we will displace the energy that they would have produced.

So if we're on, they're going to reduce. They're not going to go from 100 percent down to zero. They may be going from 80 percent down to 75 percent. There's going to be reduction in the amount of energy they have to generate, so

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there's going to be a reduction in the emissions.
MR. LAVERTY: 400,000 pounds a day?
MR. HANISCH: A day. And the way I got that number was by going to the ISO New England and using their calculation, their number of what those emissions are, per megawatt hour and just doing a very simple mathematical calculation.

MR. LAVERTY: So you didn't do a direct, evaluate a direct causal relationship between production of a kilowatt hour generated by this plant?

MR. HANISCH: No, I didn't. ISO New England did that, and it's not just a simple evaluation, it's a grid-wide evaluation.

MR. LAVERTY: Inducted, it's not inductive.
MR. HANISCH: Yes.
MR. MOST: My name is Matt Most. I would just like to elaborate on that comment.

Commissioner Littell in his statements was
specifically addressing the issue of whether offset credits would be allowable in RGGI and allocated to wind resources such as the one we propose building.

His point was that since you can't locate exactly where emission reduction occurs, you can't allocate the allowance to a particular participant in the marketplace or a nonparticipant, such as a wind resource; what he also said was
that irrefutably wind resources reduce emissions elsewhere in the system, as John as pointed out, and as a result, RGGI has taken the expected impact of the renewable portfolio standards and actually reduced the cap, per such. So the expectation is that wind generation throughout the RGGI regional will have an impact on emission.

Since you can't contribute it scientifically, since you can't follow the physics of where the electrons flow, you can't attribute it directly to a wind station; but that does not -- his testimony, I think, was clear that wind generation does irrefutably reduce emissions, but you can't attribute it to a specific location.

MR. LAVERTY: Right. So you can't contribute 400,000 pounds of reductions to this specific site.

MR. MOST: Well, I think actually you can because -you contribute it to -- the power generator will have a displacement effect, as John pointed out, and it will have that displacement effect around the system. It's a simple function of megawatts reduced.

MR. LAVERTY: I won't pursue that, but I think this is the reason that I think we are not an energy board, we are a Land Use Regulation Commission and natural resource protection Commission.

So to engage in this discussion, I just wish quite frankly that some of those statements -- and I guess I'm
speaking -- maybe I'm speaking to the choir in terms of the applicant here, but I think -- I don't think it is fruitful for us to engage in this type of discussion because it is complicated policy issue, and I just would hope that those types of statements would be somehow framed so as to not represent in terms of having greater weight in deliberations in perhaps our uneducated eye might accord them, if you follow what I'm saying.

MR. HANISCH: I certainly agree and I hope you will rely on the Maine regulatory experts that told you that there's a reduction. If you look at my prefiled testimony, I constantly refer to that.

You do have to weigh the benefits against the impacts. Clearly in my mind -- and I think in many of our minds -- the air pollution and global warming benefits are the biggest benefits along with the taxes and jobs.

MR. LAVERTY: If the PUC says that, which they have and will apparently elaborate on further, I think that's
sufficient for our purposes.
MR. HANISCH: That does it for me, too.
MR. LAVERTY: Thank you. Mr. Mann, I had a question about the financial viability. As you rightly indicate, in
January the applicant made the statement -- a one-mountain, single-mountain project was not financially viable, and you presented a list of considerations, or a list of factors, that
have changed that analysis, if you recall, they had to do -- I couldn't get them all down.

MR. MANN: Yes, I recall.
MR. LAVERTY: Energy credits and those types of things.

MR. MANN: There were four items.
MR. LAVERTY: Could you tell me specifically what has changed in the last eight months with regard to those criteria?

MR. MANN: Well, first of all, it may be a
technicality, I think it's a little more than eight months
because really we made this statement more like a year or so ago, so it was last summer.

I listed four things that have changed and that were more significant. The first one was on the cost side, and we talked about a reduction in our cost of capital, which allows us to finance the project more cleanly, more efficiently, and therefore, reduce the revenue requirement over the life of the project that we would need to recover the cost of capital.

That basically is something that Edison Mission has been able to do because of improvement in our financial strength, and we refinanced our debt recently at a much lower rate, so that's really the derivation of that impact.

The other three elements that I mentioned had to do with the revenue side, and again I'm thinking not just the revenues of the first week of operating the project, but over

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the life of the project because that's really what determines financial viability. We're looking at a long-term investment and expecting to get returns over a long term.

There were three elements that I mentioned. The first one that I mentioned was renewable energy credits. Over the last year and in the foreseeable future, we have seen many, many states -- and even the federal government -- now looking at or passing or enhancing their renewable energy portfolio standards. Much like Matt described, the State of Maine has a 10-percent renewable portfolio standard. This project would help to achieve that standard.

Really, the reason that I mention it is because those standards have been increasing over time, and we're also at the same time -- so what we're seeing is an increase in demand for wind power.

At the same time, we're not seeing an increase in supply for wind power sufficient to soak up that demand, particularly in the northeast where it's very difficult, as you know, to develop and site a project.

So yes, we're seeing projects being proposed, but we're not seeing those projects over the life of this project soaking up that demand for wind energy credits increases our revenues.

The second one I mentioned was capacity markets. What I said was, I think this can have a smaller effect, but
basically any power generating source connected to the grid in New England gets a capacity revenue effectively for providing the whole capacity.

For a wind project it's small because a wind project is intermittent. So it's not a huge effect but the value of those capacity payments has increased and we expect it to continue to increase.

The third one that I mentioned -- and I think this is probably the most significant one -- bears a little bit on a conversation we just had was that we're seeing carbon emission restrictions increase, and a year or so ago it was much harder to visualize what those restrictions would look like than it is today.

I probably should ask Matt to talk about this. I think the basic point is that we expect those carbon emission restrictions to increase over time over the life of this project and that will cause fossil fuel generation to be more expensive, and that drives up the market price for power. So if you're a non fossil fuel generator that doesn't have emissions, you benefit from that increase in electricity prices.

Matt, do you want to add to that?
MR. MOST: Just on Randy's last point, the impact of $\mathrm{CO}_{2}$ regulations on the power business is perhaps one of the biggest impacts we've seen since the power markets were 100
deregulated, that being the biggest in the last couple of decades.

What we've seen over the last year is very interesting. The debate in Washington has narrowed dramatically from where it was a year ago. We've seen large companies, large emitting companies, agree to support emissions regulation around carbon. We've seen the right and the left, the conservative and the liberal side, get much closer than they were a year ago, and the number of bills and the stringency of the bills that are being introduced to Congress are much, much more significant than they were before.

So companies like ours are looking down the road and seeing what's going to happen, that when you generate power, the price of power is really the function of the cost of your fuel that's used to make the power. And then really the other largest impact is the price of these emission allowance credits that we talked about, and in some cases those emission allowance credits can be more expensive than the fuel, and under a lot of the scenarios that we're looking for under carbon regulation, we're expecting those carbon credits to be extremely expensive.

In a region such as this where the power price is set by fossil fuel, that price is going to have a significant impact from these carbon credits, and we want to be positioned to take advantage of that, and there's a significant revenue
stream down the road that we could not bank on last year.
MR. LAVERTY: You're talking specifically natural gas?

MR. MOST: In this area natural gas.
MR. LAVERTY: Thank you. Mr. Anderson, I had a couple of engineering questions. The statement not wanting to blow the top of the mountain off -- I think we have a sense of where that might come from -- in terms of actual cut-and-fill, do you have an estimate of the cubic yards of cut-and-fill to take place on the top of this mountain?

MR. ANDERSON: Well, we haven't looked at just the top. We looked at the project starting down on the access road leading up to the top of the mountain. It's on the order of 250,000 cubic yards of cuts and then fills.

MR. LAVERTY: My assumption is that -- I'm asking this directly to validate this assumption I guess -- there's been a concerted attempt to minimize the number of cuts-and-fills that are necessary for this project.

Again, in terms of the silhouette of the mountaintop.
MR. ANDERSON: Absolutely, yes. We really tried to take the -- you know, we studied the topography extensively. There's actually been computer modelling to look at the slopes and use that. I presented some colored graphics last year to show that. We actually have used that and put the vertical and horizontal curves to really best follow the topography to
minimize to the absolute maximum that we could.
MR. LAVERTY: Have there been changes in the road design in this application from the previous application?

MR. ANDERSON: Yes. We encountered some wetlands at the beginning of the Upper Black Nubble access road, and that resulted in a shift. I actually went out and walked that with Woodlot. We studied a few different routes to try to put that up through and we shifted about 500 feet there.

Likewise, up on top of Black Nubble we had an area where we could shift about 75 feet and pull into some area with less topographic relief. We did that as well.

So from 2006 until now, I think we certainly improved it significantly.

MR. LAVERTY: Regarding travel ways, the road width, construction versus post-construction, you talked about 32 feet for construction and then revegetation to a 12 -foot roadway.

MR. ANDERSON: That's correct.
MR. LAVERTY: I don't know if this should be directed to you, but one of the things I am just learning, as everyone is learning with wind power, is that maintenance demands may be greater than initially expected in terms of replacing towers or replacing portions of towers.

Does anybody have any view of the extent, the time frame in which we'll be dealing with a 12 -foot roadway. Are we going to have a semi-permanent 32 -foot roadway? Does anybody
have a sense of that?
MR. LEE: The crane that initially assembles the wind turbine is sized to the largest and highest load, and that's
the nacelle itself, the big box on the top of the tower, and that weighs roughly 70 tons and has to get 260 feet in the air. That's a fairly large tip, and that drives the crane.

Once a wind turbine is operating, you're doing normal maintenance on it, you usually don't have to remove the nacelle. If there's a blade that needs to be removed, you can do that with a much smaller crane and you can get by on the smaller roads.

So it would be extremely unusual to need that large crane during the operation of the machines.

MR. LAVERTY: And obviously the reason for maintaining it, even though part of it is going to be vegetated, but the wide expanse of roadways, should there be a need in the future for replacement of an entire unit -- I'm just trying to get a sense of the extent to which we're going to be seeing 12 -foot gravel ways.

MR. LEE: Another important point I should make now is that the crane comes up in pieces. You bring it up on multiple tractor trailers, and then it's a fairly laborious process to assemble it on the top of the mountain. Once it's assembled, then it drives between the sites. That's why you need that 32 -foot road.

If you were doing maintenance, even if you need a big crane at a single site, you could then bring it up and assemble it on that site and then disassemble it, so you wouldn't need the 32 -foot roads between the towers as you do during construction.

MR. LAVERTY: Thank you. I've got a question on soils. I don't know whether it would be Mr. Anderson or Mr. Frick.

Again, my reading of the application and comments from reviewing agencies is David Rocque, the State soil scientist, had said that on the mountain slopes, the soils were unsuitable for road construction.

Then he goes on to say, however, given the nature of the project, which is resource dependent, it's going to be on the mountaintop, he isn't against the project and feels that mitigation could be undertaken to address those soil types but there would be extraordinary efforts of mitigation and erosion control.

In your view, has the design incorporated extraordinary mitigation and erosion control given the soil types on these slopes?

MR. FRICK: Yes, it has; but to go back to the earlier part, when Dave referred to the suitability that the Natural Resource Council -- SCS, Soil Conservation Service, which is the Natural Resource Conservation Service, they used
to use a soil suitable rating of severe, moderate.
They have distanced themselves from that rating and went to a soil potential rating basically saying low, moderate, or high, which gets to Dave's explanation, that yes, the soils are steep and therefore suitability for building roads because they're very steep.

You can develop roads on that site but it's going to be more expensive, that's true. You have to address the steepness and in this case the hydrology. There's a big drainage shed with a perched water table and that all has to be respected.

What the design went into to respect those elements is a rock sandwich layer. It's expensive to build because you're basically putting a layer of stone in the subsoil, as Dwight had diagramed to show that, to allow that water to transport through the roadbed to the other side and keeping the hydrology in place. That will take care of that situation.

MR. LAVERTY: Have you been in communication with Mr. Rocque in the reasonable past?

MR. FRICK: Yes, I have.
MR. LAVERTY: Is it your view that he now finds this design acceptable?

MR. FRICK: I would say that I respect that maybe he could -- I believe he's going to be here tomorrow. It's my understanding -- I don't want to speak for Mr. Rocque -- it's 106
my understanding that he does feel this design is acceptable. As a matter of fact, many of these elements that are inherent in our design are used similarly in other western Maine mountains. The Kibby Mountain design has many of the same elements that were proposed.

MR. LAVERTY: Are these the same mitigation and erosion control measures that were proposed in the original application?

MR. FRICK: Yes, essentially they were. I don't think they were understood or -- they're the same elements, yes.

MR. LAVERTY: Thank you. Mr. Folster.
I understand that Sargent was also the primary civil engineering contractor in the Mars Hill wind power project?

MR. FOLSTER: That is correct.
MR. LAVERTY: Did you have any -- did Sargent have any input into the design of that project, particularly in terms of the road construction and the cut-and-fill and pad design?

MR. FOLSTER: Yes, we did. We did most of the design. That was given to us for building the roads and the pads.

MR. LAVERTY: This project is being proposed in terms of the design that's being embraced here and presented. Is it substantially different in your view from the Mars Hill
project?
MR. FOLSTER: The criteria from which the design is based is much different than Mars Hill. We were not under the constraints of the width of road, the turbine pad design. It was different in Mars Hill than it is here.

MR. LAVERTY: Having to do with the construction characteristics of the project; correct?

MR. FOLSTER: Yes.
MR. LAVERTY: The cut-and-fill as proposed here, in relation to the cut-and-fill that was actually undertaken in Mars Hill, would you characterize it as substantially less than the Mars Hill project.

MR. FOLSTER: Mars Hill was about 25 percent greater than what this project is.

MR. LAVERTY: Was that because of the size, the number of towers involved, or the construction requirements of the road to the towers, the tower pads?

MR. FOLSTER: Both. The turbine pads here require less earth moving. There's more roads here than there were in Mars Hill in order to service the turbines.

MR. LAVERTY: You stated that you feel that this project is well planned and would be constructed as designed.

MR. FOLSTER: That is correct.
MR. LAVERTY: Do you believe that the Mars Hill project was well planned and constructed as designed?

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MR. FOLSTER: Under the criteria that was given for the design at Mars Hill, yes. The criteria here is much different.

MR. LAVERTY: Fair enough. Thank you.
Just a quick question for Mr. Pelletier. Steve, this is just a clarification. Somewhere I read in some of the material that the analysis, particularly of bats, that was presented by you omitted a bat of special concern -- omitted from the list or omitted from your analysis.

The information that you presented, does it now incorporate the bat of concern that was raised in that correspondence?

MR. PELLETIER: Yes, it does. That stems back to originally a lot of work has been done on different species and the small-footed bat was the species that is relatively unknown in Maine, and it was not part of range list -- when we do our initial analysis -- was not part of any one of those lists.

Later on in talking with -- that's all the basic homework when you're doing on all these different species that we're looking at. Are they here, how far do they extend.

IF \& W last year basically pointed out a couple of sites where small-footed bats had been. It was consequently included with our list. Of the bat species, the bat work that we did on the mountain, it was -- it's part of our list but the species that we picked up, we picked up three species: Little
bat, big brown, and quarry bats, and not small-footed.
We wouldn't really have expected the small-footed.
They have a different type of habitat that they prefer, like more rocky outcrops.

MR. LAVERTY: If I recall, wasn't there some
statement to the effect that they have a nesting area or a breeding area that's within close proximity?

MR. PELLETIER: It's likely that there would be small-footed bats regionally, but, again, the type of habitat that we have on Black Nubble -- and we haven't picked them up in the two species study that I did out there.

MR. LAVERTY: You did look for them and you didn't find them?

MR. PELLETIER: That's correct. Three species. One of them we found was a very common species, and that was almost 98 percent of our recalls that we got.

MR. LAVERTY: Thank you. Thank you for indulging. I have no more questions.

THE CHAIR: Gwen, go ahead.
MS. HILTON: Ed asked my question, but I do have sort of a follow up for either I guess Mr. Frick or Mr. Anderson.

What time of year did you do the road construction work at Mars Hill?

MR. FOLSTER: Tim Folster, Sargent Corporation. We started in March of 2006, we finished in November of 2006.

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MS. HILTON: What I've read in the application is there's a plan or there's a possibility that you will want to do the road construction and construction for the tower pads in the wintertime; is that true?

MR. FOLSTER: That was with the initial application. At this point construction sequence has not been decided. Winter construction will probably not be required.

MR. HANISCH: I think that if you give us approval -and I certainly hope you do -- it really depends on when -- we were constrained last time by the tax credits, and we really needed, because we didn't know if they were going to be reapproved by Congress, we felt that we needed to get the project done in a very short window.

We don't have that constraint this time. The only work that we're envisioning having to do based on what we see, the sequence now, would be cutting trees in the winter, which is probably better for the environment to get those down in the wintertime and then go back up during the dry season and finish construction.

It really depends on when we get approval. We don't have any intent to do winter construction at this point.

MS. HILTON: Okay. But it is in your application.
There's a whole --
MR. HANISCH: We discuss the potential for winter construction and what we would do if we had to do it, but
sitting here now, I don't think we'll need to do that.
MS. HILTON: I think that takes cake of that issue then.

My other question -- my only other question is for
Mr. Lee. My question is if we were -- if we approved this project, do you think that there are other locations in this general area or general region that would be attractive for wind power development such that we might see some applications in the future?

There's a West Kennebego site that was shown on the map. It was hard to tell how far away that is. What are your thoughts on that?

MR. LEE: We did find some good winds at West Kennebego. Unfortunately, that site is owned by Seven Islands Land Company and has been put into conservation.

It's hard to speculate, there's so many factors. But I think there may be -- obviously Kibby is coming up next, so there are other sites in the area. We looked at a lot and this is what we felt was best for all those criteria.

MS. HILTON: What I'm getting at, I guess, is if we set the precedent for approval of a site, this site, will it signal the go-ahead for other sites within this area of high mountains and unfragmented habitat?

I guess that's my question. Are there other possible sites?

MR. LEE: I guess what you're getting to, you're setting a precedent, and from our perspective we have done a phenomenal amount of work, both in site selection, as well as design, to try to produce a really, really good project.
Frankly, I think if you do approve this, you're setting a very, very high bar frankly.

I think there may be other sites, but I think the work we've done and the project we've produced is just the sort of project, in my opinion, should be approved.

MR. HANISCH: Commissioner, if I could add to that. If you, during one of the breaks, go over to the board that we have up there, the next to the last one, it shows the map of Maine. It shows you, as Harley talked about, where the transmission lines are.

You have to be pretty near one of those transmission lines because the cost of getting your power to that transmission line is huge.

So a lot of the inner workings of your jurisdiction would be very hard. Even though they've got good wind, it would be very, very expensive to generate -- to put a wind farm. So I think that's going to be the big hurdle for anybody else coming in.

MS. KURTZ: I have a few questions as well, and Ed and Gwen asked some of them so hopefully it won't take so much time.

One of the questions I had for Harley, you talked about -- it was in the testimony on meeting LURC standards, one of which is to provide at least as much protection as the current subdistrict or the current district zoning provides, you didn't actually address that.

You just said that there are other types of activities that create more impact. You said forestry growth, the ski mountains. You didn't actually demonstrate or say how this project could provide a greater level of protection than the current one does, you just compared it to other types of activities.

Can you respond to that?
MR. LEE: I guess I'm a little confused by the question. I was trying to address footprint and road construction and ski area construction, things like that.

MS. KURTZ: I think, if I look at the criteria, it says that the new district designation is more appropriate for protection and management of existing uses and resources within the affected area.

You raised that and said that this project would meet that condition, but you didn't demonstrate how it would, you just sort of compared it to other uses that are perhaps more detrimental. You didn't demonstrate how this would be more protective, you just said it was perhaps less detrimental.

I think you have to show -- I think that there has to
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be a demonstration that you'll be protecting a resource. The new district designation is more appropriate for the protection and management of existing uses within the affected area.

You didn't show, in my mind, how you would be providing that, you just said it's not going to be as bad as the ski industry and it's not going to be as bad as forestry and it's not going to be as bad as road building.

I don't see -- I haven't been able to follow your argument that it would be more protected.

Does that make sense? The look on your face says no.
MR. LEE: I guess the way I see it is these other uses that are allowed have certain impacts and that will be at or below those levels of the activities that are allowed.

For example, we have several thousand acres, and we're using a fairly small portion of it. So just right off the bat, we've got development of something like 5 percent of the total area. That's a pretty good start to begin with.
Then I guess I was comparing it with some of these other activities that we take for granted, including this mountain behind us.

Yes, comparing it to those and saying there will be less impacts.

MS. KURTZ: I understand that and I appreciate all the efforts that you've gone to to minimize the impacts compared to the original application.

I'm still not clear as to how this provides the protection -- unless I'm reading this wrong -- it has to be more appropriate for the protection of resources within the affected area, and I don't think your testimony demonstrates that.

MR. LEE: Maybe the best way here is after the hearing we can address that more in our follow-up comments.

MR. HANISCH: I think -- just as an add-on -- I think that the CLUP says that you have to balance the potential impacts of the bad against the good.

If you're saying your hurdle for that, commissioner, is the only way you can do that is not have any impacts, then you couldn't do anything anywhere.

It seems to me that we are going to have impacts, we told you we're going to have impacts, but we think we've minimized those impacts, and we think on balance the good that's generated from this project, just like there's good from foresting, harvesting the wood, and harvesting the snow for skiing and for biomass plant, we think that the good that comes out of that. We are hoping that you believe that the good that comes out of that balances against the impacts that we have.

MS. KURTZ: I understand what you're saying and I guess I just thought it was -- it was sort of quickly addressed and I just wanted to make a note -- you know, that I had made note of that and wanted to try to understand what we're
required to look at here.
Another question and I have to be honest with you, I haven't kept track of peoples' names. Whoever the person that was providing testimony about the jobs this project will provide. I guess that's Randy.

MR. MANN: Yes.
MS. KURTZ: Last summer there was a discussion about
hiring local -- the number of permanent operation jobs, and it
was brought out in the testimony that actually the operation jobs would be held by some of the folks from the turbine manufacturers and not local people at all.

I just wondered if that has changed.
MR. MANN: I think your recollection is partially correct, so let me clarify it a little bit.

The normal way that a wind project is operated is a combination of the project company owner, which would be Edison Mission to Endless Energy, in cooperation with turbine vendor because during the first five-year period, we'll have a turbine maintenance and warranty contract with that vendor.

So during that five-year period there will be employees of the project company as well as employees of Vestas on site.

After the five-year period, those employees will very likely be all employees of the project company because the warranty period expires, and so the normal way to transition
those jobs to the project company.
Now, to answer your specific question of will there
be local jobs, we have talked about this with Vestas, and their expectation -- and this is how they normally do it -- is to attempt to hire those people locally.

So there may be a project manager or two, you know, that would have seasoned experience on other wind projects, but the rest of the staff we would certainly be looking to hire those people locally. As I said before, that's a best business practice for us because quite frankly it's easier for us to hire people locally, train them, and employ them here than to have to ship them in from elsewhere with relocation obligations and things like that.

It's just a normal business plan.
MS. KURTZ: What kind of education and training would it entail to bring someone up to speed to assume one of those?

MR. MANN: This is something that the industry deals with a lot. What we have typically found is that in places -in rural places there's usually a pocket of people with the mechanical skills to work on and maintain turbines.

Now, obviously they need to go through the training process, they need to learn the ropes of that business, and all of the turbine manufacturers have sort of schools, if you will, set up to do that. You may take a couple-week program to learn the equipment, but then you will get certified and you'll be

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able to do it.
Really, the core skill is kind of a mechanical skill -- people that can work on cars, people that can work on tractors, people that can work on Snow Cats. Those are the type of people that usually have the aptitude and interest to do this. We've found that most of our projects are in rural areas and we find people locally to do those jobs.

MS. KURTZ: Thank you. I understand, obviously living in western Maine, that there's a tremendous need for jobs, so I appreciate the construction jobs involved.

I'm wondering about the other economic impacts. This area also has fortunate or unfortunate high real estate values and second homes.

I wonder if you've done any economic impact studies on real estate values and also recreational consumer impacts, this being sort of an outdoor, tourism, and recreation area.
Have you been able to either do an impact study or compare this type of project to a similar -- a location that has a similar economic base, similar real estate, and that kind of thing, sort of comparing apples to apples.

MR. LEE: We haven't done a specific study, but I collect those to the extent they're available. I think probably the most relevant one was done on property values studies a few years ago and it looked at wind farms across the country, including the Searsburg one in Vermont, which probably
has a similar demographic and economic base.
I think the conclusion is that there really hasn't
been any negative effects on real estate values, and they have become pretty significant tourist draws. There are some wind farms where they charge $\$ 20$ a visit and get tens of thousands of visitors.

I think it's unlikely to have any negative impact.
You know, having spent a lot of time in these woods skiing and biking and hiking, I think we're going to get a lot of visitors stop by. Working on the Met towers, we've had people stop by sometimes, hikers. In the wintertime we've had snowmobilers showing up just because they saw a trail and they followed it. I don't think there will be much of a negative impact.

I mentioned before the Western Mountains Foundation sort of insisted on putting their trail up through the middle of our turbines, too, and I think that's sort of an endorsement of compatibility between trails and recreation use and our project.

MS. KURTZ: I had a question on transmission capacity.

MR. GARWOOD: Steve Garwood.
MS. KURTZ: Yes. You indicated that -- you showed us the bar graphs of the capacity and the net capacity in summer and winter. You based that on an assessment, I think, of a study that has not been completed yet?

MR. GARWOOD: No, it's not a completed study. MS. KURTZ: Do you know when that study will be completed?

MR. GARWOOD: It has been completed.
MS. KURTZ: It has been completed?
MR. GARWOOD: It was completed May of '06 I believe.
I can tell you. May 30th, 2006 and it was done for the
90-megawatt Redington project and it was approved as being applicable for this specific 54-megawatt project.

MS. KURTZ: So it was completed or not?
MR. GARWOOD: It was completed on May 30th, 2006.
MS. KURTZ: I guess what I had written down is that it had not been completed but you felt nonetheless that congestion would not be an issue.

MR. GARWOOD: No, it has been completed, and the information contained in that study shows that the transmission capacity in aggregate of the three $115-\mathrm{kV}$ lines that exist today and emanate from the Wyman hydro substation, which is where all the generation ends up from this proposed project, from the Boralex project, and from the Wyman hydro, and the Harris hydro stations, except that which is consumed locally, all of the generation from those projects must get out over those three $115-\mathrm{kV}$ transmission lines.

My bar graph showed that there is more than ample transmission capacity with all three lines in service and even
if you have one particular line drop out of service from say a lightning strike or some other event, which would be a short-term event by the way.

In any event, that was the intent of the slide. To me it's not equivocal. There is sufficient capacity to get power out of that area for the projects that are there and this proposed project.

MS. KURTZ: I just have one last question. It's been mentioned that the Redington Mountain -- or the acres on Redington -- there's been an agreement that if this project is approved that no wind power development will occur on Redington.

What other plans might you have, though, for that investment?

MR. LEE: We don't have any other plans. I don't think we're doing any logging up there because of the low value of the timber, and we'll hopefully make as much of our return on Black Nubble as we can.

MS. KURTZ: Thank you.
THE CHAIR: Steve.
MR. SCHAEFER: Yes. My first comment is more of a
statement about rating these projects and not just yours but all of them.

For instance, yours is a 54-megawatt project, but in reality it's an 18-megawatt because of the 30-percent capacity.

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That would make our job a lot easier -- and not just you, but everybody -- should just be realistic about the performance, the average performance.

I think it's easier to consider transmission capabilities. It's like the food label. It would tell you exactly without giving the away the details of your research that this is truly a 30-percent project as most wind projects. That's just a comment.

About the road, Mr. Anderson, one of the new roads is the Upper Black Nubble access road and under ridgeline it says, possible connection of Upper and Lower Black Nubble. If that could be connected, would that eliminate the need of the Upper Black Nubble road, which is totally new I noticed.

MR. ANDERSON: It would, yes, it definitely would. If we connected the Upper Black Nubble to the lower, that area that you're looking at, that would eliminate the need for the Upper Black Nubble access road.

I've walked down through there. It's a challenging terrain but it's something that we plan to further evaluate for the final design. That's why we've shown it on that plan.

MR. SCHAEFER: That would eliminate an engineering headache, it looks like, if you didn't have to build that Upper, but there's tradeoffs on the ridgeline, too, I guess.

MR. ANDERSON: Yes, there's certainly tradeoffs. It eliminates a much longer but more easily constructed road and
provides a shorter section of very expensive, more challenging construction. So there's a tradeoff yet to be determined. Right now, as proposed, we do plan to do the longer.

MR. SCHAEFER: That's all.
THE CHAIR: Thank you, Steve I think -- I agree with what Ed said earlier about our trying to stay focused on what our real role is, but a lot of the testimony is focused on some of these economic issues, they're very interesting and educational. You have to indulge us a little bit to try to do some interesting things.

In reading the economic analysis of Mr. Most -Mr. Most and Mr. Mann -- presented, Mr. Most presented, it seems to me in reading this that you might want to comment, you're counting -- the economics of this whole project tell me a lot on the increasing costs of electricity. They're driven by carbon emissions, charges, or whatever you want to call them, and you're also assuming in the -- in the other side you're assuming that there's no increased demand for electricity in the mission statement that you make, because you've introduced into the testimony all of the stuff that was presented to us in Greenville about the State's position, but if you look at some of those charts, it clearly suggests that natural gas is going to become even a greater percentage of our generation.

These are some of the things that make us wonder 124
about all of these -- I can intuitively understand clearly how we're going to have less emissions if we have wind power. Any percentage of wind power will prevent some natural gas that's being used, but the reality, the global picture of it -probably not a good word -- but the bigger picture is increase of demand for electricity offsets a whole lot of what you're talking about.

That doesn't mean that wind power is bad, it just means that's the real world we live in.

Do you want to comment on any of that just to help us understand this whole thing?

MR. MOST: Sure. This is Matt Most again. You're absolutely right. What we refer to as is a business-as-usual case. If we do nothing, our expectation is that natural gas consumption to make electricity will continue to grow substantially, and that's if we continue on a path that we're on today, and then we'll have all of the impacts associated with that.

If we build wind generation as the State of Maine has prescribed -- and as many states have prescribed -- what you end up doing is reducing that increase that you would have had otherwise.

So you may still see an increase in natural gas consumption to make power, but it would be less than it would have been otherwise. As we build this wind fleet, it's cutting
in dramatically into that expansion of fossil fuel consumption as what you would have had otherwise.

The 10-percent impact that the State of Maine has prescribed is a rather substantial impact. Other parts of the country have done similar things.

So you're absolutely right. You're not going to eliminate natural gas as a major fuel for driving the electricity in this region or in the country. What you're trying to do is mitigate the growth of $\mathrm{CO}_{2}$ emissions, level them out, and then start to decrease them.

One of the major initiatives in trying to decrease those emissions is a reduction in energy consumptions. You pointed out, a lot of those charts and a lot of what the State agencies are trying to do is to reduce energy consumption overall.

Certainly, if that energy reduction overall is really substantial, it could have an offsetting impact on the price of power. The less demand for power, the more expensive power.

So we're trying to weigh those and we're trying to understand what the impact is. Our view of the future right now is that $\mathrm{CO}_{2}$ pricing will increase the price of electricity, which may decrease the demand for electricity somewhat, but it will still decrease the price which is an important factor in our economics.

Also, that increase in demand -- if there is an

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increase in demand for natural gas, that has a very interesting effect on the volatility and the price of electricity also.

So these competing effects that $\mathrm{CO}_{2}$ reduction in other parts of the country where the electricity is not as clean as it is here, they're going to see higher natural gas prices in other parts of the country where coal is primarily prevalent.

As a result, that's going to cause increasing demands for natural gas, which may also have an impact on power pricing.

So there's a lot of moving parts to this, but we think that wind power is a winner under all of these scenarios.

THE CHAIR: I think you addressed it in the written part of your testimony if you didn't say it and others have said it in prefiled, but there's been inferences made that somehow the construction of wind farms is going to decrease the cost of electricity, and all the testimony I've heard today kind of says that isn't going to happen because we're going to pay for all these carbon credits.

I guess you or Mr. Mann referred to all of the increased value of these renewable energy credits, I assume that we are all going to pay for those. Somebody's got to pay for them and it's going to be the customer in the end, right, and we're also paying for all these production tax credits and so on and so forth that make all this stuff work.

I don't know as that makes wind power bad, it just seems that -- I'm a little concerned about how we're selling it, if we're selling it on the basis that somehow it's going to reduce our costs of electricity, because clearly your testimony says it isn't going to happen, at least to me.

MR. MOST: I think the important factors that wind power will reduce what you otherwise would have had. If you didn't have wind power produce a zero emissions component to your overall energy mix, you replace that component that does have emissions, and that component would have a higher cost.

So the more wind power that can be generated, the more you can mitigate this effect.

But clearly you're absolutely right. All of the energy policy in this country that's being debated right now has a cost associated. There's no free lunch.

In order to retool our electricity industry to produce a less carbon intensive product for consumption by Americans, that's expensive. It requires the retirement of already paid for power plants and replacing them with new ones, that has costs associated with it, and it also forces the use of more expensive fuels. Coal is a very inexpensive fuel, natural gas is a more expensive fuel. So those switches all have costs associated with them.

You're absolutely right. The national interests in developing a renewable fleet all have costs and they hit the 128
taxpayer either through a reduction in tax revenue through a reduction in tax credit, or they hit the consumers through added charges.

Wind power is an answer to those problems, it's not a cause of those problems.

THE CHAIR: Thank you. I guess the argument is that the cost is increasing at a lower rate than it otherwise would increase. That's your argument, not that we're going to see a decrease in electric rates. I don't expect that to happen.

MR. MOST: You may have a lower electricity bill due to lower consumption, so you may be consuming less power, so your bill -- and I think a lot of folks are hoping their bill will be less or it would be similar -- but the per unit of electricity may be more expensive.

THE CHAIR: Thank you. Mr. Garwood, just following up on Rebecca's question. I think I heard you say that there was no capacity concern between the Wyman and where the rest of the world is located, but the real issue here to me is Bigelow to Wyman.

Now, will you clarify, please, the capacity on that specific piece?

MR. GARWOOD: Yes. Today that line is rated at about 57 megawatts. Today you only have the Boralex plant, which I think has a peak capability of 47 megawatts, with only about 45 of it transmits down that line because the rest of it is
consumed locally through a distribution circuit out of the Bigelow substation.

As part of this project, the developers have volunteered to upgrade that line. Utilities and ISOs under FERC rules are not allowed to force a developer to increase the capacity of a transmission line solely to ensure that all the generation that may interconnect with that lane can be dispatched.

Under a competitive market, FERC's rules recognize that there should be competition for transmission capacity and the variability to get onto the grid should be based on your bid into the electricity markets, so that if your bids are low enough, then you can get onto the transmission system.

So the voluntary upgrade that developers of this project have proposed raised that capacity of that line from 57 megawatts to 135 megawatts. At the time, that would have accommodated both full output, the 90-megawatt project they previously proposed, and all of the Boralex biomass facility.

Today they have come here with the same upgrade planned but the project is 36 megawatts less in size.

THE CHAIR: Thank you. I guess that makes sense to me. Because Steve questioned about the capacity. I guess he's right about the 30 percent --

MR. GARWOOD: Maybe I can help there.
THE CHAIR: -- on average, but the thing is that the
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plant will operate at capacity at any instant point in time, right?

MR. GARWOOD: Yes.
THE CHAIR: It would generate 54 megawatts, so the line has to be sized for the instantaneous production rates?

MR. GARWOOD: Correct. When utilities do the kinds of studies -- an impact study, per se -- they do those under peak conditions, they do those under light-load conditions, they do that under various levels of dispatch of the existing generation and the proposed, so in this study and the 90-megawatt Redington system impact study, they ran some 50 different cases when they modelled the system both showing the Redington project at full output at 90 megawatts and then showing it at lower levels as well. Similarly they showed the Boralex plant on at full or down to some of the levels.

The transmission planners responsible for those studies, they need to do their best to make sure that the lines can -- and the system can -- operate reliably under what they'll call reasonably stressed conditions and assuming full output of your proposed project, and they don't bother to take into account what you've raised such as intermittent units, such as a wind farm, will not be operating at full capacity in all hours.

The same is true with the hydro. You've got to have sufficient water coming down the river, you've got to have the
right wind conditions, and the biomass plant has to be operating at full output for you to have a scenario that was actually represented by my bar chart where all the generation in the area has all the right conditions to operate at full capacity.

THE CHAIR: I think obviously the reason I think we're all asking these kinds of questions is to achieve the full benefits of all of this, that we have to be operating at full capacity, we have to be able to operate at full capacity when we can; right? Otherwise, this isn't --

MR. GARWOOD: That's correct.
THE CHAIR: -- all these renewables -- I think this all arose because the whole line is based on renewable energy, which everybody wants to see get pumped into the system; right?

MR. GARWOOD: Correct. And I believe the figures that like for emission reductions that John mentioned were based actually on a megawatt hour production expected to be representative on an annual basis of this particular project.

So it doesn't assume that the project is running at full capacity all hours of the year.

MR. LAVERTY: Could I ask a follow-up question?
THE CHAIR: Sure, go ahead.
MR. LAVERTY: If the project -- if the financial viability of one mountain versus two mountains -- and this is a sensitive issue -- why would the applicant still include in
this proposal an upgrade to the 135-megawatt as opposed to now that the 90-megawatt is no longer on the table. Why wouldn't that upgrade be reduced to reduce costs of the upgrade and increase the financial viability of the one-mountain project?

MR. GARWOOD: I'll answer part of that. Randy may want to speak to another part of it.

I indicated, the ISO New England authorized and validated the original system impact study done for the 90-megawatt project to be viable and applicable to the Black Nubble 54-megawatt project.

However, in order for this project to maintain its position in the queue list of all other requested projects, it had to stay with the results of that study, because modifying that study and any assumptions that went into it would require restudy, significant restudy, and when you do a restudy of that nature, you essentially hold up other projects that are in the queue afterwards, and under the FERC regulations, it's the ISO's responsibility to look after the interests of those developers who are further in the pipeline to make sure there aren't such delays occurring, and if such delays are occurring by action taken of the developer, they're booted out of the queue and put last in line.

That was in part the reason for staying with the results of that existing study, which included voluntarily upgrading the line between Bigelow and Wyman.

MR. LAVERTY: Thank you, I understand it.
THE CHAIR: Steve, I have a couple of questions. You mentioned the bat situation and the foraging areas, there weren't a lot of foraging areas on top of the mountain because of the forest cover involved up there.

My question was, do we create opportunities for foraging areas by making openings? Do the openings make good places for bats?

MR. PELLETIER: It's a possibility. We're doing studies, sometimes that's one of the places we'll look for.
We'll go down by near wetlands or in openings along roadways, and those are areas that you'll find foraging.

The summit and most of the ridgeline of Black Nubble, though, is a very dense canopy and it's a function of a number of different things.

Typically being windy, the insects, things that they're foraging on, it's just not a great place for them to be occurring. They'll find more, better available feed on lower ridges, down in the lower elevations down in the valleys.

Again, the foraging would be -- a lot of it would be within the canopy itself because it's so dense. So yes, there could be some movements in those corridors and would actually be preferred, but it's still, I think, the overall preference to be foraging would be eliminated because of the lack of prey and because of the dense cover.

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THE CHAIR: The chart you presented on the height of the migration study, was that a local study or was that -- it kind of gave the appearance that it might be a national study. Is that what it was? The data, it's not based just on Black Nubble; right?

MR. PELLETIER: No, that was based on all available public studies that have been put out right now, and that's on a national basis.

THE CHAIR: Mr. DeWan, how many places on the -based on your studies -- how many places are we going to see all 18 turbines? Are most of the views kind of several here, several there? I saw one that had quite a few on it from the Appalachian Trail, I think, I quickly counted quite a few.

Did you collect any of that information?
MR. DeWAN: We did computer modelling I think all of the sites along the AT and a lot of other sites. We can tell you precisely how many would be seen.

I think the general answer is that from most of the sites that we've talked about -- Saddleback Junior, The Horn, and Saddleback -- you're going to be seeing 16 or 17 of the 18 turbines. Because of the topography, there's some on the back side of the mountain. Some of them you may only see the top of the blades, a partial view of them.

THE CHAIR: I had a comment about forest cover type changing over time, which may impact views, but I don't know
how to even phrase that as a question. It just struck me that -- I know that trees die and come and go and they may be cut. I don't know how any of us control that.

MR. DeWAN: That may be a question to address the views along some of the roads like Route 16.

THE CHAIR: That's where I saw the thing that could change. A landowner could decide that tree for a Christmas tree, and you've changed the whole viewshed.

MR. DeWAN: With that one particular tree.
THE CHAIR: Right. Anybody else have any questions? Marcia?

MS. SPENCER-FAMOUS: No, thank you.
THE CHAIR: I think since the Commission took probably more time than we were supposed to, which is, I guess, somewhat our privilege, that we'll take a lunch break and we'll come back and we'll start with the opposing intervenor cross-examination.

I think we've been at this long enough. We're going to try do this in a half an hour. So with your cooperation, we can start sometime between 10 minutes of 1 and 1 o'clock. Thank you.
(There was a luncheon break in the hearing at 12:21 p.m. and the hearing resumed at 1:05 p.m.)

THE CHAIR: Please proceed.
MR. PLOUFFE: Thank you. I'm Bill Plouffe, and I'm
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the attorney for the group that's been designated in the materials as the opposing intervenors, and that's the Maine Appalachian Trail Club, the Appalachian Trail Conservancy, the Appalachian Mountain Club, and the Maine Audubon Society.

I think I have a little over an hour. I think that gives us enough time so that we don't have to hurry through this. I have more time this year than I had last year.

Terry DeWan, I'm going to start with you, because I think that visual issues are very important obviously in this case.

## EXAMINATION OF TERRY DeWAN

## BY MR. PLOUFFE:

Q. Terry, we were here in August of 2006. Am I correct that in the amended application that the 18 tower locations on Black Nubble have not changed since then?
A. I believe that's correct. I would have to ask the engineering consultants. There may have been some minor shifts.
Q. Have you been asked since 2006 about moving the location of any of the towers?
A. No, we haven't.
Q. Have any of the poll locations changed since August?
A. I don't think they have.
Q. I mean by that the power line locations.

We heard Dwight Anderson this morning that there's
been some relocation of one of the roads; is that right?
A. Yes, you heard Dwight talk about some places -- relocation of the wetlands impacts -- to avoid having an impact.
Q. Does that relocation change your analysis at all?
A. Relocation, probably not; there were some places where we recommended putting some additional curbs in the road, but for the most part I don't think it does.
Q. So we're dealing essentially the same project as to Black Nubble as we were in 2006?
A. The same physical project.
Q. Correct. You would agree with that?
A. Yes.
Q. I don't see --
A. Could I amend that though to say that the lighting, which has been talked about by many of the intervenors, was of concern. That has changed, as we've all talked about.
Q. We'll get to the lighting.

Now, I heard from Dwight Anderson this morning that he had calculated an approximation of the amount of cut-and-fill that will be needed for the roads on this project.

I don't see -- but maybe I'm missing it -- the cut-and-fill locations at all in any of your simulations.
A. When we did the simulations -- the simulations, we've done two: One is the photographic simulation, the other is the 138 before or after, the aerial photograph, looking straight down.

On that one we worked very closely with Dwight to identify what the extent of the limited grading would be.

Likewise, we also -- when Amy Segal did the photo simulations took into account what we knew in working with DeLuca-Hoffman where the cuts-and-fills might be.

If you look carefully, you will see some places where there are roads that may be visible.
Q. I'm not talking about the roads, I'm talking about the cut-and-fill, upslope, downslope materials deposited, that changed the landscape.
A. The lines that we're showing are the results of those cuts-and-fills.
Q. The cut-and-fill itself doesn't shop up there, does it? You haven't created any new simulations since last August?
A. All the simulations that show are new as a result of this project.
Q. Last August, as I recall, you were not fully aware in any event of the status of Mount Abraham as being a public reserve?
A. We are certainly aware of that right now.
Q. You, I think, were not fully aware of the status of the Appalachian Trail as a unit of the National Park System?
A. That is not true. We were fully aware of the fact that it
was a unit of the National Park Service and we said that in our testimony.
Q. Did you rehike the Appalachian Trail since August of 2006?
A. I have not.
Q. Did anybody in your office?
A. Not that I'm aware of.
Q. If you would go to Page 41 of your prefiled testimony and under the Poplar Ridge on the AT, the copy I have says, the turbines on Redington and Black Nubble will be intermittently visible.

Are there any turbines on Redington on this project?
A. You can look at things a dozen times, you'll always miss something. That's one thing that was missed.
Q. Is it fair to say, Terry, that this report is basically an edited version of the work that you had done and submitted in terms of the larger project?
A. I think that's a fair characterization. We looked at all the details.
Q. Okay. All right. I hope commissioners can see this. I talked to Marcia about where to put these.

Your current testimony regarding Black Nubble-only project, your prefiled, the two places that you addressed the issue, you say, reducing the size and scope of the project has greatly minimized the visual impacts by significantly increasing the distance of the project from
close to scenic and recreational resources.
And you also say under protection of Redington Pond Range, these restrictions, that is, the protection of Redington Pond Range, would significantly decrease the scenic impact of the project, provide long-term protection of the last undeveloped and unprotected 4,000-foot peak in Maine. That's sworn testimony this year.

In your rebuttal comments submitted under oath last year when you were speaking to the Black Nubble-only proposal that NRCM put on the table, you said to the Commission in testimony that the Black Nubble-only alternative would greatly reduce visual impacts or this scenario would eliminate the views of turbines from the Sugarloaf Cirque. This viewpoint represents change of just a few minutes' actual time at the height that we would have contact with the project. In all the other locations where the hiker can view the turbines, they will still be visible.

Then you went on in another section of your rebuttal comments and said that consequently eliminating the Redington turbines would not substantially reduce visual impact from most trail locations. It is not reasonable to require the applicant to reduce the project size so significantly just to achieve these very minor reductions in the project visibility.

How do you square those two sworn statements?
A. Let's get to the middle of the second section there where we talk about use of the majority of the trail.

As we talked about, the majority of the people who are hiking the trail are going to be in the woods without a view outward, at least outward to the project, for 95 or more percent of the time.

With this particular application, there are a few places where, for example, on the Cirque, they are not going to see it at all. As we said earlier there's about 800 feet where you don't see it at all.

There's a place on top of Spaulding which is not on the trail, it's a partially wooded hillside off of it, where now you can see seven turbines and before you would have seen more of them.

So there are some changes.
Q. But not enough to make a significant difference according to your rebuttal testimony last year?
A. Significant is a very qualitative word. To some people, to see a single turbine I think may be considered to be an undue adverse effect. I think that's what this is all about.

By reducing the number from 30 down to the number we have right now at 18 , to some people that still may not be a significant change.

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Q. Your rebuttal comments last year were in defence of the larger project in the face of claims made by Natural Resources Council that reducing the size would significantly reduce scenic impacts, and you said, no, it won't.
A. From some viewpoints. As I said before in my presentation, for example, Saddleback, you're looking at the turbines at about the same distance.

For some people who are out there, it's almost a black-and-white question. You see turbines or you don't see turbines. To people who don't want to see turbines at all, whether or not we have 80 turbines or 18 turbines, perhaps that's not a difference.
Q. You said last year the only place that the turbines would be eliminated from view is at Sugarloaf Cirque.

You didn't say some people, it's not black and white. You didn't say anything. You said it wouldn't make any significant difference.

It's the same project, you haven't rehiked the trail, you now know about Abraham.

Why the different position today?
A. As I said, we're always looking at it. I think the way we looked at it the last time might have been a qualitative way of looking at it.

Now we're looking at it from a quantitative
standpoint looking at the distances, the viewing angles, the percentage of views that you're going to see it from.

I think it's the same project -- it's a reduced project, but there have been some changes.

The lighting, for example, I think that's a change that has come about over the last year.
Q. We'll get to the lighting.

Okay. Your testimony of 2006 regarding viewpoints on the Appalachian Trail, our fieldwork has determined that there will be only four open areas within the section. In addition, there would be two open views from side trails -- Sugarloaf and Mount Abraham.

You said there will also be intermittent filtered views from several locations -- North Crocker, below Sugarloaf Mounting, Spaulding Mountain, Loon Mountain, and Poplar Ridge. However, most of these offer brief glimpses of the wind farm, will be seen by the average hiker for only a few seconds at a time, if they're noticed at all. In our professional judgment they would not be considered major viewpoints.

Focus on Poplar Ridge. I was just there two weeks ago. I didn't take these photos. These are from Dave Fields' testimony.

That's Poplar Ridge. Is that a filtered and intermittent view? This is from the tread way of the
A. Right. By the tread way you mean the centerline of the trail?
Q. Right, where you hike.
A. I guess I would consider it to be a filtered view because the entire project extends from that image of Black Nubble to the left perhaps another distance equal to the width of the mountain, and it is partially broken up by trees.
Q. This tree?
A. No, I'm talking about the view from the top on the AT.
Q. Okay.
A. Ironically, the photograph is almost exactly the same views that you have there.
Q. Well, I'm not sure about that. Let's look at your photo P-51 and P-52 attached to your testimony. I don't know if commissioners have that or not.

Do you have that, Terry?
A. I do, yes.

THE CHAIR: What's the number, please?
MR. PLOUFFE: P-51, P-52, Page 6-C-10. It looks like
this.
BY MR. DIDISHEIM:
Q. Terry, the top photo of P-51 says, filtered view of Black Nubble, left, and southwestern ridge of Redington

6 Q. What's the line?
7 A. Excuse me?
8 Q. What's that? What line?
9 A. Actually the line should extend over to include all of
10 Black Nubble on the right side of the tree.
Q. According to that that you have identified as Black Nubble is not Black Nubble at all, is it?
A. Where it's pointed to right now, that's really an extension of the Black Nubble project area.
Q. That's not the mountain Black Nubble?
A. No, it is not.
Q. In the bottom photo it says, view of the Redington Pond Range from the same location on the eastern edge of Poplar Ridge.

That's not the Redington Pond Range, that's Black Nubble, isn't it?
A. That's probably correct. Again, we did change that when we prepared these boards that are on display over there.
Q. You didn't tell anyone else that you changed that?
A. We just discovered this in reading the intervenor

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1 testimony.
Q. Ahh. So are you telling me that the views on -51 and -52 are the same as these Dave Field viewpoints? Or don't you know? You haven't been to these places personally, have you?
A. I have not been to this particular place.
Q. Who took these photos?
A. Tom Farmer, I believe, from my office, I believe he did.
Q. Is he here?

10 A. He's not here.
11 Q. How much of this have you actually done, the trail?
12 A. In percentage --
13 Q. The portion between Route 4 in Rangeley and Route 27
14 Carrabassett Valley.
15 A. I've probably done a third perhaps.
16 Q. But you haven't been to the Poplar Ridge area?
17 A. No, I have not.
18 Q. How long ago was it that you were there?
19 A. The year before last, I went up to the Crocker.
Q. You did the Crockers?
A. Yes.
Q. What else have you done?
A. Went up to -- last year right before the hearings we went up to Saddleback with Dr. Palmer.
Q. So for some of these other views, your staff brings the
photographs into your office and you make some professional judgments from looking at the photographs, not from being there?
A. Yes.
Q. What makes a filtered view? Is this bottom photo of Dave Field a filtered view because of the tree in it?
A. I think that particular one, again, that's off the Appalachian Trail technically.
Q. It's within the boundaries of the Appalachian Trail right-of-way?
A. When we talked about an open view, we were talking about a 360-degree view. I think it's arguable whether or not that's a filtered view or not. I certainly would say that the top view is filtered because of the relative shortness of the opening.
Q. So an open view is 360 degrees?
A. When we're talking about panoramic views as we've described here.
Q. I have to be in an alpine area and look around like this in order for it to be an open view under your definition?

It's important because of your distinctions that you draw.
A. We were describing as this being the higher elevation views from Saddleback. We're calling those the open views.
Q. So they're really 360 s?
A. Yes.
Q. So there really could have been many views like this on all of these sections when you say they're just filtered intermittently?
A. When we sent our people up to look at the areas, we recorded the views with GPS equipment, and we located where they all are. Those are on our maps over there.
Q. If you could look to photo -- on 6-P-42 on 6-C-9.

Have you found it?
A. Yes.
Q. It says that if you're looking northeast from Mount Abraham, large clearcuts are characteristic parts of this view. The peak to the left of center is Owls Head. Photo taken 1998, nine years ago.

Do you think the clearcut shown in that photograph looks like that today?
A. Probably not. It has had nine years of regeneration.
Q. Why is this photograph put in this report, submitted to this Commission in 2007 as representative of what this area looks like?
A. It's representative of the types of activity that occurred in this area in the past.
Q. It's not representative of what it looks like today.

Why didn't you go out and take new photos?
A. We did supply some additional photographs in the form of Google Earth images, which we've included as part of our application that shows heavy patterns, different types of cutting that are going on today that weren't done back ten years ago.
Q. Is there a discussion in your visual impact assessment as to the particular visual resources of this area or of the sensitivity of those resources?

I see a discussion of still lagoons and golf courses. What about some of the other visual resources in this area?
A. We do talk about the areas that -- we've used the term scenic resource, which of course is a DEP term from the 315 regulations.

We have talked about impacts on places like the scenic roads, the Appalachian Trail, the lakes and the ponds.
Q. Now, you can't see the Sugarloaf ski development at all from the portion of the trail between Route 4 and Route 27, can you? You have to go over to the Bigelow Range and look at that; correct?
A. I know there's one point near Crocker you can go off on a side trail and see the Sugarloaf ski area.

For the most part you have to be up on the Bigelow Range and look down.

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Q. Is it not important for visual impact assessments to take into account the viewing expectation of the person who's viewing?
A. Absolutely.
Q. Where is the discussion in your visual impact assessment of the values of the Appalachian Trail?
A. We devoted quite a bit of dialogue in our report about the views from the Appalachian Trail because it is a unit of the National Park Service.
Q. What about the attitude of the viewer?
A. We do talk about viewer expectation along with a discussion of viewers from the other scenic viewpoints.
Q. What do you think the expectation of the Appalachian Trail hiker is as he looks over or she looks over these mountains of western Maine?
A. I think it will probably be different in different parts of the Appalachian Trail.
Q. Essentially between Route 4 and Route 27. You heard some of the testimony last August. I'm not hitting you with -this is not cold. I'm not hitting you cold with this.
A. The expectation for people would be, in some places, hiking along a trail when you're in the woods. Other places would be an expectation of seeing a wide open panoramas, other places will be an expectation of being in an area where you're in contact with a certain amount of
cultural development.
I think the expectation will change as you go from viewpoint to viewpoint.
Q. On that stretch of about 26 miles from Route 4 to

Route 27? Haven't you heard testimony that this is some of the most spectacular sections of the 2000-mile trail?
A. We have heard that.
Q. You disagree with that?
A. I don't disagree that it's some of the most beautiful scenery in the state of Maine up there. We all appreciate that.

We also know that from those vantage points you're able to look down and see one of the largest developing ski areas in terms of Saddleback Mountain, looking over the Town of Rangeley.
Q. You already told me you can't see Saddleback from the section I'm talking about, except for that one ski trail, you're right, the Buck Slide area.

What else? You see a little bit of the Saddleback development from the shoulder of The Horn? That's it, right?
A. And you look down and you see the Town of Rangeley, you can see the airport, you can some of the roads. From that part you can see part of the Navy facility.
Q. Have you been on Saddleback Junior?
A. I have not been on Saddleback Junior.
Q. So you don't whether you can really see the Navy facility there, then?
A. We've never said that you can. It's my understanding, the only thing that you can see from there is at the very top of Sugarloaf where you can see some transmission towers.
Q. This is what you were told by your staff, not your personal experience?
A. I've read that in some of the prefiled testimony from intervenors and in talking with people that have been there.
Q. The lighting that you mentioned, there would be eight towers lighted; is that right?
A. Seven towers.
Q. Seven towers?
A. Yes.
Q. I think the last time we met -- at least I was not entirely sure what the lighting was going to be, but now we know there are going to be seven towers -- and the lights are Redington or white?
A. They're red pulsing lights.
Q. They would be turned on when?
A. They would come on at dusk, when exactly, I don't know.
Q. And go off at sunrise?
A. Yes.
Q. I didn't fully understand your submissions about the visibility of these from below.

Could you explain that just briefly to me?
A. If you go to photogrammetric charts from the lighting manufacturers, they're designed so an airplane pilot sees the lights at its greatest intensity, flying horizontally or up above.

But they have baffles in them so that when you're down below, when you look at them, they look a lot less intense.
Q. So that would be pretty close to the base of the tower where you couldn't see them from below. But if you're at a distance, wouldn't the angle of sight allow you to see them?
A. It depends on what angle you're at.
Q. If I'm in the mountains, the next ridge over, could I seem them?
A. If you're at the same elevation, they'll probably be as intense as they're going to appear at whatever distance you're at.
Q. Have you done a visual impact assessment of this project lighted?
A. I guess it depends on what you mean by visual impact assessment, the lighting.

We have not done any simulation of the view from 154
The Horn. We have looked at the lighting from, as you saw, that one viewpoint on Spaulding.
Q. That's it?
A. No, we have talked with the manufacturers. We know how the lighting is designed. We've talked with other landscape architects who have been involved in wind power.

We have a rather extensive collection of lighting photographs, if you're interested in seeing them, showing what the lights would look like at the various viewpoints.
Q. You didn't submit those in the evidence, though?
A. We did not, and we may want to. I know that when we looked at lights at distances of 9 to 10 miles, they're extremely small.
Q. We're not talking about 9 or 10 miles here, though, are we?
A. We are if you're talking about The Horn campground on the Bigelow, which is one of the points we talked about this morning.
Q. What about some of the closer parts of the Appalachian Trail?
A. They obviously will become more intense the closer you get to them.
Q. Now, in reading through your prefiled testimony and sitting here this morning listening to your testimony, I think in reading the prefiled I think I kind of pretty
much hit this correctly, and this is important.
As I read your visual impact assessment, VIA, there are a number of factors that you look at in assessing the impact of the development on the viewshed.

My reading of this breaks down to the number of Appalachian Trail miles with views of the Black Nubble windmills, the length of time that the Appalachian Trail hiker is exposed to the views of the Black Nubble windmills, the percentage of field of view occupied by the windmills, and the percentage of days of clear weather you're talking about climate conditions or something like that.

Now, with respect to the percentage of the miles with views of the Black Nubble windmills, are you saying that in the denominator -- let's take the section from Route 4 to Route 27 -- in the denominator of the fraction, we put the total number of miles -- 26 let's say -- and in the numerator we put the number of miles in the AT within that section from which you can see the windmills.

That fraction represents in some way, meaningful way, the impact of the development on the viewing experience of hiking that section of the trail?
A. That's one way at getting at -- an arithmetic way of looking at it.
Q. Well, your analysis seems to be quite arithmetically

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driven. I think I have that right then.
The length of time that the AT hiker is exposed to the views -- and you alluded to that in your earlier testimony. In some places you talk about the hiker who walks one mile an hour, and you said that on that view maybe they wouldn't even see it.

So I'm walking along at one mile an hour, there's a view, there it is, and I keep walking?

Is that how people behave? Don't people hike to a view?
A. Absolutely.
Q. Don't they sit down and admire the view?
A. And I think that's what we found when they get to the top of some of the notable viewpoints at the tops of the mountains we've talked about.
Q. Wouldn't I stop like I did two weeks ago and look at that view? Isn't that beautiful to you?
A. No one's disputing that. It's a view of the Black Nubble Mountain.
Q. The third thing you talked about, the percentage of field of view and you had charts this morning, and it talks about the percentage of field of view that's occupied by the windmills, and that is somehow a measure of the impact of the development on the viewer's experience.

Now, you've been to Cape Elizabeth, Fort Williams

Park I'm sure, have you?
A. I have.
Q. You get out of your car as you bring some of the many people who come to visit you in the summertime, I'm sure, from other states, and they get out of their car there, what do they all look at when they get out of the car?
A. It depends on where they're parked.
Q. You know what I'm talking about. What do they look at?
A. They could be looking at the ruins of the old mansion, they could be looking at --
Q. They get out of their car and they look at the lighthouse, which is emblematic of the state of Maine, don't they?

Isn't the view -- isn't the human eye drawn towards certain things? It's not really -- it's not really about the whole panorama, it's what you're doing to the important things in the panorama.

Have you been to Yosemite National Park?
A. I have not had the privilege yet.
Q. It is a privilege. There's a place called Glacier View. I was there a number of years ago, I think. It doesn't make any difference really where this is, but there are two things in this photograph that I would suggest to you that draw people to this point, among others. A few important things, Half Dome Mountain, which is emblematic of Yosemite National Park. You view waterfalls. I think

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those are the two things in this view scape.
So if I put windmills on the top of Half Dome, is the measure of the impact of my doing to the viewer the percentage of the field of view, which here is probably 20 percent, not even, that the windmills take up?
A. That would certainly be part of the consideration.
Q. And as I recall for this view, to get to the view you park your car, you walk through the woods about a half a mile and then there's a ledge, it's probably a hundred yards long, and then you walk back to your car.

People don't come along and say, gee, there's Half Dome and keep going. They stop, they admire it, they have lunch there.

So from a visual impact assessment, how can you say that occupying that percentage of the field of view or a person hiking one mile an hour, how long it takes them to get by that, has anything to do with the visual impact?
A. When we looked at the percentage of view, we wanted to clarify for the Commission just what it is that you're looking at.

Is this going to be something which is going to occupy 90 percent of the view, 180-percent view? I think that this is a way of getting a handle on just what it means to be out there and how much it will be visible.
Q. Finally, Terry, the last thing that I had in your
important factors, I call it the clear weather factor.
Are you suggesting that because Down East Maine's rocky coast is in the fog, most of August it seems to me, but for many, many months out of the year a lot of the time, that we should have a State policy that takes that into account when assessing development along the rocky Maine coast of Maine?
A. No; one of the things I was getting at when I talked about the effects of the weather condition is this concept of atmospheric perspective.

As you'll see in our illustration -- even in Erik Crews' illustration -- under certain weather conditions -most weather conditions -- there's a certain amount of haze in the air, and those will decrease the contrast of any object in the landscape.

That's why as you get farther into the landscape, what is now up close, a very bright white object will appear to be increasingly grayed-on objects, the farther back from the landscape you see it.
Q. A clear day makes it all the more beautiful, doesn't it, in the mountains?
A. You'll still get a certain amount of grayed effect.
Q. A number of your photos, quite frankly, seem to depict a hazy gray day when you can't see the white turbines.

Why is that? Did your staff always go out there on 160
hazy days?
A. I know that we said in our -- a lot of those photograph were taken by other people that spent several days, if not weeks, waiting for the perfect day.

Sometimes it didn't happen, sometimes it did happen.
Q. I notice that a lot of these photos don't have focal lengths on them. Do you know what they are?
A. We included that on the board up there. They were all done for 50-millimeter foot lengths. In fact, that was a comment that Erik Crews and Jean Vissering had talked about. In fact when we did our prefiled testimony, we made sure that they were almost a one-to-one relationship between their photographs and ours.
Q. Does that apply to all the photos in your prefiled?
A. Yes.
Q. Every one of them is 50 millimeters?
A. I couldn't swear that every one of them is.

MR. PLOUFFE: Thanks, Terry. I've got a question for Steve Pelletier.

THE CHAIR: Before we go on, Mr. Plouffe, can we just get -- you indicated -- did we get an answer to these pictures of whether they were or were not of what they say they are? I guess it would be nice if somebody would clarify that. If they're not, then maybe they need to be corrected.

MR. DeWAN: We will correct them.

THE CHAIR: That's P-52 and P-51. I was left being confused by exactly what the answer was there, and actually what the question was, even.

If those aren't exactly what they're supposed to be, then we better get them corrected.

MR. DeWAN: These are the photographs we used this morning when we showed the illustration, what the impact would be from that particular viewpoint. We did very clearly identify that as Black Nubble. We will submit them properly labelled.

THE CHAIR: Thank you.
MS. KURTZ: Can you tell us what those are?
MR. DeWAN: Black Nubble.
MS. KURTZ: Both of them?
MR. DeWAN: Yes.

## EXAMINATION OF STEVE PELLETIER

## BY MR. PLOUFFE:

Q. Steve, in your prefiled testimony you said that you had been working at the Black Nubble site since 1993, that's 14 years.

Isn't that an unusual amount of time to be doing studies at a site?
A. Those studies were initiated in ' 93 ; in ' 94 , ' 95 we did quite a bit. We restarted again, do some work on transmission lines, in 2000; focused again more in 2004,

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-5 , and -6 .
Q. And you're still using some of the data you gathered in '93?
A. Some of the data, yes, correct.
Q. Your company, Woodlot Alternatives, has done wildlife surveys for more than 60 wind projects extending from northern Maine to West Virginia; is that right?
A. That's right.
Q. Have you done any wind plants at elevations over 3500 feet?
A. Not over 3500 feet.
Q. Of the 60 projects you've worked on, in how many cases did you the developer determine that the project would have unacceptable negative impacts on local wildlife?
A. I would say that there are a number of projects that we've looked at over time that you never see, that no one ever hears, because we identify upfront a series of issues within those.

Actually it's about 72 studies right now. That's the nature of the work is to try to determine whether or not there are issues.
Q. So you have found some, issues?
A. We had identified projects that have clearly right upfront said, you've got problems here, and those projects have gone to certain lengths, and a number of projects have

4 Q. Throughout your prefiled testimony you cite a 2007 paper
decided they weren't going to go forward.
Q. Any of those issues have to do with birds and bats?
A. None to date. by Frumhoff for propositions regarding the particular effects of global warming; correct?
A. That's correct.
Q. And the Frumhoff paper was sponsored by the Union of Concerned Scientists; correct?
A. Yes.
Q. Who is the Union of Concerned Scientists?
A. It's a group of scientists -- they're professionally recognized. They're not just nationally based, but they're folks who have spent a great deal of time studying these issues.

They weigh in on a lot of different types of projects. Wind power is one of the more recent things they've weighed in on.
Q. I saw attached to someone else's testimony here a summary of your report, and I didn't see that it was focused on wind power, it was focused on the particular effects of global warming; correct?
A. That's correct.
Q. Tell me a little bit about the report. How was it set up?
A. It talks about the different regions of the US. It
specifically talks about Maine. It talks about a lot of habitat influences.

One of the issues that they refer to in there is the effects of global warming on habitat in the independent species.
Q. Doesn't the report put forth two scenarios: One, if we continue to increase carbon outputs in this world, and the other if we get some control over that and then predict the results of climate change under those two scenarios?
A. Hopefully we will take the second.
Q. The report is not about wind power?
A. No, but it reflects the fact that our habitats, the ones particular we're talking about, some of the more sensitive ones in places such as these higher elevations, they're at risk because of global warming, and these species that we seem to be focusing on quite a bit here are right in those tracks.

There's other places too, tundra areas, low coastal areas.
Q. The report doesn't talk about the western Maine mountains, it talks about this area of the country generally, right?
A. Well, if you look at the report, there are areas they're talking about Maine, they're talking about the spruce/fir forests and the effects on that.
Q. Generally?
A. Generally, but also focused on the fact that you lose that habitat and you lose those species that are dependent on it.

To me that's a very straight-line analysis of what that report is about.
Q. The report also says that it's not good news for this place, I guess, Maine would be one of the only places with a good ski industry?
A. But it also says it would be a limited number of days for that ski industry.
Q. So this report by the Union of Concerned Scientists, would you disagree with me that they can be fairly regarded as an advocacy group?
A. I would say that what they're doing is they asked a question and what's the effect on that.

It's a group of scientists that basically evaluate an issue and report on it.
Q. They certainly advocate advocating against nuclear power, aren't they?

Have you heard of Helen Caldicott?
A. I've heard of Helen Caldicott, yes.
Q. Again, you cite that report many times. You cite the National Academy of Sciences report that also came out in 2007 once. That's specific to the study of wind power.

You cite it for a proposition having to do with bird
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mortality. That's it. Why didn't you cite that report more often?
A. We could site the GAO report, we could cite that. Every one of those studies point -- and I'd be happy to talk about any of the results -- the fact that it's mentioned or not mentioned, let's talk about the different factors in those studies.

Each one of them talks about the threat on habitat, and those reports that you're referring to right there start talking about some of the bird and bat issues. I'd be happy to talk about those.
Q. You only cite it once in your analysis?
A. Well, whether --
Q. Right?
A. If that's relevant, yes.
Q. You don't think that the National Academy of Sciences is something -- especially a report specific to wind power, isn't something that this Commission perhaps deserves to hear more about from you?
A. I am not ignoring that. The fact that it's referenced in there, we are not ignoring that document.

I am concerned about global warming, very much.
Q. I think we all are in this room.

As I understand your prefiled testimony, I can boil this down based on the Frumhoff report in other work that
you cite.
The subalpine habitat is going to be seriously degraded or killed off by global warming?
A. Eliminated.
Q. Eliminated is what you're saying based on that. I assume you're obviously picking the Frumhoff scenario where if we don't get a handle on carbon discharge, which will continue to increase global warming?
A. I don't have great faith that our society has a way of turning that around in a short enough period of time to make any difference.
Q. Again, it doesn't speak about wind power. So we could take this $\$ 115$ million that Edison wants to spend on this wind farm and put it into mass transportation and cut back carbon discharges; right?
A. I'm not sure where you're going with this conversation.
Q. Am I right? Isn't it a question of where we put the money, from the Frumhoff perspective, the Union of Concerned Scientists report, isn't it a question of where we put the money?

MR. THALER: I'm only going to object because I don't think it's proper within the scope of LURC talking about alternative use of money.

The applicant has chosen to try to apply that money here. Hypothesizing is speculation about all the other

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possible uses for that money.
MR. PLOUFFE: Why don't we just move on.
THE CHAIR: I think that would probably be a good idea, although it's an interesting question, I have to confess.
BY MR. DIDISHEIM:
Q. So as I read your report, essentially you're saying that we need to destroy the habitat that's there now in part in order to save the species later on?
A. You made a big jump there that this project would destroy that habitat.

This project basically uses about 64 acres of habitat that's greatly been influenced already by timber harvesting, at least -- several hundred acres, was it 300 -- 300-and-some acres that would not be touched.

Essentially what we're doing here for this habitat, it's not hampering the habitat, it's something that's truly unique, it's not the $\mathrm{S}-1, \mathrm{~S}-2$ communities that we're particularly concerned about. It's an S-3 community that has a lot of forest issues with it already.

I believe it's a good tradeoff.
Q. I'm glad you brought up the 300 acres of the subalpine habitat, the fir-heart-leaved birch. That's been designated by the Natural Areas Program, I think, since the last hearings we had here?
A. I believe you're correct.

9 Q. And a lot of old growth?
10 A. If you call, you know, 100 years old growth, then I guess
Q. I don't remember seeing reference to how special that area was in your earlier?
A. I believe we always called it an S-3 community, yet there were patches of S-3 in the other one.
Q. That's in the summit area; right?
A. That's correct.
Q. A lot of old growth --
A. Mostly on the summits, a little bit down. you could -- it's not the typical old growth.

Just to address --
Q. I'll take 100-year-old trees as old growth.
A. I don't.
Q. In regard to the Bicknell's thrush, you submitted a report which is basically the same that you submitted last time. You said 2002 there were unconfirmed sighting of two.

Assume that Bicknell's thrushes in 2003 there were a couple of thrushes sighted, but you weren't sure they were there.

Dr. Jeff Wells, who is the consultant in this case for NRCM, went out there this year and came back and predicted there were probably 40-plus males living up there.

Did you just miss it since you've been there in --

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since 1993 have you been able to confirm that there were Bicknell's thrush. He goes up one summer and confirms that they are there?
A. We spent a great deal of time on both mountains. We conducted breeding bird surveys on both mountains. On Redington --
Q. I'm talking about Black Nubble.
A. I understand. We did not pick up. They're relatively -particularly during breeding season is the time that you would actually be seeing a lot of them.
Q. Which is when?
A. Starting May into June. Most birds show up around middle of May.
Q. You didn't find them during the breeding season?
A. Not on Black Nubble for the surveys that were done.
Q. Do you disagree with Dr. Wells?
A. Not at all.
Q. Okay. This morning you put a graphic up there on the height of migrating birds. That was an average height elevation that they migrate at?
A. That was the -- that focal point on that range was an average of all of those studies, both spring studies and full studies, then the average of the range.
Q. For the purposes of this proceeding, isn't the relevant question how many of them migrate at an elevation that
would be within the rotor sweep of the wind turbines?
A. That's a great question, yes. In the work that's been done to date shows that that's about 10 percent of the population that's flying through there.

You can't say that there's no risk; but compared to the full season on a nightly average, it's a -- it's about 10 percent.

Nights that you may find lower flights because of wind conditions, generally you find that there's a lot lower numbers. So the risk is lower because of that.

MR. PLOUFFE: Thank you. I have some questions now for Mr. Lee.

## EXAMINATION OF HARLEY LEE

BY MR. PLOUFFE:
Q. Mr. Lee, when did you purchase Black Nubble?
A. I don't remember. I think it may have been 2001.
Q. Did you have an option on it before that?
A. We did.
Q. When did you enter into the option agreement?
A. I don't remember. I think we purchased Redington in ' 98 and had an option of Black Nubble at that time.
Q. When did you first become aware of the opposition of the National Park Service to your wind power project?
A. I don't remember.
Q. Before '98?
A. I don't remember.
Q. It's a pretty significant issue, isn't it?
A. Opposition of the Park Service?
Q. Yes.
A. Well, were you talking about me getting a conversation or a letter from Pam Underhill?
Q. Yes.
A. I don't remember that day.
Q. But you don't remember if it was before or after you bought Redington?
A. I don't know.
Q. How long have you been studying this area for a wind farm project?
A. By "this" do you mean Maine and western Maine?
Q. Western Maine.
A. I think we put our first wind measurement tower actually on this mountain, Sugarloaf, maybe December of ' 89 or ' 90 , something like that.
Q. In your alternatives analysis you say that you looked throughout Maine and other places in New England.

How many places on the coast did you look?
A. Oh, I think it may have been nine sites on the coast of New England.
Q. How about the coast of Maine?
A. It's in that chart there. We looked at Stonington, we had
two sites in Stonington, actually. And Orland, Maine. We had some non Maine coastal sites as well.
Q. Were these done before your purchasing Redington?
A. I think the Orland machine we installed around the year 2000, so it would have been after purchasing Redington.
Q. So some of these alternative sites you looked at, you looked after you had already bought Redington and probably had an option of Black Nubble?
A. Yes, I think we measured some of those coastal sites later. Yes.
Q. Would you agree with me that technology has changed in the wind industry in terms of turbines and so forth in the past ten years?
A. Technology has changed, yes.
Q. How do you explain how you missed Mars Hill and Stetson Mountain and Kibby and some of the other projects that are now in the pipeline coming before LURC if you did an exhaustive analysis?
A. Well, I didn't say we did an exhaustive analysis; I said we analyzed many sites. It doesn't mean we analyzed every site.
Q. Well, you analyzed many, many sites -- or many sites -how did you miss those?
A. Well, we didn't miss Kibby, for example. We actually had an option on that site that we developed after Kenetech

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went bankrupt. So we did look at that site.
Mars Hill, I was actually aware of the fellow who first did wind measurements up there.
Q. But you decided not to pursue that?
A. That's correct.
Q. Why?
A. I didn't think it would be an economical site.
Q. And it now is, I assume, because technology has changed?
A. You have to be careful with this technology. The costs have come down quite rapidly, 3 to 5 percent a year for many, many years; but unfortunately starting like three or four years ago, costs actually started going the opposite direction. They've been up for several years.

A lot of people think that, oh, technology is going to be wonderful, we'll be able to put things anywhere, but actually the reverse is happening. In the last several years we've had increasing prices, fewer sites are economical rather than more sites, which is not widely known.
Q. I'm assuming that the developers, TransCanada and Evergreen Wind Power, they know what they're doing and these are economically viable sites that they're pursuing and you didn't identify them?
A. Well, as I said, we actually did look at the boundary mountains and identified Mars Hill, but I didn't think it
Q. If this project is approved, this will be the first wind farm you've ever built?
A. That's correct.
Q. You, in your testimony, talked about this area around Black Nubble, and my impression was that you were trying to convey the image that this is a fairly developed area, say, between two ski areas and you specifically mention the Navy facilities, the SERE -- S-E-R-E --
A. Right.
Q. -- as evidence of development in the area so your wind farm is not going to be a massive change of character for the area?

Do you know what SERE stands for?
A. I think it's Survival Escape Rescue and --
Q. I think it's Survival Evasion Resistance and Escape. My understanding is the Navy uses the facility to train pilots, seals, and others who might go down in remote areas and teach them to escape capture and if they're captured what to do.

I'm wondering why if this is such a developed area, the United States Navy would use this 12,000-acre site for a SERE facility.

Do you have an answer for that?
A. I really don't know why they chose that site originally.

Inink they like the remoteness and they liked to be left alone. They like to shoot off their machine guns and fly their helicopters and fighter jets around.
Q. You also talked about the area, its not remoteness or lack of -- let me rephrase that.

Are you aware that the US Department of Fish \& Wildlife analyzed the SERE facility for its wildlife values in the event that the Navy left there?
A. I think I saw something.
Q. It's in the Appalachian Mountain Club's, their letter of analysis in the Appalachian Mountain Club's prefiled testimony?
A. I think I saw something to that effect.
Q. And that they characterize this as a pristine area, largely undisturbed and pristine, 12,000 acres?
A. I think I saw that, yes.

MR. PLOUFFE: Thank you. Now I have a few questions for Mr. Mann.

How much time do I have left Mr. Chairman?
THE CHAIR: 10 minutes.

## EXAMINATION OF RANDY MANN

## BY MR. PLOUFFE:

Q. I think I heard your testimony this morning regarding air pollution referring to this project helping to curtail acid rain; is that right? You mentioned that a couple of
times.
A. I said that the project would displace fossil fuel generation which creates air emissions, and those air emissions have impacts.
Q. You specifically referred to acid rain, I know that you did.
A. Okay.
Q. Not all fossil fuel emissions create acid rain, do they?
A. No.
Q. It's really only so-called NOX and SOX, SO2 $\mathrm{a}_{\mathrm{n}}$ d nitrogen oxide?
A. I don't want to cut off your question, but I think you're going to quickly get out of my area of expertise. I'm a wind developer, not a air emissions expert.
Q. You would not disagree with me, then, I guess, if I were to tell you that if you cut back on natural gas generation, natural gas fired electricity generation, you're not going to affect NOX and SOX in any appreciable way?
A. Again, I'm really not an air emission expert.
Q. Did someone write that testimony for you?
A. I think it was based on the testimony that came from Mr. Hanisch.
Q. I assume you're not aware of the National Academy of Science's study that was appended to Jody Jones' testimony

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in which they say essentially that wind power should not be expected to decrease NOX and $\mathrm{SO}_{2}$ emissions?
A. No, I'm not.
Q. So you don't know really whether your claims about acid rain are true or not true?
A. I know that we have estimated the emissions that we believe this project will reduce, and we know that that will improve the air quality in Maine.
Q. Edison International, as you have said in your testimony, is a major developer of electricity plants around the country, an owner of electricity plants around the country. Many, many of those are coal fired; is that right?
A. Edison International is a large generator of electricity, that's correct, and we own a wide variety of power projects.
Q. Many of which are coal fired?
A. Some of which are coal, yes.
Q. In Illinois there are several of them, for example?
A. That's correct.
Q. And coal-fired plants do produce SOX and NOX and mercury; correct?
A. That's my understanding in some cases, yes.
Q. You're building a new coal plant in Virginia or West Virginia?
A. No, we're not.
Q. I thought that was under development?
A. We're actually developing wind power projects in West Virginia. We currently own a small coal project in West Virginia that burns waste coal.
Q. Okay.
A. No, we're not developing new coal projects in West Virginia or Virginia.
Q. Okay. When you were coming into negotiations with Mr. Lee, when was that in terms of becoming a partner in this project?
A. That was probably three years ago, 2005.
Q. Did you do any independent analysis of the natural resource of visual impacts of this project before you entered into an agreement with Mr. Lee, or did you rely on the work he had done?
A. We did not do an independent analysis; we did look at the work that he had done and we certainly understood the location of the project.
Q. Do you have any other wind power projects around the country which are close to a National Park?
A. I'm pausing to think because we have quite a number of wind projects. Not, I think, that close to a National Park.
Q. What do you mean by that close? As close as you are here?
A. I don't believe that we have other wind projects that are close to a National Park.
Q. Do you have any wind projects that are at elevations over 3500 feet?
A. We're currently building some wind projects on ridgelines in Pennsylvania. Those are probably in the 3000-plus-foot range.
Q. Those must be the highest mountains in Pennsylvania?
A. They're ridgelines in Pennsylvania. I'm not sure what the highest peak in the is.
Q. You don't know, really, how high those are?
A. I know they're in the high 2 s and low 3 s .

MR. PLOUFFE: Thank you, Mr. Chairman, I think my time is just about up.

THE CHAIR: Thank you. I believe that Mr. Trafton is next. I trust that the witnesses he asked are here.

MR. THALER: That would be Panel 1.
THE CHAIR: Would those folks come right up.
MR. TRAFTON: Thank you Mr. Chairman. My name is
Dain Trafton. I'm from Phillips. I'm a retired professor of literature, not of engineering or anything like that, and I am here today representing Friends of Western Mountains.

I'd like to start by questioning Mr. Mann.
EXAMINATION OF RANDY MANN
BY MR. TRAFTON:
Q. Mr. Mann --

MR. TRAFTON: I might say, Mr. Chairman, that I am going to talk about generation issues and some technical issues and also about business, but I hope to bring a new perspective to the discussions that have already occurred.

THE CHAIR: That's fine, I guess, since we brought the subject up, but you've got 30 minutes, that's all.

MR. TRAFTON: I know. I'll try to use it wisely.
BY MR. TRAFTON:
Q. Mr. Mann, would you agree that this hearing is not about wind power generally but specifically about your project and the site that you've chosen for it and whether that project and site, put together, are consistent with LURC rules and standards?

Would you agree with that statement?
A. We're asking for approval for a particular project, absolutely.
Q. Right. Thank you. Does your application contain something which you call an economic impact statement?

Can you hear me?
A. I can hear you. I'm trying to understand the question. What do you mean by economic impact statement?
Q. There's a heading in your application, economic impact study. It is there. If you've forgotten it, I can tell you the answer to my question is yes.

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Can you tell me what that economic impact statement is about?
A. You're going to have to refresh my memory.
Q. All right. It's about a wind project in Sherman County, Iowa. Now, I hope you -- have you read that?
A. I have.
Q. All right. Would you say that Sherman County, Iowa, where this economic impact study was conducted, which you've submitted, is a place much like Franklin County, Maine? I said Iowa, I meant Oregon.
A. I think they're both rural areas but obviously there are quite some differences between those areas.
Q. Would one of the big differences be that Franklin County, Maine depends heavily on tourism and real estate development related to tourism? Would you admit that?
A. I think that this area clearly has some tourism, yes.
Q. You know what an economic impact study is supposed to provide to people who have to make a judgment about a project.

Why did you not do an economic impact study of the area in which your project is going to be located?
A. We felt that the information that was provided was sufficient to make an evaluation.

This area does depend on tourism, but it's our view that these wind turbines will not have any adverse impact
in a material way because in part of all of the discussion that you heard this morning about the visual impact of these turbines.
Q. Now, your testimony -- I'm not sure the impact study -but your testimony brings out all the alleged benefits of the project.

But isn't it true that to properly understand what the economic effects of a project are, one ought to make an extended effort to try to understand the potential negative effects?

Is there anything in your testimony which actually goes into these potential effects, or do you just simply say they're going to happen?
A. We looked at -- we showed graphs this morning that showed that hikers and recreational users and skiers favor the project about as much as the average resident of Maine.

So I think that it indicates that some of those hikers will be interested to see the turbines, others won't, but it there's no reason to expect it to be significant.
Q. We'll come back to those hikers later.

Why have you not allowed commissioners and the public to see the wind data on which all your energy output estimates, your avoided emissions benefits, and many other alleged benefits are based?

You've said that they're proprietary, that is, the wind data is proprietary, but you own the site. What possible harm could result from revealing this wind data?
A. It's just not something that we would normally do, and I also don't think it's necessary at all to make an assessment of this project.

I find it hard to believe that you would believe that I'm here for the second year in a row if I don't have a high degree of confidence that that mountain has a good wind resource.

We have shown you how we came up with those estimates. We've talked about the data that we've collected.
Q. I have no doubt that the wind data justifies your expectation that you'll make a lot of money; but I think the wind data -- and I'll try to show as I go on -- is very relevant to understanding the matters of avoided emissions.
A. You can't make money from this project without it generating electricity, and we can't generate electricity without wind.
Q. Your prefiled testimony states that the power from Black Nubble will be sold into the grid.

Does this mean you failed to negotiate the ten-year fixed-price long-term contract with Constellation New

6 Q. Is it an expectation or is it a contract?
7 A. It's a contract.
8 Q. What's the price for the power?
9 A. That's really not your business.
MR. TRAFTON: Okay. I'd like to question Mr. Most now.

## EXAMINATION MATT MOST

## BY MR. TRAFTON:

Q. Mr. Most, you quote the DEP Commissioner Littell who says that speaking generally that wind power can force older, dirtier plants to emit less.

I have no doubt that under certain circumstances this can be true of wind power, but I have not yet seen the evidence that has proved that it's true of this particular plant.

Can you tell me how many times and for how long during any recent year the projected output from your plant would in fact have caused any particular dirty plant to reduce its emissions and by how many tons?
A. What you're suggesting is a level of granularity necessary 186 in understanding impacts.

As the panel stated on August 1st, there's a very clear connection between displacement of higher cost power -- in this case fossil fuel -- by lower cost, variable cost power, such as wind power.

Wind power has a zero variable cost because when the wind blows, the turbines turn. The fact of the matter is that you've invested your capital upfront and any time that that wind power is operating, it will be displacing something that is more expensive.

Now, as the testimony has shown, there is no transmission congestion that would limit the flow of that power where it's sited.

So it's very simple to see that any time it is running, you will have a displacement of higher emitting power. Now, to actually try to pinpoint the location of any particular electron to where it is being displaced from another is really not a necessary exercise and is an unnecessary level of criticism.
Q. I think it is necessary because your estimates are based on average marginal emissions rates in New England, and we need to know -- this is an important matter, this is a beautiful place that you're asking the state of Maine, people who live here particularly -- you're asking them to give it up, and you're telling us in a very general way
normally this would be the average result of the operation of a wind plant.

We do need to know that this wind plant is able to actually cause a reduction in a particular dirty plant and how much.

It's not enough to say that it will cause a reduction in emissions somewhere. Some of those emissions may well be in clean plants, they might even be in other renewable plants.
A. There's no way that you can have a displacement of another clean plant, a plant with zero emissions. You're going to have displacement of a plant that makes emissions.

As you stated in your prefiled that the governor, the Maine PUC, and the Office of Energy Independence and others all spoke to this issue that wind power helps to save regional greenhouse gas reduction goals and is needed for the power to meet the climate change rules also.

So the fact that you have an emission reduction at the marginal unit, as you've pointed out, the marginal unit in New England is a relatively constant factor.

Of all places it's relatively simpler here than other places to determine just what that emissions impact is.

The fact of the matter is that you're looking at a variance of very small, very tight tolerance between what type of emission reduction that will be and that the use
of the marginal rate as a proxy is a very consistent way to make that calculation.
Q. Nonetheless, you have not provided the kind of systems modelling that was called for by Tom Hewson a year ago, which would actually make possible for the commissioners to make the judgment about this. But you claim that emissions will be reduced.

Do you think that the emissions that are reduced will be displaced or avoided? That is, will the emissions that are displaced in some particular plant nearby end up being emitted somewhere else? Or will they be actually avoided?

I'd like a simple answer to that. Avoided or displaced?
A. A complicated question but a simple answer. The fact of the matter is that an avoided emission due to the displacement of power generation is what you would expect to have here

It's very similar, as I pointed out in my prefiled, replacing a less efficient technology with the analogy of automobiles, replacing a traditional car with a hybrid car.

There's no reason to think that if you replace a certain portion of the power generation stack with a clean unit, like a wind unit, to think that all of a sudden today I avoided emissions and then tomorrow I'm going to
have more emissions because all of a sudden my wind unit is no longer going to be operating and no longer going to be providing that benefit.

I believe an avoided emission is a replacement and it's an emission that's not happening.
Q. Isn't it true that under the rules of RGGI, which will begin applying in 2009, that emitting plants will have emissions allowances -- which they will either be given by the State of Maine or they will have to buy -- and if these plants are forced to reduce emissions by say Black Nubble wind plant, will they not have emissions allowances left over, and is there not a market for these allowances which they'll be able to sell to other emitters elsewhere?

Is that not an accurate description?
A. The way cap and trade works, which is again a very complicated subject that we can get into, the ability to bank an allowance for use by another party or for use of futures periods is one of the key factors of making cap and trade effective regarding environmental policy.

That's exactly the reason why the $\mathrm{SO}_{2}$ program, which is done to reduce acid rain, and the NOX program designed to reduce smog is so incredibly effective because we do create this incentive to reduce emissions and then have that emission allowance be perhaps banked for a future

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use.
Now, in this case, what you're suggesting is that a dirty unit that is not economic, which is the reason it's not running, will have an allowance that it will not consume. That allowance will be stored.

Now, the suggestion that that allowance will then go to another dirty unit that would have run otherwise, would have allowed it to run, doesn't make sense because the fact that that unit didn't run is because it wasn't economic.

The unit that is economic is going to run anyway. So what you simply have is that allowance added to the bank, and what happens when allowances are added to the bank is over time your cap is reduced and that allowance is retired.
Q. I thought you told me not long ago that the units that are going to be forced to cut back are going to be the gas-fired units, and these are not among our more dirty units, nor are they on the whole our less efficient units.

They're expensive but they're not dirty.
A. As you point out, it's their expensive nature that makes it exactly, not their dirty nature.

MR. TRAFTON: Mr. Garwood, a question for you or a couple of questions.

## EXAMINATION OF STEVE GARWOOD

## BY MR. TRAFTON:

Q. Do you claim that the operation of the proposed Black Nubble plant will reduce the cost of electricity to Maine consumers?
A. What I believe it will do is lower the Maine clearing zone price, which will translate to lower cost electricity than would otherwise occur if you don't have such projects like Black Nubble being dispatched.
Q. Bearing in mind that the output of this wind plant will be small at best, 54 megawatts in ideal circumstances, that it will depend entirely on whether the wind blows at the right speed, and it will be generated in the sub area of the grid that is full of other renewable plants, bearing all this in mind, will you please tell us how often a bid of zero from Black Nubble wind plant can be expected to actually reduce the bid stack, that is, knock off the top bid of a gas or oil plant? How often would that be likely to happen?
A. I couldn't give you the answer as to how often, but it will occur whenever the demand and supply is such that assuming the full output of this wind project, 54 megawatts, would be enough to satisfy the demand whereby that 54-megawatt offset will allow for not dispatching another unit that was on the margin which for the most

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purposes in New England would be a gas unit in Maine.
Q. What my specific question is, how often --
A. No one knows. No one knows how often this particular wind project will actually displace and how many megawatt hours of it will be displaced from this project.
Q. I know you don't know and I don't know, but this is -you're making this claim and it is being made as a -- one of the important benefits of your project.

If we had those wind data, we could ask somebody like Tom Hewson to do the analysis. In fact, his opinion -what it's worth, he's not here -- is it would be very infrequent that there would be any --

MR. THALER: I have to object to him trying to testify for somebody who's not here under oath. Move to strike that.

MR. TRAFTON: Let me move on now to Mr. Hanisch. EXAMINATION OF JOHN HANISCH

## BY MR. TRAFTON:

Q. Mr. Hanisch, in 2006 the National Electric Congestion Study identified congestion at the Maine/New Hampshire line as one of the 40 worse points of congestion in the United States. You're nodding, so you're aware of this study?
A. Yes, I am.
Q. Well, let me go on, I haven't asked you the question yet.

1 A. Too bad, that would have been an easy one.
Q. Congestion at the border of New Hampshire could effect Black Nubble's ability to effect emissions at, for example, the Bow, New Hampshire plant, could it not? The Bow, New Hampshire plant has been mentioned as one of those dirty coal plants we'd like to shut down.

Is it not true that congestion -- perhaps not in the Wyman hydro export area -- but perhaps congestion beyond that point could curtail the benefits, the emission benefits, that you claim?
A. That's an interesting question. I'm certainly not a transmission expert. You'd have to ask a transmission expert.
Q. You guys all talk about the same thing.
A. I'm familiar with this issue. My testimony in my prefiled last year and the application last year talked about the fact that Maine isn't always a net exporter of electricity.

There are times, and history has shown, when Maine is an importer of electricity. During the times when we would be importing electricity, if we had wind here in Maine, we wouldn't have to import as much assuming the wind was blowing at the same time that we were importing electricity.

Now, if I had used both as the source of that 400,000
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tons -- or pounds -- per day of emissions, if I used both as the criteria for how much reductions there would be, you would be right. I would have way overestimated the amount of reductions that would occur.

But there are two studies by ISO New England on what would be reduced when new power comes on-line. One of those is for all of New England, which says the gas-fired unit in New England, that will be reduced. So if I was going to do all of New England, I would have used that gas-fired.

But the other study said, what if you bring on more power in Maine, and that was a detailed study. It was probably more detailed than your expert testimony, your expert last year did.

They go through their entire system. They weighed all of the issues, and they said, when you bring in additional power, this is the amount of pollution, this is the emissions that you are avoiding.

So I have used a very conservative number in estimating those reductions, and quite frankly, the PUC, the OAIS, and the DEP all believe that bringing in wind power will reduce emissions.
Q. Is there any place in the testimony of any of those State agencies or representatives thereof that actually endorses the Black Nubble wind project? I want a yes or no answer.
A. I don't think so. How's that? Is that close enough?

MR. TRAFTON: Close. One last question. This one to Mr. Lee.

## EXAMINATION OF HARLEY LEE

## BY MR. TRAFTON:

Q. Harley, you make a great deal of support for your project from hikers. But is it true that at the annual meeting of the Maine Appalachian Trail Club in March of 2006 in Farmington you made a pitch to the assembled members -and there were at least 200 people there - of asking the club to support your project?
A. I think that's correct, yes.
Q. After you had made your pitch, a motion was made to reaffirm the club's opposition to your project; do you remember that?
A. I do.
Q. The vote that was taken was unanimous except for one negative vote, which was yours.
A. I would like to respond to that briefly, I'm a hiker. When I was first measuring the wind up here on Sugarloaf many years ago, we didn't have the cell loggers that we had, so I had to backpack up there every month and swap chips.

I kept on going up the mountain and then I saw Redington and Black Nubble over in the distance -- it's
really an amazing site, not many mountains are shaped that way -- then after doing that for several months, I thought, I should find out more about that. I bet it's close to the trail.

So what I do is every time I would be up there and see hikers, I'd say, well, what do you think about wind power? It's pretty cool. What about on this mountain and Sugarloaf, and usually got a positive response. I was, well, what about over on that mountain?

And that's how this whole project began wasn't necessarily scientific but it was talking to hikers out on the trail about what they thought about the project.

MR. TRAFTON: There are an awful lot of hikers who don't agreement with those hikers.

THE CHAIR: Thank you. I guess the question, this ISO study referred to, is that in the record?

MS. SPENCER-FAMOUS: The impact study?
THE CHAIR: No, the emission rate study that he referred to.

MR. HANISCH: It's called the marginal emission study. I know that the Maine study is on record or at least relevant portions of that study are on the record. I think the entire New England study is on record.

THE CHAIR: I'm speaking of this record for this hearing. It's here somewhere.

MR. HANISCH: I know the Maine one is because I referenced it. The Maine one is one of my references in my report.

THE CHAIR: Thank you. Well, we have a supporting intervenor. Who's going to do that, Dave?

MR. WILBY: Thank you Mr. Chairman. Dave Wilby with the Independent Energy Producers of Maine, 20 seconds, Mr. Chairman, on behalf of the consolidated supporting intervenors.

In the interest of time we have spoken with a couple of the organizations -- Natural Resources Council and CLF -which will follow with cross, and we've sort of consolidated any questions we may have, so I'm just going to leave the microphone here and we'll maybe come back later.

Thank you Mr. Chairman.
THE CHAIR: So you have no questions -- so we're going to have one person kind of ask questions?

MR. WILBY: Well, I can't speak for the other organizations as to what their plans are, but they had reserved time previously with you, and we're going to yield back all of our time and they can --

THE CHAIR: Okay, that's fine. In that case, the next one was the NRCM. Do they have any questions?

MR. DIDISHEIM: We have a few.
THE CHAIR: Theoretically you have 40 minutes.
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MR. DIDISHEIM: I think I'll start with questions for
Steve Pelletier.
My name is Pete Didisheim. I'm the advocacy director for the Natural Resources Council of Maine.

EXAMINATION OF STEVE PELLETIER
BY MR. DIDISHEIM:
Q. Steve, I want to focus on your comment about the ecological distances between the original project and the Black Nubble project.

I'm particularly going to focus on getting a fuller understanding for the record of some details in your presentation.

It's clear that there's no northern bog lemming habitat that's been documented on Black Nubble but there is on Redington; correct?
A. That's correct.
Q. And there's no high value habitat for Bicknell's thrush on Black Nubble but there is on Redington; correct?
A. We commonly ran into Bicknell's on Redington. We did not see them -- we were surprised we did not see them on Black Nubble.
Q. And you testified that there was no high elevation wetlands, sort of sphagnum wetlands up on Redington? There's none of that that you've identified on Black Nubble; correct?
A. That's correct.
Q. And there's none of the krummholz stand conditions that you see up on Redington, you don't see that down on Black Nubble; is that correct?
A. Even on Redington it's only in small scattered places.
Q. And you clarified with a map that was Page 5 on your summary that Black Nubble is not within the unfragmented forest that has been mapped by the Appalachian Mountain Club; is that correct?
A. That's correct.
Q. It's also clear from information from the Maine Natural Areas Program that although Redington has what's called an exemplary example of the S-3 subalpine forest, that Black Nubble has not been given -- the habitat that does exist there has not been given the exemplary rating, there's only five of those in the state and it's tens of thousands of acres.

Instead, Black Nubble only gets a good or fair rating; is that correct?
A. That's correct.
Q. Now, the opponents have testified -- I believe it was Jody Jones' testimony -- that the values between Redington and Black Nubble are essentially identical.

Do you believe that that's accurate?
A. Absolutely not.
Q. You've testified that there will be about 64 acres of habitat that will be cleared above 2700 feet, is that correct, for the Black Nubble project?
A. That's correct.
Q. And 35 total acres, total acres, will be disrupted or cleared permanently, the rest will revegetate?
A. That's true.
Q. This is 35 acres out of 1937 acres, I believe your testimony said, above 2700 feet in the project area?
A. That's correct.
Q. What you say is about .02 percent of the PMA zoned lands in the project area?
A. It may actually be 2 percent. Yeah, less than 2 percent.
Q. As far as you know, the number that has been established by the -- I think it's the Maine Natural Areas Program -the amount of land in PMA is about 139,000 acres; is that correct?
A. That's correct.
Q. So we're talking about 35 total-acres impact out of 139,000 acres of PMA zone in the state?
A. A very small percentage.
Q. I'd like to focus on the species that have been identified as potentially occurring within the Black Nubble area.

Your testimony said that there are four species of concern, I believe, that have been observed on

Black Nubble?
A. That's correct.
Q. Could you explain a little bit about the difference between I think what you said was screening process on the species that would be on a screening list as opposed to an observed species list?
A. Before taking off and starting to do a lot of different surveys, we'll do a lot of desktop work. Some of the work focuses on the studies that have been done by the US Forest Service, a guy named DeGrath in particular.

It listed for the northeast all the different species and the types of habitat that they find, whether or not they're prime habitat, whether or not they can be used; and essentially we go through that process, and then we also have a series of other documents in-house continuously being upgraded by the Department of Fish \& Wildlife that talk about species ranges.

So it's that type of analysis that tells us whether or not we think certain species are going to be there, and then it's our job -- particularly for those that may be at risk or listed -- to focus our studies on trying to determine whether or not they're there.
Q. Now, in the testimony of Maine Audubon, it's suggested that there are 18 species of concern at Black Nubble and then there's a list.

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I would like to go through just a few of these and make sure I understand whether you have actually observed those species, whether you've detected them, trapped them, observed them in the project area.

The Canada lynx, is that known to be in the project area?
A. No, I wouldn't be surprised if it travels through.
Q. Is there a known risk of wind power projects to Canada lynx?
A. No.
Q. The golden eagle?
A. There's been past reported studies of a pair that's been around there by IF \& W, more historical. We spent a great deal of time doing surveys.

Again, there's no habitat on the mountain that they typically use, places they wouldn't forage for. They may, on occasion, find an individual one that could fly through there but it's again not -- we list it but we don't see it as a risk.
Q. What about the three-toed woodpecker?
A. There's potential habitat for those. They were not observed.
Q. The spring salamander?
A. You find those more with kind of more permanent streams and wetlands.

Again, the one thing about Black Nubble, it is relatively a dry site. The lower elevation, the bog valleys you're going to find the stream conditions where you would more likely find those.
Q. Do you anticipate that the project as proposed would pose any significant threat to species?
A. No, not at all.
Q. The long-tailed shrew?
A. Potential habitat. Again, we did a bit of small animal trapping it was not found.
Q. Has there been any testimony that you're aware of that's has substantiated that the project as proposed would pose a threat to that species?
A. Not that or other small species.
Q. So the same would be true for the yellow-nosed vole?
A. That's correct.
Q. When you read that there's 18 species, as Maine Audubon has suggested, of concern that are put at risk by this project, do you believe that that's accurate?
A. It's an overexaggeration.
Q. You have read the testimony that expert witness Dr. Jeff Wells has submitted as part of NRCM testimony; is that correct?
A. That's correct.
Q. In earlier questioning today, it was suggested BY MR.

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DIDISHEIM that that testimony said that Mr. Wells went up and documented 54 Bicknell's thrush, but I assume you actually know that I was with him and he did not document 54 Bicknell's thrush; is that correct?
A. It's just a projection I understand.
Q. So that's maximum utilization in that optimistic scenario of how many -- so it was not accurate to have been told that that was the interpretation of this study?
A. No, it's not at all.
Q. In the aerial photography of the project on some of the display boards, there's essentially no timber cutting in the Navy SERE land, which I assume suggests that the Navy doesn't allow timber harvesting in the same way that there's been thousands of acres around Black Nubble and Redington Township; is that correct?
A. I would come to that same conclusion.
Q. So might that be a reason why the US Fish \& Wildlife concluded that the SERE property was quite pristine?
A. Absolutely.

MR. DIDISHEIM: I next would like to ask some questions of Mr. Anderson.

THE CHAIR: Are you going to object to something, Mr. Plouffe?

MR. PLOUFFE: This isn't cross-examination in any sense I've ever heard of it. It appears to be a series of
leading questions with answers of yes or no of the witness. This is not Mr. Didisheim's witness. Maybe if he could ask questions instead of giving statement and then asking for a yes or no.

MR. THALER: Mr. Plouffe asked a lot of questions that were yes-or-no questions. I thought that's what cross is.

THE CHAIR: My -- I think that his -- I agree to some extent that he's reading a lot of stuff into the record that's already been put in the record, at least that's my impression.

Take note, please, Peter. If you have a specific question, I guess we'd appreciate that you ask it, but rereading stuff into the record I don't think helps us any.

PARTICIPANT: We can't hear you.
THE CHAIR: I just asked him to be a little more circumspect. Putting stuff in the record that previously was put in the record and I kind of had the same reaction that Mr. Plouffe did, I guess.

So I'm asking him to ask a question as opposed to making statements that can be affirmed. Thank you.

MR. DIDISHEIM: Okay. EXAMINATION OF DWIGHT ANDERSON

## BY MR. DIDISHEIM:

Q. Mr. Anderson, I want to get a fuller understanding from you about the process that goes into the construction and putting into place the wind turbine as has been suggested

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by the Black Nubble wind farm application.
You've been involved in the Mars Hill project. Could you just give us a fuller understanding of what's involved, the machinery, and precisely what will happen on this site?
A. Actually, your question -- my involvement in the Mars Hill projects has really just been up to review the site as it relates to wind power. As far as the erection, I think it would be a better question for Tim to answer.

MR. FOLSTER: We would use similar type of equipment as we did at Mars Hill that would consist of large bulldozers, excavators, up-haul, off-highway haul trucks to move the earth and rock to where it's needed.

The design for Black Nubble is much more conservative in that the side slope treatment has been designed to minimize the impact. At Mars Hill, the centerline, the line that was given, we were given a template addressed to be technical that we did not have limitations on how wide the sections could be to the road to the turbine pads. On Black Nubble it's much different. We're instructed to limit our side slope disturbance.

## EXAMINATION TIM FOLSTER

## BY MR. DIDISHEIM:

Q. So the permit application is very specific in terms of
limitations and constraints that you'll need to operate
A. Certainly the final design plans will show that.
Q. Your testimony said that the blasting would be much less than traditional construction projects of this size and magnitude.

Could you explain what you mean by traditional construction projects?
A. We have done many mall projects, highway projects requiring much more blasting than this project. Just some examples, the Augusta mall project required almost half a million yards of blasting. The 395 project in Brewer required 400,000 yards of blasting. The Augusta -- excuse me, Waterville Commons project was 400,000 yards of blasting.

We expect to be about a third of that on this job.
MR. DIDISHEIM: I think that's all for Mr. Frick
[sic].
I have a question for Randy Mann.

## EXAMINATION OF RANDY MANN

## BY MR. DIDISHEIM:

Q. In terms of the reassessment by Maine Mountain by the economic viability of this project, you mentioned that there were various changes in economics that would affect the Black Nubble project, including REC prices and carbon prices.

Then you alluded to -- and also increasing demand by states and possibly the federal government for renewable energy.

Are there specific laws that have been passed in the interim over the last year that have affected the projections of revenues?
A. There have been, speaking generally now, across the country several new states have passed renewable portfolio standards.

So that shows you the trend towards more demand for renewable energy. There's also been in Congress a federal RPS requirement that's been debated and passed by one branch of Congress. There's clearly a very significant trend towards that.

And then some of the developments with the RPS rule here in Maine being further clarified in the RGGI rules as well.
Q. I gathered from listening to some of the witnesses that there had been some changes, particularly with the design of the road, over the last year from when it was projected. It actually had resulted in an improvement in some way in terms of the environmental impacts compared to the original.

With the passage of time, you have made some accommodations.

Would you like to elaborate at all about how the current Black Nubble project has even reduced the impacts compared to what it would have been as part of the larger project?

THE WITNESS: I think this would be a better question for Dwight, actually.

MR. ANDERSON: Yes, as we talked a little bit earlier, we did extensive field work last summer. We spent a lot of time up on the mountain. I hiked up to the top, looked at the alternate routes that we hadn't looked at before to really help what we had done, and we made slight adjustments to the roads, as I said, to get outside of some wetlands that were encountered on the Upper Black Nubble access road, as well as some steep slopes that were observed.

These were minor, subtle shifts, but certainly improvements relative to, you know, protecting natural resources of that mountain.

MR. DIDISHEIM: I guess I have one question for Terry DeWan, and I think that may be it.

## EXAMINATION OF TERRY DeWAN

BY MR. DIDISHEIM:
Q. Terry, one of the photos that you included in your summary this morning has a large dotted line for the future expansion for the base lodge area for Saddleback and the view is from the Appalachian Trail.

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I'm not aware of what's proposed within that -within that dotted line. Could you please tell me more detail?
A. Yes, Terry DeWan. That was part of the application that Saddleback made for a D-PD zone change, and within that area, there's going to be a number of facilities based upon their long-term plan.

There will be additional lifts, there will be additional base lodges, there will an additional ski run, there will be some amount of residential development, some parking areas, roads, and so forth. Those have not been designed yet, but we do know that this is the area that the LURC Commission ultimately looked at.

The other thing about that diagram, that did not include all the area that had been rezoned as a D-PD. There was additional land that went down beyond the vicinity of the lake.

Those are the areas that were closest to the Appalachian Trail.

MR. DIDISHEIM: I guess I'll give back the rest of my cross-examination time.

THE CHAIR: The next one is the Conservation Law
Foundation, 15 minutes. They are going to be questions, right?
MR. MAHONEY: Very few, Mr. Chairman. And really just of Mr. Mann and Mr. Most.

In large part the questions have already been asked in the cross-examination by Mr. Didisheim. We don't have too many questions.

Also, our witness, Dr. Wake, we'd like to get him on this afternoon because he has classes tomorrow, so we'll keep this very brief.

Sean Mahoney with the Conservation Law Foundation.

## EXAMINATION OF RANDY MANN

## BY MR. MAHONEY:

Q. Mr. Mann, could you tell me how many megawatts of wind power Edison International currently generates in the US?
A. In the US we have just about a thousand megawatts worth of wind projects that are either in operation or construction.

It's probably, oh, close to 600 megawatts or so that are in operation and the balance are in construction right now. We're adding new projects.
Q. So 400 in current construction and 600 existing. Of that 600 , how much has come on-line since 2000 , the year 2000 ?
A. The bulk of it has, I think, probably at the end of 2000 we would have had about 150 or so megawatts, something like that.
Q. Is it your opinion that the bulk of that wind power has displaced carbon-based fossil fuel sources?
A. Yes.

MR MAHONEY: This is a question to either you or Mr. Most. I just want to get clarification. We talked about this a couple of times today.

## EXAMINATION OF MATT MOST

## BY MR. MAHONEY:

Q. Will new wind power generation cause by itself the cost of power to increase in the state of Maine?
A. Absolutely not. Wind power -- all other things being equal, it will cause the cost of wind power to reduce.

MR. MAHONEY: Thank you. That's all I have, Mr. Chair.

THE CHAIR: Would you do that again please. Say that
again. Ask the question and let him answer it again.
BY MR. MAHONEY:
Q. Will new wind power generation cause the cost of power to increase for Maine consumers?
A. No. The simple introduction of wind power into the grid will not cause prices to increase, it will all cause prices to decrease all things being equal.

The difference between that and what I said earlier was the addition of carbon restrictions and the addition of a carbon trading program has the impact of increasing power prices because it affects the fossil-fuel-based power generators.

A wind power service, it puts out -- it doesn't have
any of those carbon costs that the fossil fuel units have. That does not seem to capture that increased price, that's increased revenue.

THE CHAIR: I don't want to get started again. I just caution you when you ask questions like that and the answers, it would help us if they were reasonably consistent because you make us wonder what you said before.

I'm sorry, because it is very confusing and we're not experts in this at all. I'm just saying.

I'll give you -- you've got some time left.

## BY MR. MAHONEY:

Q. So without wind power, the cost of power -- kilowatt hour were a dollar, let's say -- if you introduce new wind power generation, would you expect that kilowatt price to decrease because of the availability of power generated by wind?
A. The addition of wind power to the grid has the effect of displacing higher costs and the higher price fuels at the marginal -- I hate to use that lingo -- but the unit that is setting price is the expensive unit.

The wind unit comes on as zero price. So it has the effect of reducing power prices.

The distinction between that and what I was saying earlier was that when you consider the addition of costs to the power generation community from carbon, they have

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the effect of increasing prices.
Wind reduces that impact, and this is something that the PUC testified that the addition of wind reduces the reliance on fossil fuels, particularly gas, and as a result reduces the price of power and volatility of the price of power to what it would have been without the addition of wind.

MR. MAHONEY: Thank you, that's all the questions I have.

THE CHAIR: I have a thousand more but I'm going to restrain myself.

Yes, TransCanada, do they have questions?
MS. BROWNE: No, Mr. Chairman. No questions.
THE CHAIR: Thank you.
MS. BROWNE: We're trying to get back on schedule
here.
THE CHAIR: Appreciate your concern.
MR. THALER: Mr. Chair, excuse me.
THE CHAIR: Hold on a second.
MR. THALER: I'm going to identify who I'll need up
there. Mr. Hanisch, Woodlot, DeWan and Segal. I think that will be it.

THE CHAIR: While they're assembling, does the court reporter need a break?
(There was a break in the hearing at $2: 58$ p.m. and
the hearing resumed at 3:09 p.m.)
MR. THALER: I'm just going to ask some quick questions, members of the Commission, following up on specific questions that were asked this afternoon.

## EXAMINATION OF JOHN HANISCH

## BY MR. THALER:

Q. Mr. Hanisch, you were asked some questions by Mr. Didisheim and in terms of the question of emissions and what would be displaced, in the record from last summer was -- and you were here last summer when Dr. Colin High testified to the Commission on behalf of Conservation Law Foundation; is that right?
A. Yes, I was.
Q. Back at that time Conservation Law Foundation was neither for nor against the whole two-mountain project, just as a point of reference.

Dr. High did a study and testified that the full project -- and obviously the numbers somewhat different this time -- would avoid emissions of NOX, N-O-X, and SOX, S-O-X, and $\mathrm{CO}_{2}$ and would also avoid significant emissions of fine particulate matter -- mercury, organic compounds, and some others.

You were asked a question earlier about acid. I'm not an expert in that area.

If NOX is avoided, is NOX a contributor to acid rain?
A. Actually I wasn't the one who was asked that question, and it kind of struck me as odd because I am the air quality expert here.

But NOX does impact both smog and acid rain, so those pollutants will reduce acid rain, so that was a misstatement.

Moving on to Mr. Pelletier.
EXAMINATION OF STEVE PELLETIER
BY MR. THALER:
Q. There was a question asked of you, I think by

Mr. Didisheim, who was referencing US Fish \& Wildlife's description of the area around the SERE facility if you recall that.

Did US Fish \& Wildlife review any aspect of the pending Black Nubble project?
A. My understanding is that they did review it and determined that they weren't going to comment.
Q. Was that with respect to the wetland impact from this project?
A. And the associated wildlife impacts as well.
Q. You're going to have to speak into the mic.
A. Because of the associated wetlands, it allows them to look at wildlife issues and decided not to comment.

## EXAMINATION OF TERRY DeWAN

## BY MR. THALER:

Q. While we're on SERE, Slide 26 from Mr. DeWan's presentation of the SERE facility, can one of you -Mr. DeWan, do you have a laser pointer -- can you just explain to us -- I think we heard reference to some of the structures there, helicopters and others -- can you tell us what we're looking at there?
A. I really don't know what it is we're looking at, but I
know there is development that you see here, there are several structures. There's a large H in ground, I assume it's a helicopter landing pad.

You see the structure down here. There are mounds of earth in this area, and a road system.
Q. Where is Black Nubble in that picture?
A. This is Black Nubble right here. The project area runs to this point up to there and down a little bit off the slide to the left.
Q. And the road to the SERE facility is obviously already there as well?
A. That's correct, the Dallas Road.
Q. Just a couple of questions now that I have you Mr. DeWan, Ms. Segal.

Mr. Plouffe asked you some questions about views and 360 views, and I'm not going to go toe-to-toe with Bill on

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hiking, but having been up the Caribou Speckle a couple of weekends ago, there's a 360 view there, if you're on a mountaintop with 360 views, for example, from Caribou Speckle, a number of places, Bald Face and Evans Notch, you can see Mount Washington, for example, or around here you might be able to see the towers of Sugarloaf.

Is what we're talking about when we're talking about angle of views, field of vision, things like that, when you have a 360 that there is a lot of opportunity to sit, have your lunch, and not look at one particular location of the view?
A. You certainly have that freedom of choice to be there and to orient yourself in any direction you want to.

Up in these areas around Saddleback, there are beautiful views in all directions.
Q. So, for example, when Mr. Plouffe was showing you Yosemite National Park here behind me and -- by the way, Black Nubble is not in a National Park, is it?
A. It's not in the National Park. As far as I know, the National Park Service never attempted to gain control of it, unlike a piece of land on top of Saddleback where they have a scenic easement.
Q. But Bill was getting out of your car, walking down a trail through the woods, and seeing a view or you can sit and look at it.

If behind you are woods and a parking lot, that wouldn't be a 360 view, that would be more of a focused view; is that correct?
A. I would think so.
Q. While we're talking about mountaintops, I know having tried for many years to duplicate an experience I had on top of Mount Washington years ago where I could see the ocean because it was so clear, that despite getting up at 4 in the morning and still climbing on days that I think are clear, there seems to be more haze in the atmosphere in Maine.

Is that something based on your experience and modelling places around the state is a trend in terms of ozone?
A. I'm not a weather expert. I really cannot comment on that.

It certainly was a factor, though, in our determining when to take the photographs. We did the best we could because there were so many days we were up there it was hazy.

MR. THALER: One or two other questions,
Mr. Chairman, and I'm done.
BY MR. THALER:
Q. We had -- Mr. Plouffe asked you questions, well, isn't it true you could see the project from certain locations or 220
Q. Last question. We heard questions about how people would respond to those views. You were here last summer and I know you've read all of the various testimonies.

Are there people, hikers, and others to your knowledge who have said in surveys and sworn testimony to this Commission that they would welcome the opportunity to see wind turbines in the 21st Century in Maine?
A. We have definitely heard that testimony. We also heard that up at Mars Hill they've actually had to buy two buses to accommodate the people that are coming up there to get tours of the area.
Q. In terms of the -- really last one -- we made up time from this morning.

This is a serious question, I'm sorry.
Mr. Plouffe spent a lot of time questioning you, Mr. DeWan, about testimony you gave last summer and this
and about the differences between your evaluation of the project.

Can you in a nutshell tell the Commission your -- how you have arrived at your assessment of the Black Nubble impact in the prefiled testimony, in your sworn testimony, to the Commission in terms of the differences of what you said last summer in this?
A. Not in a nutshell but I'll give you a few points.

THE CHAIR: Are you objecting, Mr. Plouffe?
MR. PLOUFFE: Yeah, I thought this was a 5-minute bullet question, not a regurgitation of his whole visual impact assessment.

MR. THALER: I'm not asking for a regurgitation.
There were several hours -- three or four hours of cross on my panel. You gave me 5 minutes, I'm trying to do 5 minutes.

But I think -- even if it's 10 , I think as the
applicant we're entitled to try to clarify several hours of testimony.

THE CHAIR: I'll let Mr. DeWan answer that question.
MR. THALER: Thank you.
THE WITNESS: I'll try to keep it brief. We've done several things since then. We saw the Mars Hill project. We had not seen that the last time. We have a much better understanding of visual impacts of towers of a similar height from various viewing distances.

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We have a better understanding of the lighting conditions. We now know about the mitigation that's being offered on the Redington site. That was not present last time.

DeLuca-Hoffman, of course, has done 75 percent engineering drawings at this point and have answered a lot of the questions that we had about potential visual impacts.

I think what we did is reassess the project based upon the concerns that we heard by the Commission.

We still think, though, that the turbines are going
to be visible from the locations that we talked about. We now know, as we did before, how big they will be.

MR. THALER: That's all I have. Thank you.
THE CHAIR: Okay.
MR. PLOUFFE: Mr. Chairman, I believe the rules also have recross if we're going to have redirect. I'll limit it just to Mr. DeWan.

THE CHAIR: In the spirit of generosity, I'll let you go ahead and ask your one question. Okay.

MR. THALER: I don't have an objection to asking one question as long as it relates only to anything I said on redirect of Mr. DeWan.

MR. PLOUFFE: And it does.
MR. THALER: Thank you.

## EXAMINATION OF TERRY DeWAN

## BY MR. PLOUFFE:

Q. Terry, you told me last fall -- last summer when you were here that you had visited other wind power sites, including, I believe, Searsburg in Vermont, that you had reviewed the materials given to you by DeLuca-Hoffman regarding the roads, and you heard it today that the road changes were minimal.

What on earth does having seen Mars Hill have to do with your visual assessment since you had already seen wind farms? Are you telling me that last year your visual assessment was based on an absence of knowledge about what wind plants look like?
A. The significant difference is that Searsburg has towers that are 200 feet tall. These are obviously a lot taller.

We deal with an object at a different scale, different colored blades. I think that there is a -- we were very curious as to how far you would be able to see them from.

I have seen wind turbines in many other states and in Europe, nothing as compared to the size of the facility that's being proposed here and also that has been completed up in Mars Hill.

It has a direct bearing on our understanding of what the impacts will be.
Q. This is the biggest plant you've seen internationally?
A. No --
Q. Oh, I thought that's what you said.
A. It's the largest towers, this generation. I've been out to several facilities in California and seen thousands of them.
Q. So you tell me of all the wind plants you've seen internationally, these have the biggest towers?

MR. THALER: One question became three.
THE CHAIR: Let's call it good right there because this is just going down a slippery slope.

We need to move on because we've got a couple of other intervenors that we need to hear from this afternoon.

I think it's the supporting intervenor group at this point. They have 20 minutes. There's two of you who are going to testify.

MR. HOLT: There are four of us who will be up here, one will be speaking.

Good afternoon, my name is Ed Holt. I'm speaking this afternoon on behalf of the consolidated intervenors, Maine Interfaith Power \& Lights, Maine Energy Investment Corporation, Ed Holt \& Associates, Incorporated, and Independent Energy Producers of Maine.

We're comprised of three nonprofit organizations and one consulting firm is engaged in work to ensure clean energy
in Maine, and what I intend to do this afternoon is summarize very briefly the key points that we have prefiled in our testimony.

Before I do that, I would like to just ask each of the parties to introduce themselves briefly, just name and organization so you know who's affiliated with what.

MR. HAZZARD: Chuck Hazzard, Maine Energy Investment Corporation.

MR. WILBY: Dave Wilby, Independent Energy Producers of Maine.

MR. FLAGG: David Flagg, Maine Interfaith Power \& Light.

MR. HOLT: Going by organization, Maine Interfaith Power \& Light, in its testimony, contends essentially that there is a clear demonstrated need for the project from the standpoint of energy need and environmental benefits.

Maine Interfaith Power \& Light bases this conclusion on increasing sales that they are seeing as marketer of cleaner electricity, products to Maine consumers, and a growing consumer concern over spiralling energy costs, and a detrimental environmental impact of fossil-fuel-generated electricity.

Maine Interfaith Power \& Light also contends that Black Nubble would reduce a substantial amount of carbon dioxide being emitted from existing power plants in New

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England, not to mention the avoidance of upstream impacts from fossil fuel use, including mining, drilling, pipeline construction, and fuel transportation.

By contrast, NEPOOL offers products to its consumers that are free of greenhouse gas emissions, including wind and hydro, and by contrast, the electricity that a typical Maine household chooses -- not chooses, but purchases -- under the standard offer service is responsible for over 4500 pounds of $\mathrm{CO}_{2}, \mathrm{NOX}$, and $\mathrm{SO}_{2}$ emitted into the atmosphere each year.

The Maine Energy Investment Corporation addresses primarily the suitability of the Black Nubble site and the need for wind power. MEIC contends that Maine will need to balance the preservation of the western mountains against the backdrop of climate change, which you've heard a lot about here in this proceeding. Also increase threats to respiratory health and other health ailments and national security and economic development. These are broad issues that I realize go beyond the factors that this Commission often considers, but that's the context.

MEIC feels strongly that the proposal -- the revised proposal establishes the desired balance between the preservation of Maine's western mountains against the need to enhance our renewable energy to a clean energy portfolio.

The testimony of Ed Holt \& Associates -- that's me -really goes to the question of consistency with State energy
policy, the fact that clean energy has strong public support and is not likely to have negative effects on property values or tourism.

With respect to Black Nubble's consistent with energy policy, I point out that any ambiguity around the goal of increasing new renewables to 10 percent by 2017 that was passed last year by the legislature was clarified in this year's session by the passage of LD 1920, which mandated an increase in the share of new renewable generation during the same period of time, 2008 to 2017.

I also added in my testimony that in addition to the small consumer demand that MIPL -- Maine Interfaith Power \& Light -- has seen, there is also significant demand for renewable power among Maine's large and medium electricity customers. These customers include many prominent Maine institutions, including colleges, hospitals, and this facility here, Sugarloaf USA.

The Independent Energy Producers of Maine addresses the demonstrated need criterion by explaining how the development of the project would be consistent with the energy policies of the State of Maine and New England and federal governments.

Some of those policies include Maine's renewable portfolio standard, or RPS, as well as those of other New England states, which ask for demand for these types of
projects.
The position of the PUC that new wind resources would reduce electricity prices, lessen price volatility, and increase system reliability. The importance of the addition of wind power to Maine's ability to successfully implement its climate action plan, and the regional greenhouse gas initiative, which I know you've also heard about.

ISO New England's analysis, the development of new non natural gas generating facilities, such as wind, was "important for both the economy and electric system reliability."

IDPM also echos the comments of the Maine PUC at State Office of Energy Independence and Security, citing the fact that they state that wind facilities will avoid on a $1: 1$ basis fossil fuel generation and associated emissions.

Second, Black Nubble will not add an appreciable need for operating reserves. Third, will help Maine make progress toward reducing our dependence on fossil fuels, which means that we need to develop not only these new clean energy products, but also energy efficiency at the same time.

And finally, the Independent Energy Producers note that the challenging numerous ingredients necessary for a location for wind develop limit the number of economically viable sites. There's not one best reasonably available site, rather there's a handful of sites in the state that can achieve
an appropriate balance between allowing development of a clean energy source with the environmental and zoning values administered by the Commission.

MIPL's assessment of the Black Nubble project is consistent with the zoning and environmental values administered by the Commission and its potential adverse impacts are negligible.

Our four organizations strongly encourage you to approve the Black Nubble-only proposal. We believe that projects such as this are needed to make the necessary transition from polluting fossil-fuel-generated power to clean, renewable electricity, and we support the timely approval of this application so this project can begin construction.

Thank you for your time.
THE CHAIR: Does anybody else on your group? Okay.
Ed? Anybody down here?
Nobody has any questions.
MS. KURTZ: I do.
THE CHAIR: I knew if I waited long enough I could invoke one.

MS. KURTZ: I guess I'm really struggling with this relationship that's being drawn between strong public support and no negative economic impact on real estate or recreation.

I'm wondering, can you give me a little more information about this public support, what demographic this 230
is, where the -- who's been queried, who's been polled, what these numbers represent, where they are in the part of the state, that kind of thing just so I can get a feel for the opinion, you know, where that opinion is coming from.

MR. WILBY: I think -- Dave Wilby for IPM -- I think maybe each organization addressed some of the public support maybe in a different way. I'll explain my comments and hopefully they'll address your questions, and if not, somebody else can. Certainly Ed is the one who has provided some testimony on the property values and some of those issues.

In my testimony I simply reported on the public opinion poll that was done by a reputable pollster here in the state in May, I believe, and in fact I that I attached a copy of the question and results and the details of the poll.

That was a typical public poll by my reading and I have some experience with these things from past professional experience, a very typical poll. I don't know off the top of my head how many people were polled, but it's probably typically in the 400 range, which is accepted by pollsters generally in this state as being a representative answer.

If you see in the governor's race, you know, these are the poll numbers. That's the sort of polling process that would have been used here. So it's a general poll of all demographics across the state is my understanding.

Now, I did not commission this poll, I didn't have
anything to do with it other than I read about it in the paper and obtained a copy of the question and the response, which showed very, very strong support for wind power, over 85 percent, either strongly or somewhat favoring the development of wind power in this state. And the question, again, was an exhibit, Exhibit B, in my testimony.

MR. HOLT: With respect to your question about economic impacts, the basis of my statement is in the record from last summer. It has not changed from then.

It was based on research that I undertook to determine what kinds of studies have been done with respect to impacts on property values, specifically on wind projects.

There were a number of them, but there were two that stood out as being really head and shoulders above the others in terms of the breadth, the variety and type of projects that they analyzed.

One of them was a survey of projects that had been undertaken between I think 1993 and 2000 and the county tax assessors in the counties or in the neighboring counties where those projects were located were surveyed as to whether it had any impacts on property values. The answer to that was -- the conclusion was no.

The other study that I found that I think is particularly useful, it was a separate study designed. It included ten projects in different parts of the US, including

Pennsylvania, New York and Vermont -- I think Vermont were the regional ones in our region -- that looked at property values before and after a wind project went in; also looked at comparable communities nearby that were not affected by the wind project, did not have it in their views.

So in one case they're looking at properties that are in the viewshed of the wind projects, and in the other case you're looking at comparable properties that are not in the viewshed.

It looked at several different scenarios, and in most of the scenarios they found that property values of those properties that were in the viewshed of the wind turbines increased in value faster than those in the comparable communities, suggesting -- one conclusion, I suppose, would be that it adds to property value but my take away from it would really be that it does not have a negative effect.

One can have opinions based on your like or dislike of the appearance of wind turbines in your neighborhood, but the facts don't bear that out.

MS. KURTZ: Are you the only two that are going to respond?

MR. HOLT: It depends on what the question is. We're here to respond to any questions that you might have, but we'll respond specifically to the things that we testified about.

MS. KURTZ: The question -- the thing that comes to
my mind, then, is certainly throughout the country there are obviously different types of neighborhoods, different kinds of landscapes, different kinds of economies, industry, the whole -- you know, it runs the gamut. I just -- I'm not sure that any -- that we're comparing apples to apples.

MR. HOLT: Anything like us anywhere else.
MS. KURTZ: Well, I guess you could say that in a nutshell. I guess the next question I would have is, have the -- when we're talking about something as specific as real estate, have the local realtors been asked? Has an impact study been done for this region? It is a little different than us, I guess, in Oregon. It's certainly not like a
Pennsylvania.
From a broad sweep, you could say yes, there are no negative economic impacts, but it seems to me that a project of this size and precedent sort of setting project that it really deserves a study that is close to home.

MR. HOLT: I think I heard two questions in that. One is, why don't we just ask real estate agents.

Agents reflect what they think is happening in the market. They develop opinions, they list to what people tell them, but it's not a very scientific survey.

The two surveys that I cited -- and the first one that I cited or that I referred to -- they specifically chose to ask assessors rather than real estate agents because

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assessors have no interest in what property values are doing, they just simply reflect what's happening.

In the second study, they looked actually at the property -- at valuations or transactions, and there were some in total, some 25,000 different pieces of property and transactions that were looked at. In that case, again, they were looking at some factual data about what the property values are as opposed to what somebody thinks they will be or might be under different scenarios.

So in one case I think it would be more speculative; in the other case I think -- I tried to restrict my research or reporting on what I testified to was those that focused only on experience-based results as opposed to what might be.

Now, the second question that you raise is, shouldn't there be something closer to home, and I suppose it would be nice to have something closer to home, it would be more reassuring, but we don't have that.

So what I tried to do in my research and my testimony was reflect what I felt were the best -- and again by best meaning best designed and most objective -- and in terms of the variety of situations that are covered, yes, I know Maine is special to us but I can tell you that people that live in Montana or Minnesota or New York or Pennsylvania believe that their hills or their countryside is very special to them, too, because they grew up with it. It has the same emotional tug to
that that our mountains or our coast or other parts of the state have to us.

So while they don't -- I would say the other site --
the Vermont site is somewhat similar to ours. It is a mountainous area site which is heavily forested, small communities, not right nearby.

The other sites are going to be different, yes, but they're all, again, the properties are still residential properties, people have to look at it or get to look at it -depending on your point of view.

If it were just one study from, say, Washington, Oregon or any other place, I would be more inclined to agree with you or to hesitate to take the results as being applicable to us here.

But when you look at the studies that look at a range of projects, a range of settings, and the kind of variety of types of economic activity and occupation and so on that goes on there, with the same kind of powerful results I think that we can apply those results here in Maine and that's why I reported them in my testimony.

THE CHAIR: Okay?
MS. KURTZ: Yes, thank you.
THE CHAIR: Okay, Ed?
MR. LAVERTY: (Indicates yes.)
THE CHAIR: All right. I guess that brings us to --
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do you have any questions Mr. Thaler?
MR. THALER: Yes, Sarah Tracy will be doing this.
THE CHAIR: Okay, ten minutes, please.
MS. TRACY: Thank you.

## EXAMINATION OF ED HOLT

BY MS. TRACY:
Q. We heard a fair amount of discussion on economic benefit and property values, and I think the discussion has been informative. Just to put it in context, in the Washington study that you looked at, Mr. Holt, a year ago, isn't it true that that study looked at projects where there were 90 turbines on average?
A. That were on average. Larger projects than the one we're looking at here.
Q. And here there are 18 turbines?
A. That's correct, 18 turbines here versus an average of 90 turbines in the projects that we were examining.
Q. So despite the fact that these were much larger projects, the conclusions were in that study?
A. The conclusions, again, were that there were no discernible impacts on property values.
Q. Were you here during the presentation of Mr. DeWan's testimony?
A. This morning?
Q. Yes.
A. I was present. Whether I was paying attention fully is another question.
Q. During that testimony -- if I could indulge you for a minute -- there was a card passed out, and I'm going to give it to you now. The commissioners already have this card.

For your benefit, Mr. DeWan testified this morning that the nearest residence is at least 4 miles away from our project, and if you take a look at this card that Mr. DeWan also provided, you can see on the left-hand side of that card it refers to a view of what turbines would look like from Saddleback Junior at 4 miles.

This -- I understand Commissioner Kurtz' point about sort of global conclusions based on studies that aren't from Franklin County, but you are the person to have sort of done a broad survey of impacts to residential properties and looked at all the details of these studies and based upon taking a look at this card and what the turbines would look like and then filtering it through your assessment of these studies, do you have any reason to believe that views of this size would have any different impact or result than those studies?
A. The short answer is no, I don't think it would necessarily be different. Let me elaborate if I might just a little bit.

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I read those studies most recently, I read the full studies, a year ago before I filed my testimony, so I may not remember completely; but because of the variety of projects that were examined, the range of view, that is, the distance from these properties to the wind turbines and the projects in question, varied -- would include all of these ranges that you see here on this card from 4 miles or less to up to 10 miles perhaps.

So my observation -- trying to connect this to those studies, I would say that those studies are looking at visual impacts that are similar to these and that they would be reflected in the economic or property analysis values that I reported earlier.

MS. TRACY: Thank you very much for your time. I have no further questions.

THE CHAIR: Good. Go ahead, Ed. Ed had a concern about the question.

MR. LAVERTY: Mr. Holt, you testified that in response to questions of Commissioner Kurtz that it would be nice if we did have a more specific economic analysis related to the impact of this project but that we don't and consequently might undertake in a sense a bibliographic search.

Do you think, then, given the project of this size, of this amount of money that's being invested, that the applicant should have undertaken an economic analysis specific
to this area?
MR. HOLT: That's a great question and I'm glad you gave me the opportunity to clarify that because the answer is no.

I don't think a project of this size would warrant a study of magnitude that is going to be taken here. The studies that were undertaken, particularly the second one I mentioned, was really an independent one, independent of any particular project. It wasn't in support of a particular property, it was trying to address this question that comes up in every situation, or nearly every situation, where a wind project is proposed.

It's to allay concerns or fears that property owners -- that they're going to be negatively impacted. I said, it would be nice to have that information because it's hard for us to accept sometimes information that isn't local, you know, it comes from somewhere else so therefore there's some reservation about whether or not it applies here.

That's why I said it would be nice to have it, but I did not intend to mean that the applicant or that any -- not even just this one -- but an applicant should undertake this for every project that is proposed.

THE CHAIR: I guess that's it. Unless Mr. Plouffe is going to stand up, I think you better run right now.

MR. TRAFTON: I requested time.

THE CHAIR: Of course, yes. Just as a reminder to ourselves again, these questions need to be directed to testimony that was by these individuals and not try to get them to answer questions that were presented by other people.

Please keep that in mind.
MR. TRAFTON: The question's for Ed.

## EXAMINATION OF ED HOLT

## BY MR. TRAFTON:

Q. I think there's a bit of déjà vu here. You may remember a year ago we discussed these issues of property values and the kinds of studies that might be relevant.

First of all, could you tell me what your qualifications are in the realm of valuating property values and so on?

Do you have any, or have you simply read these studies?
A. A bit of the latter, but I have no experience as a property evaluator. I'm not a tax assessor or anything like that.

I do have -- I have training -- a master's degree in urban planning -- which does provide training and an overview in various kinds of environmental/economic impacts and how you go about doing that. I have a strong research background, which I have employed over my 30-year career.
Q. Thank you. You say that you think it's really not necessary to do economic impact studies in any detail for a project of this size, and yet as the nearly 2000 signatures on our petition, mostly from people who live here either full time or part time, indicates there is a great deal of anxiety in this area about this project, and it's very controversial and the commissioners have to make a decision.

Many assertions have been made about benefits, economic benefits, and they are unfortunately not backed up by any thorough studies, and it seems to me --

MR. THALER: Excuse me, Mr. Chairman, that's
testifying.
MR. TRAFTON: Sorry.
BY MR. TRAFTON:
Q. What would be so difficult about doing an economic impact study, or even a study, a limited study, on the probable effects on property values? I don't see that that's very hard.
A. Well, the issue would be where would we find another wind project in Franklin County to evaluate -- to determine before-and-after effects.

If this applicant were required to undertake a study of this sort, he would probably end up doing what -something similar to what these other two studies have

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done, that is, they would identify other wind projects elsewhere, and they would probably pick the ones nearest, which are in New York and Pennsylvania and in Vermont which were included in this earlier study, and evaluate them on the same basis or a similar basis to what was already done.

So again, it might be done by this applicant, but it wouldn't be specific to some before-and-after study here in Franklin County.
Q. You are aware, I know, of the studies that's been done of the Cape wind project by Beacon Hill Institute.

Would you say there are some striking similarities between Cape Cod and the opposition to the Cape wind project and this area and the opposition to it: Tourism, second home, second home real estate market, and so on?

That study, as you know, found that there would probably be severe harmful effects.

MR. THALER: Excuse me, again.
THE CHAIR: Dain, you really have to stick to the -MR. TRAFTON: I'm sorry.
THE CHAIR: Your opinions, ask questions. Mr. Thaler is probably asking me to strike that from the record.

MR. THALER: Mr. Trafton will get a chance to testify tomorrow.

THE CHAIR: If you have a question about the Cape
wind project you want to ask him, that's fine.
MR. TRAFTON: I will move on to a different subject.

## BY MR. TRAFTON:

Q. Also for you, Ed, LD 1920 -- a question about that -does -- do the requirements of LD 1920 have to be satisfied by the inclusion of 1 percent of renewable power in the provider's portfolio?
A. Yes, it's a requirement that it will be 1 percent in the first year, 2008, increasing by 1 percent each here thereafter to 2017.
Q. Well, isn't there an alternative to including the 1 percent of actual wind power? There are two alternatives?
A. I understand what you're getting it. You can comply with this requirement either by buying renewable energy certificates or by paying what they call an alternative compliance mechanism which is essentially a cap on the cost of complying.

If you cannot buy certificates for less than the cap, then you can pay the capped amount in order to meet your obligation.
Q. So would you say that that escape hatch -- as we might describe it in the bill -- actually provides a kind of relief for a board like the commissioners of LURC to not feel pressured into approving projects just in order to 244
satisfy this requirement? As you just said, it can be satisfied in other ways?
A. Frankly, I think it's way beyond the role of LURC to decide whether it's adequate for an obligated entity, a utility of low serving energy to pay versus buying certificates.

The effect is, from my perspective, from a policy perspective, the effect is the same.
Q. But there would be no requirement to approve this project so that there will be wind power available?
A. There is no -- LURC is an independent Commission. There is no requirement on them to approve this project.

MR. TRAFTON: Right. Question for Dave. EXAMINATION OF DAVE WILBY
BY MR. TRAFTON:
Q. You say in your written testimony that according to MPUC comments on the Stetson wind project that LD 1920 is "intended to promote wind power." The last five words were quotation from you.

I can't find that statement in the MPUC comments or in the legislative document itself. Can you point them out to me?
A. Well, as I don't have those comments in front of me, I'm unable to do it right now. I believe I footnoted that, but I would have to look at the specific comments.
Q. In the -- you mention the poll, which has come up several other times today, this poll which shows very strong support for wind power in Maine. I have what you have handed out in front of me.

Does it -- did it have anything to do at all with this particular project?
A. The question posed, as anyone who has the exhibit can see, does not specifically address this or any other specific project; but it did start with a note that this Commission is considering several multi-million dollar proposals for projects in the UT.

So not by name but certainly by reference, yes.
Q. Well, people support wind power, but I don't see the reference. Can you show me the reference to this particular project?
A. Well, I said, there's no specific -- there's an indirect reference I would suggest.

I mean multi-million dollar proposals for wind development projects in the unorganized territories in Maine. That's a direct quote, and I don't know how you would characterize that without including this project.

MR. TRAFTON: One last question, Mr. Chairman, please. Back to, Ed. I'm sorry, I should have asked you this earlier.

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## EXAMINATION OF ED HOLT

BY MR. TRAFTON:
Q. There's a section in your testimony, your written testimony, that I wasn't clear about. You refer to Tom Hewson's point from last year that the amount of wind that can be accommodated by a transmission system without causing significant problems is in the range of 10 to 20 percent of peak load.

In this figure, cited by Mr. Hewson, came from a National Renewable Energy lab study. But you suggested a percentage may be much higher.

Are you aware that the Bonneville Power Authority --
A. Administration.
Q. I'm sorry, Administration -- having reached 15 percent penetration by wind has recently initiated a rate case in Utah asking for an extra price for the balancing services for wind? Are you aware of that?
A. Not specifically but I do follow what's going on in the northwest since I did live there for 20 years.
Q. This is relatively new.

Are you aware of the price?
A. I understand.
Q. The price they're seeking is over $\$ 4$ a megawatt hour? You're probably not aware of that?
A. Actually, that's very much in the range of balancing
costs. In fact, the whole issue about reliability is not a physical issue about having more capacity; it's really a question of economics and do you purchase the ancillary services that firm up the loads. That usually costs, according to all the studies that I've seen, between 2 and $\$ 5$ per megawatt hour.
Q. But this is a special charge for wind and wind only.

Now, would you agree --
MR. THALER: Let me just move to strike that as well.
That's testimony and not a question.
MR. TRAFTON: Just a minute. I asked it as a question.

MR. THALER: But you then went on to say something else with a declarative sentence, that's all.

THE CHAIR: Just ask the question, Dain.
MR. TRAFTON: I don't think I'm the only one who's used at declarative sentence.

THE CHAIR: I understand. Some of this might make good testimony, so don't give away your only testimony.

MR. TRAFTON: Thanks for that help, Bart.
I do have one last question.
THE CHAIR: That's only one of my tips for
testifying.
BY MR. TRAFTON:
Q. Would you agree that whatever price, special price, is set 248
for wind will ultimately be borne by the rate payers
and/or in the case of subsidies, taxpayers?
A. Of course.

MR. TRAFTON: Thank you. That's it.
THE CHAIR: Thank you Dain.
MR. TRAFTON: Thanks for bearing with me.
THE CHAIR: We'll make a lawyer out of you yet.
All right. I think that -- unless the Commission has any other questions or comments -- no comments, okay.

That brings us to the Conservation Law Foundation testimony. I believe there are two folks for that.

MR. THALER: I just want to note for the record,
Mr. Chairman, we are exactly on schedule now.
THE CHAIR: Thank you. Who should we thank for that? I guess all of you.

I'll make note of your departure. Just for the record, Lisa, just please make note that Commissioner Schaeffer had to leave.
(Commissioner Schaeffer left the hearing at 4:00 p.m.)

MR. MAHONEY: Good afternoon Mr. Chairman and fellow commissioners. My name is Sean Mahoney. As I said earlier, I'm from the Conservation Law Foundation.

With me today is Dr. Cameron Wake from the University of New Hampshire.

As much as it is against my personality and training, I'm going to let Dr. Wake do most of the talking this afternoon with respect to his testimony and I'll follow up with a few brief comments at the end.

I would note that Dr. Wake was not here this morning, Chairman Harvey, when you swore in the witnesses, so he will need to be sworn in before we get going.

He also has a PowerPoint presentation, and I do have hard copies of those slides.

THE CHAIR: That PowerPoint will have to go into the record?

MR. MAHONEY: Yes.
THE CHAIR: It's prefiled, we already have the prefiled in the record?

MR. MAHONEY: Yes.
(Witness was sworn.)
THE CHAIR: Please go ahead when you're ready. We'll put the PowerPoint in and share it with the intervenors and Marcia will assign it a number.

DR. WAKE: Thank you very much. I'm here to talk today about a project that I've been involved with for the last three years called the Northeast Climate Impact Assessment, of which you have that report and I've seen many copies floating around.

I just want to clarify a couple of things about
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how -- who did the work on this report.
It was organized by the Union of Concerned
Scientists, but the results in the report come from the
research from 50 independent scientists who work in teams to address different issues, such as climate change and the impact on different sectors.

The report was put together primarily for the general public and policymakers and decision makers, but it is based on the results. There are 15 papers that have been published or soon will be published in the peer reviewed literature.

So I'm going to highlight some of the results of our research with a particular focus on Maine and a particular focus of forest and recreation in Maine.

But I would like to start by telling you the main conclusion of the report, that the climate that our children and grandchildren experience in the northeast depends fundamentally on the decisions we make today and over the next decade about how we produce and use energy. Those different -I'm really going to talk about different climate outcomes depending on what those decisions are.

All right, I just want to start briefly and let you know -- I think most people know -- our climate in fact is already changing. Work that I've led at the University of New Hampshire shows that our winters have warmed significantly over the last three or four decades, we have a decrease in
snowfall, we have fewer days of snow on the ground, our ice-out dates are earlier -- and that's coming from the USGS work in Augusta -- our lilacs are blooming 4 days earlier, we have frequent extreme precipitation, our stream runoff occurs earlier in the season, and sea levels are continuing to rise.

So we now -- we know very clearly that our climate is already changing.

What we did as part of the Northeast Climate Impact Assessment was to really look at how our climate might change in the future depending on two different scenarios, carbon dioxide emission scenarios.

As I said, this was 15 independent scientists who work together, the geographic scope in the northeast, and it's really based on peer reviewed literature.

This really gets to the crux of the matter. We looked at two different scenarios for what our greenhouse gas emissions would be.

We cannot predict human behaviors, so instead of predicting it, we have developed -- or we used scenarios plausible story lines and what might happen, and this comes from the United Nations Intergovernmental Panel on Climate Change.

We looked at two of them. Here we're looking at time periods from 2000 to 2100 , and these are our greenhouse gas emissions and carbon dioxide equivalent, $\mathrm{CO}_{2}$, different kinds 252
of carbon.
What we see here, we looked at the A-1 and F-I scenario, which is this red dashed line, where our emissions of greenhouse gases continued to grow over the course of the 21st Century as we rely primarily on fossil fuel for our energy.

The other scenario we looked at was a B-1 scenario where our emissions grow much more gradually, flatten out by the middle of the century, and then actually begin to decline out toward the end of the century.

This results in the atmospheric concentration of carbon dioxide in the atmosphere at 2100 of about 550 parts per million, two times natural background levels. This higher scenario results in atmospheric concentrations of 970 per million, about 3.5 times natural background levels.

What we did was we took those emission scenarios and then fed into a series of global circulation models, and we used three state-of-the-art global circulation models, one that comes out of Princeton, one that comes of the NFF in Boulder, and one that comes out of the United Kingdom.

That output is fed into these grid of different sizes for different models, and one of the things that we did was take the output from those big grid cells and we did a statistical down-scaling so that we could get much finer information on how our climate might change across this region.

All right, I'm just going to jump right into the
conclusions here. I'll be happy to answer any questions, and there's a lot more detail in the report itself.

As we look out -- this 1900 to 2100 -- and as we go out over the course of the next hundred years, we see that the mean annual temperature is out into the middle of this century are about the same under the high emissions or the lower emissions scenarios.

The amount of climate change we're going to experience over the next 20 to 30 to 40 years is already in the pipeline, and that's because of the thermal inertia in the climate distance and the fact that we've already dramatically increased greenhouse gases.

The difference really happens after 2050, and what we see is under the higher emission scenarios, we see temperatures rising on the order of 6.5 to 12.5 degrees Fahrenheit by the end of the century, compared to under the lower emissions scenario of 3.5 to 6.5 degrees Fahrenheit.

I would argue -- and we talked about this in the
report -- that this climate change that we can adapt to, and this represents catastrophic climate change that would be very difficult to adapt to. The range that you're seeing here is the range of the three different global circulation models that we used to get these results.

The other piece of this -- in fact the models do a pretty good job at recreating climate change over the course of

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the last 50 years.
All right, what does this mean for Maine? We looked at a sense of how hot summer would feel with the combination of temperature and humidity, and we put together this set of migrating state maps. Here is Maine right now, the average from 1961 to 1990.

Under the higher emissions scenario, by the end of the century we would expect Maine to have a climate comparable to that -- at least the southern half of Maine -- climate compared with that that occurs in Washington, DC today.

Conversely, under the lower emissions scenario, we will expect the summertime climate of Maine to feel something like that of New York state or southern Pennsylvania.

This is a change that we're going to have to live with and adapt to, this is a change we can potentially avoid if we actually change our behavior and reduce our greenhouse gas emissions.

We also looked at drought, and this was one of the most shocking results that came out of our study. We took the output and we actually did a water balance equation, a soil moisture equation, that actually looked at inputs from precipitation and output from evaporation. So we're looking at the water that is available to use.

What we have plotted up here, 1961 to 1991, the average, is the frequency of drought per that 30-year period.

So the colors here in 10 to 15 indicate for most of this
region -- and certainly in Maine -- we experience a short-term drought one those three months about every two to three years.

In terms of a long-term drought, we experience very few, if not zero, long-term droughts greater than six months every 30 years. That's what the colors mean here.

Let's just focus on this image in the lower left-hand panel here. Under the high emissions scenario, by the end of the century you can see that we would expect drought in the entire region of Maine 30 times in 30 years.

That means that we experience a drought every year and that drought is going to come in summertime because while the precipitation goes up a little bit, the summertime temperatures are going up a lot, there's a lot more evaporation. We're moving to a world -- the high emissions scenario -- where Maine would have to deal with drought all the time.

We also looked at a hydrological model. We looked at the snow cover, snow-on-ground days. You can see here, this is climatological average, 1961 to 1990. What we're plotting here is the frequency of days per month when there's snow on the ground, average for winter: December, January, and February.

You can see most of Maine and the mountains of New Hampshire and Vermont experience 30 days of snow cover per month. That's what we are expect in this part of the world.

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If we look at the higher emissions scenario at the end of the century, what you'll see is that for most of that season, 30 days out of snow on the ground, we're looking at sort of 15 to 18 days on average with snow on the ground, so less than half of the normal snow on the ground days that we experience.

You will also notice that under the low emissions scenario, there is certainly a reduction of snow-on-ground days, but the higher elevation areas continue to have 30 days with snow on the ground. There's a real difference once again between the two scenarios.

All right. What are the impacts on forests going to be? And this comes out of work that was led by Lou Iverson from the US Forest Service.

We took out climate data that we generated with these two different scenarios, and then we provided it to six different teams, groups of scientists who looked at what the impact would be on their specific sector.

So we looked at marine resources and coastal infrastructure. What I'm going to talk about today are on forests and on winter recreation, which really do in fact focus on Maine.

Here you have the current, in terms of looking at a climate analysis, that the habitat that's suitable for different forest types, and you'll see that Maine, northern
and over the course of the next decade.
Just some details here, under the higher emissions scenario, we even expect a 70 to 85 percent loss of the suitable habitat for the balsam fir, and a 50 to 70 percent loss suitable habitat for red spruce.

I would also like to add that Nick Rodenhouse from Wellesley did a very particular study looking at the effect of climate change on birds, and then as part of that, looked at the effect of what the loss would be for alpine zones that we have.

What he is forecasting that under the high emissions scenario, we would expect a complete loss of suitable habitat for Bicknell's thrush and other mountain-breeding birds, because we would essentially lose that habitat. There's nowhere for it to go.

As the climate warms, these habitats are going to go up mountains. That's where we find the Bicknell's thrush up high now, but essentially as it warms there's no land up above the high elevations, and that habitat would essentially disappear.

So what he has concluded is that we would expect the habitat for Bicknell's thrush to actually disappear under the high emissions scenario by the end of the century.

We also looked specifically of the distribution of the hemlock woolly adelgid. This is a disease that attacks
hemlock forests, it's prevalent in Connecticut, southern
New York, Massachusetts. It's just coming into Kittery, in the southern part of the state in Maine; and it turns out that hemlock woolly adelgid is controlled in a large part by minimum wintertime temperatures. So if it's cold enough, it would essentially get killed off; if it's not cold enough it can survive the winter and reinfect the tree and spread.

What you see in the blue here is the climate conditions that represent the area where the climate currently allows for the threat of the hemlock woolly adelgid.

The red indicates the typical range for the hemlock woolly adelgid under the high emissions scenario. So essentially you see the spread of the woolly adelgid to the entire region except for this one little spot up here, two little spots up here, in northern Maine.

Conversely, under the lower emissions scenario you can see that it's going to continue to spread throughout the region but actually would not go into the northern part of the range. And so there's hope to preserve some of our hemlock for us under the low emission scenario.

Dan Scott from the University of Waterloo did a very detailed study on the effect of climate change on winter recreation and focused on those winter recreation aspects that were most important -- snowmobiling and skiing, alpine skiing -- and these are the results of his study.

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What we're plotting here is for a number of different areas across the region -- why don't we look at northern New Hampshire, it's more comparable to where we are here -what we have plotted here is the average season length in days of the snowmobile season, and that is days when snow is greater than 4 inches on the ground. It's a threshold that is widely accepted in the industry.

Right here in northern New Hampshire, as is true in western Maine, there's over a hundred days that are suitable to support snowmobiling, which makes it very viable as an economic activity in the region.

If we look at right through 2070 to 2099, we have a number of days that we would expect snowmobiling to be suitable under the high emissions in red and the low emissions in yellow.

What you see for northern New Hampshire is it is reduced to slightly over 60; the numbers for western Massachusetts are actually reduced by half of the 50 days. So we go from it being a -- where we have more than a hundred days suitable for snowmobiling, which is classified as a long season, to being about 50 days, which is classified as a short season.

You do see in almost the remainder of the area -north country in New York, southern Vermont, western Mass, Down East Maine -- an almost complete loss of the snowmobile
seasons.
One of the things we couldn't do is what's the response of the snowmobiler going to be? Are they all going to come here? Or are they going to end up just quitting the sport? That's not the type of analysis that we did, but there would be significant changes to this significant business across the region.

We also looked at the vulnerability of ski areas to climate change. Now, snowmobiling is pretty clearly vulnerable because they can't really make snow because of the long distances over which they have to make snow. It's not economically viable for them. So they don't have much adaptive capacity.

Conversely, ski areas do have adaptive capacity and have been using it over the course of the 15,20 years where they can make snow. And that adaptive capacity was an expletive part of Dan Scott's model. He includes that, and so he has the temperatures at which people can make snow, he uses the temperatures we provided him to figure out how vulnerable different ski areas are.

The threshold that he used in his study was whether or not the ski area was open for more than a hundred days, which is a rule of thumb in terms of economic viability, and also whether or not they would be open for the Christmas season. So in order to remain viable, it had to be open for

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hundred days and it had to be open for the Christmas season 75 percent of the time.

So what you see here is that in the earlier part of the century, 2010 to 2039 you can see the green are viable areas, but essentially areas in the southern part of the region no longer are viable.

If we skip right down to 2070 to 2099, what we see is that we lose downhill skiing in the southern part of the region. The only place that actually remains viable are the mountains in western Maine -- Sugarloaf, Sunday River -- and even areas in norther New Hampshire and northern New York become vulnerable.

So you might think yahoo, we're going to see winters here, but once again, we weren't able to actually model what would happen to the demand of people to go skiing if all these other ski areas actually closed.

But you can see that as a region it's highly vulnerable to this warming climate.

All right, so I just want to come back to where I started. I mentioned these different greenhouse gas emissions scenarios on which we based our analysis, and I talked about the A-1 F-I, which there's a great saying in New England that says -- I learned when I came here -- if you're not careful you're going to end up where you're going. That's exactly where we're headed on this one if we continue to rely primarily
on fossil fuel.
How is it that we might actually begin to stabilize our greenhouse gases and then reduce our emissions over time? Well, there was a very influential paper that was published in Science Magazine 2004 by Pacala and Socolow from Princeton, and they talked about this notion of the stabilization triangles.

So here is the emissions track that we're on, and this goes up to the middle of the century, right, there's sort of monotonic growth in greenhouse gas emissions, and where we need to be is we need to stabilize our emissions and eventually decrease them.

So they call this the stabilization triangle, and this triangle they then broke up within this series of wedges, stabilization wedges. Each one of these wedges, as you get out to 2050, represents 1 gigaton of carbon.

So the point I want to make here is that these wedges really represent different potential strategies, and there's no one strategy that can actually solve the problem to reduce the 7 gigatons of emissions by 2050 .

There's a whole bunch of strategies that are smaller that can add up. Actually, each one of these wedges that we can add up to actually reduce our emissions. There's no silver bullet, there's no one thing we can do.

Wind isn't a silver bullet, hydro is not the silver bullet, carbon sequestration and capture aren't the silver
bullet. We're actually going to have to do them -- we're going to have to find a group of them together that can significantly reduce our greenhouse gas emissions.

So each one of these wedges represents a gigaton of carbon, and here's an example of what we have to do to just reach one of those wedges. These are right in their paper, they came up with 15 different examples -- the one I want to highlight here is switch wind power out for coal power.

If we want to generate one of those wedges by 2050, we have to add two million 1-megawatt windmills. I present this because I think it's very important for you to understand the scale of the problem on the globe is that we as a society in this country and globally need to figure out ways that we can significantly reduce our emissions, and we have to do it in the next decade, because if we don't do it in the next decade, we're going to have an energy system that's going to take that much longer to actually change.

The scale of the problem is huge, but I would argue that actually this country is at its best to prevent the grand challenge, and that's what our scientific constraints in this problem are starting to provide is that we need to act now and we need to act in big and bold ways to forestall that dramatic climate change about which I spoke.

I think I'm probably over time. I'll stop there.
MR. MAHONEY: I won't add anything. I'll continue my
one-time policy of not adding any more than necessary and leave it open for questions from the commissioners.

THE CHAIR: Thank you. Anybody have any questions? Ed?

MR. LAVERTY: I guess this is as much a comment as anything. I really appreciate your presentation and I want to thank you for coming and sharing this information with us. Our difficulty, however, is relating specifically to this project.

Do you have any observations about this specific project or concomitantly, do you believe that wind power projects, irrespective of where they're located or what their impact might be in terms of elimination of certain habitat or natural resources or their visibility impacts, that every different magnitude of problems -- every wind project should be approved irrespective of its specific impacts?

DR. WAKE: I'm happy to answer that question as long as you realize it's outside my area of scientific expertise.
It's a personal reflection based on my understanding of the scientific problem.

My answer would be no, I don't think we should put up windmills irrespective of local concerns for the environment.

I think it's actually very important that we ensure that the projects that do move ahead are ones that are viable from an economic perspective and also from an environmental perspective.

We really put this, at the University of
New Hampshire, through the rubric of sustainability. So we have a climate system problem we have to deal with, we have a biodiversity problem we have to deal with, a food and agriculture problem, culture of society, and they all integrate into this notion of help and integrity of human, of our eco -no, I think it's critical that we put these projects up so that they are both economic and they don't negatively impact the ecosystem.

My big concern is that so much of the debate is around relatively small impacts. There's a lot to the big picture. I mean, we are talking about a catastrophic climate change that's going to impact all human life, for everybody in Maine, for everybody in this country, and everyone in the globe.

I don't think most people understand the urgency that we have a decade to turn this around before we hand our children and grandchildren an absolutely and utter mess.

MR. LAVERTY: I tend to agree with you, please don't misunderstand where I'm coming from, but I feel that --

DR. WAKE: I'm a little passionate.
MR. LAVERTY: I understand. I guess that's one of the -- I don't know how to say this -- I think we recognize that global change, or climate change, has tremendously complex and important implications.

As you had implied, there are winners and there are losers. There's a qualitative judgment that needs to be made. I think that the scientific, and what we really appreciate your efforts for, is to demonstrate the magnitude of the change but all change is not necessarily bad.

I, for one, am very concerned about the type of change qualitatively that is going to take place in Maine, but I think it's important to point that out, is it just because change is going to take place, there may be many people who appreciate a Maine with warmer temperatures, I wouldn't.

So the mere assertion of the magnitude of change, it seems to me, does not necessarily lead to the qualitative determination that that change -- change is always necessarily bad.

I make my own judgment, you make your own judgment; but I think from a scientific basis, I think your documentation of the magnitude of that change is very important for us to keep in mind.

Whether that's good or bad, I think we have to realize it's a scientific question, it's a value-laden question that has to be resolved through public debate and discourse.

I also appreciate the fact that it is exceedingly difficult to relate these large issues to a specific project and tie impact to that specific project to the benefit of effecting change and at the time same time balance that against
the impacts that are going to be undertaken by that specific project.

I think you appreciate the complexity of the issues we're trying to deal with.

DR. WAKE: I'd love to respond to that. We made a concerted effort here to actually do more than let the reader say, oh, there's change, that might be good or bad. That really is the focus of the effort on the different sectors.

So we looked specifically at the marine sector and the coastal infrastructure sector. And I would say throughout this entire report, it -- and I've read it several times -- the negatives far outweigh the positives in every one of those sectors that we looked at from a scientific analysis.

When I say that, I say the entire loss of the commercial fishing, the potential flooding of our coastal regions. The loss of the hemlock fir forests and what that means for recurring logging systems in Maine. So we have tried to take that extra step in this report and not just stop at climate change.

In terms of -- there's certainly a lot of complexity around this particular project, but -- and I actually followed this from a distance for a while, I am a scientist, I take an academic view of this, I actually have skied for years in this area, I love back country skiing and alpine skiing, I have a wood lot over in Mason Township that I've had for a couple of
years and a small camp up there, I love to recreate in this region -- it is important that we get on with the business of dealing with the energy that we're going to produce to maintain our quality of life in the future and decrease our carbon footprint at the same time.

This project is a very important step in that. Just because it's not the millions of megawatts that we need, doesn't mean that it's not critical in terms of moving the region forward.

I really think that Maine, and in particular
New England, who play a very valuable role, has the resources, we have the technical resources, we have the innovative resources, and we have the financial resources to actually lead the country in working to solve the problem.

MR. LAVERTY: Thank you.
MS. KURTZ: I just have a couple of questions about emissions in general. I do appreciate your presentation. It's a little frightening.

I'm wondering, when you talk about emissions, we've been talking about coal-fired plants and petroleum plants, blah-blah-blah, how much of the emissions are actually coming from energy producing plants versus cars.

DR. WAKE: I don't have the graph with me, but if we look at New England wide, about 38 percent of our emissions come from transportation.

I'm going to guess at the other numbers, but somewhere around 25 percent from electricity production, and then slightly less than that from residences, and then down low at about 10 percent, it would be industrial and commercial sources.

MS. KURTZ: How about nationwide?
DR. WAKE: We're heavy on transportation and light on industry, and so transportation and electricity would be in the same kind of ballpark nationally.

MS. KURTZ: That wedge that you had up there was a wedge, and 10 or 15 -- the next slide, no, I'm sorry, in the other direction, the 15 strategies, how are they organized?

DR. WAKE: They are not.
MS. KURTZ: They're not?
DR. WAKE: Pacala and Socolow said, listen, here's 15 ways that you can get a gigaton of carbon reduction by 2015. Each one of these, if you read the paper, may allude to not quite, but close to, excruciating detail on how you do that.

MS. KURTZ: Thank you very much.
MR. MAHONEY: And I would note just for the record that at the hearing a year ago, there was testimony from Seth Kaplan of the Conservation Law Foundation which was simply based on this study from Socolow, the wedge theories.

THE CHAIR: Marcia, do you have a question?
MS. SPENCER-FAMOUS: Yes, I do. I don't want to
scare anybody any more, but I was listening to your presentation and one point of clarification, if you could.

How much of the modelling took into account what's been in the news, in the last couple of years they're calling it global dimming, which is factoring it in would accelerate the level of global warming.

DR. WAKE: The three global circulation models that we obtained the output from actually deal with a whole range of factors observed for change of climate, so there's a bunch of natural factors for their output, but then there's the man-made driven ones, like decreases in greenhouse gases.

We talked about global dimming, that's really driven by an increase, so when we burn coal, we have sulfur dioxide. That oxidizes the sulfate aerosol, which we call acid rain, but when there's sulfate aerosol, the output is there to reflect incoming solar radiation.

So while at the same time we've been heating the planet because of greenhouse gas emissions, we've also been cooling the planet because of the sulfate aerosols.

There's been a whole bunch of land use and land coverage changes. At the same time we're cutting down forests, especially in the tropics. It's changed albedo, which is the reflectivity on the surface which are accounted for. The planes that fly around high up in the atmosphere, with there contrails from, which create clouds.

So all of those factors are actually taken into this model, so it's not just a simple model driven by greenhouse gas emissions, but it has all of those. So in fact, we have been at the same time warming and cooling the planet.

In some ways global dimming is masking the rate of warming that would otherwise be occurring as a result of greenhouse gases.

MS. SPENCER-FAMOUS: So your models did take that into account?

DR. WAKE: Absolutely. I should clarify, these are not the models I used, but these were the model output that was run by the United National Intergovernmental Panel on Climate Change -- well, it was run by the different groups for them and then we obtained the output from that and statistically down-scaled it.

THE CHAIR: The CLF, are you supporting other things than wind power as part of your program here?

MR. MAHONEY: As an entity, we support renewable energy projects, whether they're wind power or tidal. We're absolutely looking at that.

Another major focus of ours is reducing energy demand and increasing energy efficiency. I think as you noted at another hearing that the wind power is not the silver bullet and quite frankly, it's probably -- much to your chagrin -- the easiest of the options to do.

It's going to be much harder to reduce energy demand, to get people to start driving two per car as opposed to one per car.

It's going to be harder to get fuel efficiencies increased from 30 miles per gallon to 50 miles per gallon. Those are going to be some very hard decisions we're going to make. Our focus is completely on that.

With respect to other cleaner technologies, we supported natural gas facilities because we see that as a transition fuel away from coal and carbon and it's better on pollutants, but it still has the $\mathrm{CO}_{2}$ impacts that renewable projects don't.

Certainly the best energy is the energy that you don't use. That's where you really are making the biggest impact.

THE CHAIR: Thank you. There does seem to be a certain irony in us worrying about global warming and carbon emissions, their impact on snowmobiling and skiing, which are great consumers of fossil fuels. So we're promoting one way to not reduce them so we can save another one to do it.

MR. MAHONEY: Even though western Maine ski areas may be "winners," of course to be a winner under the scenarios that Dr. Wake was talking about, it's going to require snow making, which requires water, which requires energy.

So you're right, even as a winner, it's going to be a
loser to some degree.
THE CHAIR: I guess probably I had better not pursue that any further.

DR. WAKE: If I could respond very briefly. Hard for snowmobile but you can imagine the hybrid snowmobile of the future, the battery-powered snowmobile of the future, and also you could imagine ski areas -- Sugarloaf and Sunday River are already doing this -- they're buying -- I think they're buy RECs, but they're powered primarily by wind.

We could actually enjoy those recreational opportunities, you know, maintain our quality of life but reduce our carbon footprint.

THE CHAIR: We're known as a people who want our cake and eat it, too. Seems that's going to be difficult from what you said.

I note we have cross-examination of this group by two parties only, so I guess the applicant wishes to cross-examine. He has 15 minutes, and then followed by NRCM/supporting intervenors.

I take it that the other intervenors did not have an interest in this particular testimony.

MR. THALER: I think we were the only two.
THE CHAIR: Okay. Go ahead, please.
MR. THALER: Thank you Mr. Chairman. Sean, I just have one general question for you as director in Maine for

## Conservation Law Foundation.

## EXAMINATION OF SEAN MAHONEY

## BY MR. THALER:

Q. I know when you testified at Stetson, but you're generally aware that the Maine legislature has passed a law that Maine increase its amount of renewables by 10 percent -an additional 10 percent by 2017.

Are you generally aware of that?
A. Yes, I am.
Q. Other than the three pending wind farm applications before LURC, are you aware of any other significant or meaningful size hydro or other projects on the books that are being reviewed by agencies in Maine?
A. No, I'm not. There are, as the Commission is well aware, there are some Met towers for the project in northern Maine in Aroostook County and there was an announcement for another wind power project in Roxbury that was in the papers, and they've got some Met towers up there.

As far as hydro, I'm not.
Q. Or any other renewable other than wind? Are you aware of any other power plant proposals?
A. I'm aware of -- as far as renewable, I'm aware of a number of tidal energy investigations going on. There aren't any proposals for any specific tidal projects.

There is a proposal for a coal gasification facility
A. And coal's not a renewable source.

MR. THALER: All right. Moving on, Dr. Wake, I have a couple of questions for you.

## EXAMINATION OF CAMERON WAKE

## BY MR. THALER:

Q. Mr. -- I don't know if you were here this morning or afternoon, I guess, when Mr. Plouffe was asking questions about your report, about the UCS report, but he was suggesting that UCS was an advocacy group and therefore this was an advocacy report.

Looking at the report that you have in your testimony, it has -- whether it's 50 or 60 -- it says, independent experts, including three from Maine -- USM, Bigelow Laboratory, University of Maine -- and said it was peer reviewed.

Were you one of the independent professors/experts involved in the project?
A. I was one of the independent experts. I, along with Katharine Hayhoe, co-led the climate analysis part of this effort.
Q. Were the studies that were being done that made up the ultimate report peer reviewed generally?
A. Each and every study was peer reviewed, first peer reviewed by the group of scientists that are actually listed on the inside cover.

So if you look at the synthesis team, very well known and respected scientists, but then it also went out for external peer review to a wide variety of scientists; and as I mentioned, all of the results that are presented here have actually been published in the peer reviewed scientific literature in an edition that I was actually the lead editor for.

So I was involved in many of that, of that peer review process, upon which scientists -- and I'm sure you're all aware.
Q. I want to switch now to a couple of questions that Commissioners Laverty and Harvey asked you and maybe Commissioner Kurtz.

In terms of bringing the global aspect -- the global warming or the study back to Maine and to this

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jurisdiction, the unorganized territories for LURC, I want to give you an exhibit, and I'll pass it out to the Commission and the parties?

MR. THALER: Sarah, I think you've got the intervenors.

Mr. Chairman, just for the record, while that's being passed out, the exhibit that I'm presenting and will offer as an article summarizing statements from University of Maine professors, as well as Maine IF \& W staff and others, about how climate change already is affecting Maine's ecosystem.

I'd like to ask you, Dr. Wake, some questions as to whether what they are reporting is consistent or not with what you were testifying about.
BY MR. THALER:
Q. The director of the University of Maine's Climate Change Institute said that over the next few decades the climate in Maine will become much more like northern Massachusetts.

Is that generally consistent with what your report is finding?
A. Yes; in terms of change, that has already occurred. I
would almost say that it has become much like
Massachusetts.
Q. Some of the changes that they describe in here, for example, to wildlife, the threat of ticks causing more
moose and other wildlife mortality, the change of vegetation and forest types, are those consistent with what your report and the report of what UCS was suggesting is attributable to the fossil-fuel emissions?
A. I would have to look at these in some particular detail to comment on each and every example. I did receive this article.

What I would say is that what they're talking about in terms of the changes that they've seen in specific ecosystems are consistent with the types of climate change that I've been studying.

I'm not an ecosystem specialist, but certainly the changes that they're talking about are changes that are resulting from warmer and a sometimes wetter and oftentimes drier climate, which may be confusing but that's what's happening.
Q. When the people from Maine -- and in your report -- talk about the shifts in habitat, shifting so that the habitat in Maine would be more like Massachusetts, does it also involve shifts in habitat in terms of elevation?

In other words, if, for example, certain bird habitat may be found at the 2500 -foot level, because of warming the habitat may keep rising to the point that it's eliminated from the mountain?
A. I think it's consistent. No where in here did I see --
maybe I read it too quickly -- that's a tough ecosystem to study.

Certainly, as it warms, what we expect is those ecosystems that are predominant on or close to the top of mountains are out of luck because they have nowhere to move.

So, yes, it's not just a spatial spread, but it's an elevational spread, and in some ways it's a similar response in that those ecosystems are shifting towards cooler temperatures.
Q. Let me just ask a couple of questions to again bring it back to LURC's -- what LURC is comfortable with, which is the CLUP, and some of the LURC standards. By CLUP I mean the Comprehensive Land Use Plan for LURC.

I would like to describe for you a couple of the broad goals and policies of LURC in the CLUP, which is what this project is being reviewed by, and ask you how displacing fossil-fuel emissions, say 400,000 pounds a day, would be consistent or not with some of these values based upon your professional judgment.

One of the broad goals of the Commission, which is Page 134 of the CLUP is to --

MR. TRAFTON: In the spirit of a little comic relief, I would like to say, was I worse than this? Would declarative statements --

MR. THALER: I think reading the CLUP is not testifying to ask a question. He doesn't have it in front of him.

THE CHAIR: Object. We get the point. Ask the question and move on, okay. Please.

MR. THALER: Thank you, I'm going through the CLUP.
BY MR. THALER:
Q. The first broad goal is to ensure the continued availability of outstanding quality: Water, air, forest, wildlife, and other natural resource values of the jurisdiction.

Is it your opinion, your professional judgment, that in order to ensure the continued availability of these types of outstanding resources that there needs to be more clean renewable power generated in Maine and in New England as quickly as possible?
A. I would say that we need to figure out ways to significantly reduce our greenhouse gas emissions in Maine, in New England, and in the United States, of which renewable energy, if we really did much more than we're talking about today, would be one wedge towards solving that problem.

So yes, renewable energy is one solution and an important solution. As I said, there's no one thing that we can do that's going to solve the problem. We really

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have to pursue all the different strategies.
Q. Would displacing or avoiding 400,000 pounds a day of fossil-fuel emissions be contributing to the goals of trying to at least assure as long as possible those natural resource values?
A. I think there's a great Buddha saying that a voyage of a thousand miles starts with the first step. In that sense, absolutely, have to start now.
Q. Just a couple other of the CLUP goals, which, again, the Commission has to apply to this proceeding, one of them is to conserve, protect, and enhance the forest resources which are essential to the economy of the state as well as the jurisdiction. You presented some slides about that, the role of the forests in Maine.

Would displacing 400,000 pounds per day of carbon-based emissions contribute to the -- as a small step -- conserving or protecting the forest resources of Maine?
A. Absolutely. And I would say that the alternate is also true, that if we don't make these changes, it will not be preserved. It will change in dramatic ways.
Q. Likewise, one other goal of the CLUP that the Commission has heard about last summer -- and I'm sure we'll hear about tonight and tomorrow -- is about mountain resources, conserving and protecting the values of high mountain
areas, including the natural equilibrium of vegetation, geology, slopes, soil, and climate.

In your professional opinion, would avoidance or displacement of 400,000 of pounds per day of carbon-based emissions contribute to the conservation or protection of those high mountain value resources?
A. As I first step, yes.

MR. THALER: I have nothing further, Mr. Chairman. Thank you.

THE CHAIR: NRCM, are they planning to cross-examine here?

MR. DIDISHEIM: Just some quick ones, yes.
MR. THALER: I'm sorry, I should ask for the admission of that exhibit.

Are we continuing the numbering sequence?
MS. SPENCER-FAMOUS: Yes.
MR. THALER: Would it be 23 ?
MS. SPENCER-FAMOUS: No, you're 22.
MR. THALER: Okay.
THE CHAIR: This is what you're talking about here?
MR. THALER: Yes.
MS. SPENCER-FAMOUS: I've got a copy of that.
THE CHAIR: Are you objecting to that, Mr. Plouffe?
MR. PLOUFFE: I think that's a June article from the
Bangor Daily News, is that right?
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MR. THALER: 2007.
MR. PLOUFFE: If he wants to make it part of his case, why hadn't he distributed it earlier and made it part of his prefiled?

MR. THALER: I don't think I have to make anything prefiled, everything prefiled, No. 1; and No. 2, the hearing rules provide for -- and as last summer offering new evidence -- dealing with arguments of other parties in their prefiled.

MR. PLOUFFE: That was cross-examination.
MR. THALER: Yes, it was.
MR. PLOUFFE: So you're trying to impeach him with that article?

MR. THALER: Cross-examination does not have to be impeachment, Bill, you know that.

MR. PLOUFFE: I object.
THE CHAIR: Your objection is so noted.
MR. THALER: Is it 22-C?
MS. SPENCER-FAMOUS: I have it as -B.
MR. THALER: All right. Thank you. Thank you Mr. Chairman.

THE CHAIR: Go ahead, Peter. Questions, please.
MR. DIDISHEIM: Pete Didisheim, Natural Resources
Council of Maine. The other intervenors in support, I believe, are not asking any other questions, and I just have five quick
questions to ask. We hope to get concluded quickly.
My questions are all for Cameron.
EXAMINATION OF CAMERON WAKE

## BY MR. DIDISHEIM:

Q. The study that you put together you described a number of teams of scientists.

Did it also include some economists?
A. Yes, we had two economists. We had Tom Tietenberg from Colby College and Gary Yohe from Wesleyan University.
Q. We had some discussion earlier about economic impact analysis of wind power projects, and I want to get a little bit of your thinking.

In looking through this study, it appears that there's some very significant economic sectors that pose risks as a result of climate change, and your study mentions the $\$ 3$ billion a year regional snowmobiling sector, $\$ 300$ million a year skiing sector.

Could you tell us on the net positives and negatives how does it come out in terms of economic impact to the state of Maine as a result, let's say, the higher emissions and the lower emissions scenarios.
A. If you look at the higher emission scenario, what we see is a reduction in the number of days that are suitable for snowmobiling, so we look at that -- I have those notes here -- the snowmobile industry is $\$ 3$ billion across the

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northern tier. We didn't get the numbers that broke it out just for Maine, but we're looking at sort of a reduction in half in terms of that industry.

If we look at skiing, there's going to be a significant reduction -- and that's just Maine, \$300 million is what Maine's bringing in.

There's likely going to be a reduction because the cost of doing business is going to be much higher because the increased demands for snow making, plus the increase for snow making at warmer temperatures.

In addition to that, I know when I come up to the north country, I often will do a couple days of snowshoeing, I might go skating for a day, but those other wintertime options are not going to be really viable.

So how much people want to come here just for that, skiing, is a question that we couldn't -- economically it's tough to answer, but at what point do people not want to make the trip to ski on man-made snow is an important question that no one has an answer to.
Q. The study suggests that -- or I think it shows in a pie chart -- the electrical sector is 29 percent of the carbon emissions for New England?
A. That's in the northeast.
Q. That's in the northeast?
A. Yes.
Q. Do you believe -- I'm just thinking about the wedge approach.

Can you achieve the lower emissions scenario without a substantial initiative to lower the carbon emissions of that 29 percent?
A. No.
Q. It's mandatory moving forward that one has to achieve some other alternatives?
A. Actually, just to reemphasize something that Sean said, despite the nature of the hearings and the process that he's been involved in, it is in many ways the easiest because it's an industry that's fixed in place -- it's not mobile -- and it's really sort of a group of power plants that you can work with.

The alternative -- that sort of cutting the vehicle miles travelling in half -- or doubling the efficiency of every home in the region, you can begin to see the road block that I think we have to get over.

The reason that RGGI is moving forward and we're seeing these projects being suggested is that in fact the electric industry combined with energy efficiencies, are really those areas that we would call low sort of low hanging fruit. They're going to be easy to actually obtain.
Q. We've had some testimony about that study.

Decreased visibility because of high ozone days here in the western mountain areas, and your study about Maine impacts said that the number of poor air quality days in cities, like Augusta, could go actually quadruple under the higher emissions scenario.

I'm assuming, and I'd like your clarification, is the same pollution that would be coming to Augusta also the pollution that might be coming into these mountains, and what would be the likely scenario for decreased visibility days in these mountains?
A. I guess my short answer is, enjoy those clear views while you can because the future is one where there is going to be decreased visibility because of increased pollutants.

I should say that the visibility is going to be affected much more by fine particles than it is by ozone, but so often when we have bad days ozone days, we have bad days with fine particles as well.

What happens in a warmer world, we see that the reactions that generates those fine particles from gaseous pollutants actually occur much more rapidly than the reaction that would take them out of the atmosphere.

So as it gets warmer, it's hard to see any scenario whereby our air quality improves unless we dramatically reduce emissions, which is going to reduce the $\mathrm{CO}_{2}$ emissions as well.

So really, $\mathrm{CO}_{2}$ is a good proxy for air pollution as well.

That's also going to -- it's not just bad visibility up here, but in the cities that we live in we're looking at a significant increase in bad air quality days, as defined by the Environmental Protection Agency, would affect human health and the ecosystem as well.

MR. DIDISHEIM: Final question, Mr. Chairman.

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BY MR. DIDISHEIM:
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Q. We've heard a lot about the magnitude of the global problem, and you clearly have distilled that in a compelling and challenging way. Sometimes that can make it seem like the northeast can't do anything to deal with it.

Could you put the northeast or New England's aggregate emissions within some larger context so we understand how we fit in the larger picture?
A. Certainly. If we look at greenhouse gas emissions from the northeast and we put them on a -- look at them compared to the rest of the countries around the world, the United States is No. 1 and China is quickly approaching the United States, but the northeast itself, if we pulled it out, would be the seventh emitter of greenhouse gases just behind Germany and just ahead of Canada.

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So we are a huge part of the problem, and because of that, I think we can be a huge part of the solution as well.

MR. DIDISHEIM: Thank you, that's all I have.
THE CHAIR: Thank you. That concludes everything we had on the schedule for today.

I appreciate everybody working to get us through and get us completely done right on time, as a matter of fact, a couple of minutes to spare.

That means we will be obviously continuing with this part of the hearing tomorrow morning at 8:30. We'll look forward to seeing you all there.

We're going to be here -- we're going to be here tonight for some period of time to hear testimony from the general public. We're coming back at 6 o'clock tonight. I don't know whether you are or not, but we'll be here from 6 until whenever.

So all of you, I guess, we'll see you tomorrow morning at 8:30, and we'll work to keep on schedule like we did today.

Thank you very much.
(Whereupon, the hearing was suspended on
September 19, 2007 at 5 o'clock p.m. and resumed at 6:08 p.m.)

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THE CHAIR: Folks, if you're going to join us this
evening, would you take a seat please and we'll get started.
We'd like to be done before midnight if possible.
Good evening ladies and gentlemen. My name is Bart Harvey and I am the chairman of the Land Use Regulation Commission and the presiding officer for this hearing.

Other members of the Commission with us tonight are Rebecca Kurtz and Gwen Hilton. Commission's counsel, Amy Mills, and LURC staff members, Catherine Carroll, director; Marcia Spencer-Famous, who is the project administrator for this project; and Melissa Macaluso. And our court reporter is Lisa Fitzgerald.

This evening's hearing is being held pursuant to provisions of Title 12 MRSA $685-\mathrm{A}$ and will be conducted in accordance with Chapter 5 of the Commissions rules for conduct of public hearings.

The hearing is being held to receive public testimony on the matter of Zoning Petition ZP 702 submitted by Maine Mountain Power, LLC, to rezone 487 acres of Redington Township, Franklin County from a mountain area protection subdistrict to a planned development subdistrict to develop a wind power facility.

Within the planned district development subdistrict, the wind power facility would include 18 turbines on
Black Nubble Mountain, access roads, underground utility lines.
The petitioner's adjacent parcel on Redington Pond Range would
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be restricted from the development as a wind farm.
Outside of the planned development subdistrict in
Redington Township and Wyman Township, the wind power facility
would include access roads, utility lines, a substation, and a
maintenance structure.
The purpose of this public hearing is to allow the public to present direct testimony and evidence as to whether the development proposal meets the criteria for approval as specified in Title 12 MRSA Section 685-A, Subsection 8-A of the Commission's statutes and the Commission's land use districts and standards.

For those who -- some of you have already done it, but if you want to testify, we'd like to have you sign up so I have some way to control who's coming down to see us. I have three sheets now of people that have signed. If you haven't signed one, there are some in the back. You can sign those and Melissa will keep bringing them down to me as we move along.

All witnesses must be sworn and will be required before they give testimony to state for the record their name, residence, and business or professional affiliation, the nature of their interest in the hearing, and whether or not they represent another individual, firm, or other legal entity for the purposes of the hearing.

In addition to being transcribed by the court reporter, we will be recording the proceedings, so I would
request that you speak clearly and come down front and use this microphone that's in front of us here.

As a reminder, all the questions and testimony must be relevant to the Commission's criteria for approval of this project. Irrelevant and unduly repetitious material or questions will be excluded.

This hearing record will remain open for ten days for written comments until Monday October 1st and for an additional seven days until October 9th for rebuttal testimony.

I would just caution you that potentially this could be changed since the hearing is going to go for another day or possibly longer. Sometimes these things get changed. Just keep in mind that the hearing record will remain at least ten days, after we finish here, so if you think of other things that you want us to know about, you can send it -- you can put it in writing and it will be part of the record.

After the record closes, which will be probably on October 9th, we are not able to receive any additional testimony. So if you do have additional things you want to tell us after leaving tonight, we would encourage you to get those into us as soon as you can.

If you want to be notified about the final action taken by the Commission as a result of this hearing, please leave your name and address with the staff.

At this time I would like to swear in any of those
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who wish to testify tonight. I would just ask you to stand and raise your right hand and repeat the oath.
(Witnesses were sworn en masse.)
THE CHAIR: Thank you very much. Please be seated. We're going to begin with just a little bit -- I think, Marcia -- are you going to do something -- Marcia is just going to give you a little administrative history of the project and any exhibits that we have, and then the applicant is going to give you a very brief presentation of the project using the screen here so we can all start out from the same place about what we're talking about here tonight.

Marcia, if you're ready, I think we can go ahead. After we do that, I'm going to take the list in the order which I received them and ask you to come down front, and I'm going to read a couple of names out so that somebody -- we have one person here and one person waiting so that we kind of cut down on the amount of time people spend walking around. That will save us all a little time tonight.

Also, I ask that you try to keep your remarks to around 5 minutes or so because if we get -- we've got -- I've got three sheets full of people here tonight, so that's at least 35 of you who want to talk. That's fine, but talking to us for 10 or 15 minutes probably isn't going to necessarily make your point any better than it would if you told us in 5 minutes. I don't know how I can be any more polite about it.

Keep that in mind, please. Thank you. Marcia.
MS. SPENCER-FAMOUS: This is a continuation of the record that closed on August 21st, 2006. Many of you who are here know that there was a public hearing on a larger proposal. This is a revised proposal for a 54-megawatt wind farm. The original proposal submitted in 2006 for a 90-megawatt wind farm, all materials received by LURC relating to Zoning Petition ZP 702 from the time the record closed in August of 2006 until the record was reopened on June 6th are included in the record.

So I'm actually going to pick up the reading of the staff statement with reopening of the record.

On May 9th, 2007 the petitioner submitted a request to reopen the record to allow a revised proposal for an 18-turbine wind farm on Black Nubble Mountain.

On June 6, 2007 staff recommended that the record be reopened, and after deliberation the Commission voted to reopen the record. The Commission set June 20th, 2007 as the date for the prehearing conference, and on June 20th a prehearing conference was held. The prehearing conference memorandum and order was sent to the parties on July 17th, 2007.

Parties who were previously granted intervenor status in 2006 could continue, but no opportunity for new parties to request intervenor status was provided.

In 2006 Central Maine Power and the Coalition to
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Reduce Dependence on Foreign Oil dropped their intervenor status. They had been granted that status withdrawn.

In August of 2007 intervenor Western Mountains
Foundation requested its status be changed to an interested party.

In 2007 intervenors Natural Resources Council Maine and Conservation Law Foundation expressed support for the revised proposal.

On July 12th, 2007 the petitioner submitted a revised proposal to rezone 487 acres on Black Nubble Mountain from mountain area protection subdistrict and soil geology protection subdistrict to a planned develop subdistrict to develop a 54-megawatt Black Nubble wind farm.

The proposal also includes a provision to restrict from wind power development the petitioner's 517-acre parcel on Redington Pond Range. The proposed wind farm would include 18 3-megawatt turbines, 6.5 miles of new gravel access roads, upgrades of existing land management roads, above- and below-ground $34.5-\mathrm{kV}$ and $115-\mathrm{kV}$ utility lines, a new substation, and a maintenance and operations building, and other associated activities and structures.

The turbine towers would be 263 feet in height. The tip of the blade extended upward, the height would be 410 feet.

During construction, approximately 63 acres would be cleared above 2700 feet in elevation. Of those 63 acres, 51
acres would be disturbed as well as cleared. After construction, approximately 30 acres above 2700 feet in elevation would remain unvegetated. Approximately 423-acres of the petitioner's 487 -acre parcel, or 89 percent, would not be affected by the project.

On August 22nd, 2007 prefiled testimony was submitted by the parties. An objection to one section of the prefiled testimony submitted by intervenor Appalachian Trail Conservancy was submitted by the petitioner. Intervenor TransCanada did not prefile testimony but sent letters to the Commission about the issue of transmission congestion.

Three other procedural orders regarding the hearing and testimony were sent to the parties on August 9th, August 20th, and September 11th, and the final hearing schedule was distributed to the parties on September 13th.

The matter being considered at this time is a rezoning of the parcel on Black Nubble Mountain and the associated revised preliminary development plan. A final development plan and the intended permit to construct the facility would be considered only if the rezoning is approved.

I have offered the exhibits No. 1 through 27 to the file this morning. So if anybody's interested in a copy of the full staff statement or the exhibit list, I do have copies.

THE CHAIR: Is that it, Marcia?
MS. SPENCER-FAMOUS: That's it.

THE CHAIR: Mr. Lee, are you going to be the presenter?

MR. LEE: Yes, sir.
My name is Harley Lee and I'm president of Endless Energy Corporation. I began work on this project about a --

PARTICIPANTS: We can't hear you.
MR. LEE: My name is Harley Lee and I'm from Endless Energy Corporation. I began work on this project many years ago.

In summary, what we're proposing is a wind farm on Black Nubble Mountain, which is about 6 miles west of here on the other side of Sugarloaf, and this is a view from the Bigelows. You can see we're right here at the base of Sugarloaf right now.

We've got Sugarloaf, the Crockers are here, and Redington, and then Black Nubble is over there. One of the things we learned today is that our visual expert described sort of a good rule of thumb literally for visualizing these turbines, and for most sites from 3 or 4 miles out, which is really where you'd be able to see it. It's equivalent to about a half an inch at arm's length.

The project is about a $\$ 110$ million 54-megawatt wind farm on Black Nubble. We're using 18 turbines and we're putting in about 6 miles of new roads and 10 miles of upgraded existing roads and less than 8 miles of transmission lines.

One of the reasons we chose this site is because there's a substation right up the road here from Sugarloaf.

The team we put together is we formed a joint venture with Edison Mission Group to form Maine Mountain Power, and as I said, I'm from Endless Energy. We're using Vestas turbines, which is the largest turbine manufacturer in the world, and Sargent, one of our contractors to build the roads. They built the road up at Mars Hill, and I think they're the biggest civil contractor in the state.

This is a picture of the Vestas V90 in a mountain setting similar to what we plan to use. Some folks think it's beautiful, I do, and other people have issues with them. That's what it's going to look like.

Why wind energy? It's one of the most cost effective new renewables and it's a very large resource, which is why you're hearing more and more about wind energy over the last several years.

How will our project benefit Maine? First and foremost, we're providing quite a bit of clean energy. It's about 140 million kilowatt hours, and most people don't speak million kilowatt hours, so it's about 21,500 Maine homes. It will be used here in Maine.

One of the important benefits of this is it will help reduce our overdependence on fossil fuels to produce electricity. There's a very high dependence on natural gas and
oil throughout New England.
We'll mitigate against price increases and reduce air pollution about 400,000 pounds per day, which is equivalent to taking 12,000 cars off the road, and you need to burn about 26,000 gallons of oil per day to produce that much energy. So it's a fair amount of energy produced from this project.

Last January the commissioners discussed our two-mountain proposal and pretty decisively said, no, we're not very comfortable with it, so we went back and spent quite a bit of time revising the project, and what we've basically done is moved from two mountains to one mountain.

We've eliminated turbines on Redington and agreed to put that into have a -- to have a restriction on it from further development. It's gone, as I said, from 12 turbines [sic] down to 18. But even at 18 it's still a pretty significant project. There's an NRCM display on the way in talking about how that compares to the hundred dams in Maine. It's more power than about 95 out of Maine's hundred dams.

This is a summary table, which is not showing up right, but basically going from about 300 acres of total project to about 230, and our total cleared area is actually pretty small.

We believe we have selected the best reasonably available site. We looked at many sites around New England, the coast of the New England, and the mountains. The coast
simply isn't windy enough to produce a large amount of commercial grade energy, and we chose this because it's got a strong wind resource, it's located between these two huge ski resorts, which are adjacent to existing development.

It's near the power line, and frankly, it's not a lot of overlap between windy sites and power lines. There is one nearby.

We looked at some other sites farther from the grid but it turns out that the power line alone, the footprint of the power line, would have been twice or more of the footprint of our entire project. So that was a big driver for us, and we were able to use the existing logging roads. There are logging roads that go up to and part way up the mountain, so we're able to take advantage of those. As I said, it's close to a lot of existing development.

It's also working in the fringe of the LURC
jurisdiction. One of the key drivers of LURC policy is to try to put new development near existing development and help preserve the core of the jurisdiction. We're at the very, very edge, or fringe, of the jurisdiction.

As I said there's two large ski areas. This here at Sugarloaf and over at Saddleback, 1800 acres of development, and we have just a tiny fraction, just over 200.

There's a biomass plant. There's a Navy survival school adjacent to us. There's a lot of logging going on.

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This is part of the working forest. As I said before, there's transmission, and there's 330 miles of roads and 1000 miles of logging roads within a 15 -mile study area of here.

We spent quite a lot of time looking at the various impacts -- visual and wetland, and so on -- and we've decreased the number of turbines, reduced impacts. We've designed roads very, very carefully for erosion control. We had a civil engineer today describe that at great length. I don't think anybody got hungry when we talked about rock sandwiches, though.

Minimized visibility and avoided wetlands. We started out our project basically on something like 20 acres of wetlands impacts, and we redesigned it over and over again, and now we're down to $3 / 100$ of an acre, which is less than some houses.

We have avoided sensitive habitat, and we're going to revegetate wherever practical. We've already received permits from Maine DEP, we received our NRPA permit, and from the Army Corps of Engineers, and Carrabassett Valley here to give us the permit for power lines to go through town.

As I said, we've worked very, very hard on soils and erosion problems. We don't want to save the planet with our wind turbines and then have problems with erosion, so we've worked very carefully on that.

We've done a lot of wildlife studies and our
biologists, I think, have pretty much got the comfort of the Maine Fish \& Wildlife on their impacts, how small they are. We've only got 42 acres of clearing after revegetation, so it's a pretty small footprint.

Another way to look at it is for every acre of disturbance we have, we produce enough power for 92 homes.

As I mentioned before, the visual impact -- what is interesting about this site is it's fairly well hidden, so if you do a 15 -mile circle around it, you can only see the project from something like 5 percent of that area. It's not visible for 95 percent, so it's a pretty well hidden mountain.

The Appalachian Trail is nearby. There's little over 30 miles of the AT and I think the project is visible from about 9 percent of that, and the closest views are pretty far away, about 4 miles. Once, again, the turbines are equivalent to about half an inch. Hikers who are up there will also be seeing other man-made development like the ski areas, wood roads, and towns, and so on.

We believe there are pretty strong economic benefits, environmental benefits. Economically we talk about 80 construction jobs, five to ten well paying operating jobs, and we have a preference for local hiring. A lot of people around here have the skills you need to operate wind turbines, turbine machinery, and power equipment, and so on.

We'll pay property taxes, at least $\$ 500,000$ a year,
land lease payments, and purchase of local goods and services, and most of the site will be untouched.

The entire Redington project will be restricted from development, 500 acres, and about 90 percent of the other mountain will be unused as well. It's a lot of protection of that land.

Of course, we'll have educational tours for school children and other people who are interested. The Western Mountains Foundation insisted on putting a trail right through the middle of our wind farm, so we've offered them that right, too.

What was encouraging to us is a little over a year ago we did a poll of Maine residents, and we found that there was $9: 1$ support for this project. For every opponent, there are 9 supporters, which is very nice to hear, and that was throughout the state among different demographic groups.

We've had over 2000 people who have signed our petition. We've got more than 20 of Maine's leading environmental, social, and policy organizations who support the project, and we have gotten very strong editorial support as well.

So in summary, we think this part of the state does have a very good wind resource, and we think Black Nubble is the ideal location to harvest any wind resources. It's near the fringe, closer transmission lines, and it would produce
quite a lot of clean energy, reduce the dependence on fossil fuels, reduce air pollution by 400,000 pounds a day, provide economic benefits, and recreational benefits.

We worked very hard to have a well designed project, and we have a team that we think can put it together properly. Thank you.

THE CHAIR: Thank you, Mr. Lee. All right. We'll begin the testimony -- I'm going to read three names off my list here, the first three on list No. 1. I'll just ask you, the first person, to come down and take the mic, and then the other two can be ready to go.

Pat DeFilipp, Michael [sic] Caliandro, and Lloyd -- I think it's Griscom. Why don't you guys -- you folks all get ready to go, and we'll start right out. Speak right into that microphone. Your name -- don't forget to give us your name so Lisa can have it.

MR. DeFILLIP: My name is Pat DeFilipp. I'm a resident of Auburn, Maine.

I work for Reid and Reid. We're a general contractor located in Woolwich, Maine. I was a project manager for construction of the Mars Hill wind farm.

We feel that this project should be approved. Aside from the obvious economic benefits and environmental benefits we talked about, it's a real economic shot in the arm for the state.

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It will generate some significant tax benefits, it will create approximately 80 construction jobs. Now, these construction jobs will be local jobs. On the Mars Hill project everything from the road work to the pad construction to the foundations to the turbine erection, all the underground wiring was all done by local companies, Maine companies, and Maine labor.

The only thing that was done from companies out of state was the wiring up in the tower and turbines, because that was a real specialized thing. Still, everything else was done with either local companies and local labor.

A lot of the materials for the projects were purchased locally, right up in The County. The concrete was purchased there, the reinforcing steel. That actually came from southern Maine. Structural steel for that project was actually fabricated by ARC right here in Kingfield.

When the project was done, it created some really good permanent jobs. General Electric supplied the turbines on that project, and to get the project up and running and on-line, they brought in their own people to get it going, but as soon as it did and they could train some local people, they hired local people to take over.

We believe that with the proper design for the roadways, the cuts-and-fills, the tower pads, and the tower foundations, and with the proper construction techniques and
monitoring environmental controls, construction impacts will be minimized on this project. Thank you.

THE CHAIR: Thank you, Pat. Just a question. Could anybody hear? I didn't get a sense that that microphone was on.

You're okay back there? Everybody here except me. I just want to make sure it's on. You just need to speak right up. I'm sorry, it's Michelle. My apologies.

MS. CALIANDRO: That's okay, you would have caught on eventually.

THE CHAIR: Yes, obviously.
MS. CALIANDRO: Good evening. My name is Michelle
Caliandro. I'm a resident of South Gardiner, Maine. I'm the
public policy assistant for the American Lung Association of New England and Maine. I am here representing our executive director, Ed Miller.

On behalf of our organization, I offer testimony in support of the Black Nubble wind farm project. The American Lung Association of Maine is the state's oldest voluntary health organization and is focused on improving the health of Maine people by ensuring access to healthy air.

We have 60,000 supporters here in Maine. Air pollution is a significant and increasingly dangerous health threat to Maine, especially for more than 120,000 people in the state with lung disease.

Combine that with Maine's unwanted distinction of having one of the highest lung disease rates in the country and you've got a public health crisis that must be addressed promptly and aggressively.

A copy of our 2006 Maine Healthy Air Annual Report that further defines what we consider can be the key air quality issues for Maine can be found on our website.

We need to do all we can to reduce air pollution emissions through Maine in the nation to the lowest level possible, and what are the sources of these emissions?

Air pollution in Maine is primarily a by-product of our fossil fuel-based energy and transportation systems. These are the same sources responsible for global warming.

If nothing is done to reduce these harmful emissions, the health risks to Maine people will continue to increase every year.

Inaction is not an option. Corrective action will require a sustained and aggressive combination of energy efficiency, conservation, and increasing our clean fuel capacity, including solar, bio fuel, and wind.

Is the investment in clean energy worth it? To put in perspective, at least 150 million in health costs are incurred every year in Maine just as a result of lung disease. The costs from heart disease approach half a billion dollars. It is clear that air pollution contributes to these costs, and
we cannot afford not to take action.
Wind power is viable, necessary, and yet still underdeveloped. We are pleased to see the increase in Maine projects over this past year, but Maine's capacity to host wind farms is limited.

Our organization was very interested in determining the potential of community level wind power to meet more of our energy needs. In 2005, along with Coastal Enterprises
Institute [sic] and the Jebediah Foundation, we commissioned a
study to explore community wind power. Included with my testimony is a summary of our report, a feasibility study for community wind projects in Maine.

We have hopes that community windmills might be able to become as common as community water towers or cell towers; but we find that even when looking at smaller scale projects, only about 15 locations in Maine have the right combination of factors, including wind speed, access to transmission lines to make wind projects a viable option.

Maine's vast wind resources are located here in the western mountains and along the coast. Black Nubble is one of the few opportunities for large-scale significant wind power production in Maine.

Given this reality, the need for this project as a key wind resource is magnified.

This is not just a local issue. All Maine people
have a stake in the Black Nubble wind farm project because all of us are affected by air pollution.

Even if you do not have asthma or lung disease, you probably know someone who does. Those susceptible to the effects of air pollution include the active, as well as the sick.

We need to work across the state to improve health and prevent costly disease. Reducing air pollution by supporting the Black Nubble wind farm is one important step in helping Maine people breathe healthy air.

There are those who feel that this project is not needed here; they claim that these wind farms should be built somewhere else. While we appreciate their viewpoints, we respectfully disagree.

Unfortunately, it will take much more than bringing this one project on-line to break our addiction to fossil fuel. Our organization will continue to support projects that propose healthy air alternatives to oil, coal, and natural gas.

We realize that you must take many factors under consideration in reaching your decision, but Black Nubble is a healthy air step in the right direction, a show of support for this technology, and the American Lung Association of Maine urges you to support it.

THE CHAIR: Thank you. Do you have any questions, Rebecca or Gwen?

Lloyd is next, and following Lloyd we have James Hutzler.

MR. GRISCOM: I am Lloyd Griscom, resident and landowner --

THE CHAIR: Lloyd, you're nice and tall. Extend that microphone up a little bit because you've got to speak right into it or otherwise we're not going to hear you.

MR. GRISCOM: Lloyd Griscom, resident and landowner in the Phillips and Madrid area. I'm also the director of the Maine Appalachian Trail Land Trust.

I have hiked Saddleback Junior yesterday and the day before going by ATV to where I live to a trail head that I know of. I ran into six hikers, three of whom were through hikers from Georgia who started in April.

When I'm in a place like Saddleback Junior -- that is the Bigelows on the top and Mt. Blue/Tumbledown in green on the bottom. What strikes me is that if you connected these areas that are very important -- Maine and beyond Maine -- treasured resources, you would have a world class nature-based tourism destination that would be second to none.

This would give us a sustainable boost to our rural economy that we badly need, and these effects could be widely shared. This could be accomplished through public and private cooperation in a multi-use fashion that would make this spectacular area available to future generations.

I would like to think that the hikes I enjoyed this summer with my grandson could be experienced by he and his grandchildren.

I have noticed over the last 20 years more moose at very high elevations, like even 3400 feet -- the top of Saddleback Junior is around 3600 -- possibly driven there by encroachment of their territory. This area is important to wildlife ecology is an unusual transition zone between mixed, hardwood, and boreal forest. Australia has recently set aside such an area to aid animal adaptation to the challenges of global warming.

Please keep this common ground available for the benefit of many. It is very important to our economy and ecology. Please do not approve the Black Nubble wind project.

Thank you for listening.
THE CHAIR: Thank you. Following James is Vera Trafton.

MR. HUTZLER: I'm James Hutzler, and thank you very much for the opportunity to speak today.

Fourteen months ago when I was standing in this exact place and testifying on the same subject, I never would have imaged that I would be back here today as I am.

For the second time I made the trek to Franklin
County, Maine from my primary residence in Alexandria, Virginia to state that case why 420-foot-tall industrial wind turbines
do not belong on the top of Black Nubble Mountain.
I think it appropriate to note to the commissioners that I am not a stockholder in Endless Energy Corporation, Edison Mission Industry, Constellation New Energy, or any other entity that stands to financially benefit from this proposed installation. I hope that all speakers after me will identify whether or not they have a financial interest in this project.

As some of you may recall from my previous testimony, my grandparents built a summer camp here on Rangeley Lake in 1922, which remains in our family today. I'm an Appalachian Trail devoted hiker and trail construction and maintenance volunteer with the Appalachian Trail Club.

At the outset, I would like to say to you that you are here because of your concern about global warming, I commend you for your noble activism; the problem, however, is what we are actively attacking here in this room today is an important detail that is only a part of a much larger equation.

This hearing is entirely about wind turbine electricity projection and where it should be located and where it should not be located. The Land Use Regulation Commission has the unenviable duty of making huge and weighty decisions in this regard throughout the unorganized territories of this state.

A starkly important question about how we can stem man-made climate change has been studied and looked at

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realistically in great detail in a balanced forum where solutions for these models could be fully debated.

There is absolutely no doubt conservation must be the primary focus of our nations and efforts to mitigate air pollution and the resulting consequences. This must be done from the consumption side more than from the generation side.

Appropriate and non controversial places for wind power exist in many parts of the USA, but the sacrifice of wilderness mountain ridgelines comes at a great cost.

The decision to sacrifice these ridgelines, our protected wilderness, the environment, and the common good to mostly benefit private financial interests at the expense of taxpayers, citizens, and the national growth must be looked at with due fear and trepidation.

I would like to quote Section 3, Subsection A of the Sierra Club's official national wind siting document. I'm not here in the capacity of the Sierra Club. This is the nation's No. 1 environmental organization in membership, and this is a publicly available document.

I quote, The Sierra Club opposes development in protected areas, such as national and state parks, national monuments, wilderness areas, wildlife refuges, designated roadless areas, critical habitat, and designated habitat. In the areas of cultural significance, sacred lands and other areas that have special scenic, natural, or environmental
values. In these areas it is inappropriate to build wind turbines, roads, transmission lines, or any structure related to wind development.

The Appalachian Trail is administered as a part of the National Park Service and designated by the National Scenic Trail back in 1968. These 18 huge wind turbines would be "in your face" for over 30 miles of the Appalachian Trail, and from six of Maine's ten mountains that rise over 4000 feet above sea level: Saddleback, Abraham, Spaulding, Crocker, Redington, and Bigelow mountains.

Among those, only Sugarloaf is nearby. The fact that your decision will reach far beyond Black Nubble is well known by industrial developers, as well as the Natural Resources
Council of Maine. NRCM's clean energy project director Dylan Voorhees' words were posted on the NRCM's website only two weeks ago on September 4th of this year.

I quote, "It might be useful to point out the implication of denying a permit to any wind project proposed near the Appalachian Trail. Black Nubble is about 3 miles from the trail at the closest point. If LURC were to make a de facto determination that this was a steep cliff, it would to categorically moving of 1.5 million acres of Maine off limits to wind power, an area of twice the size of Rhode Island."

Despite Mr. Voorhees' inaccuracy in overstating the land area involved, I think it has to be critical to turn this

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notion around 180 degrees. I assert that to permit this project would set the precedent that would dictate the automatic approval of industrial development throughout the length of the Appalachian Trail corridor and would irreparably lower the bar of wilderness preservation in Maine.

Indeed, wouldn't such a decision dictate that impacts from any development proposed along the Appalachian Trail corridor beyond the 1-mile limit, regardless of its size or desirability be a meaningful challenge in the debate?

Edison Mission Energy, which is one of the huge corporate partners in this tapestry is based in San Diego, California and operates 19 fossil fuel power plants in various parts of the USA.

Edison Mission is in the wind business to reap federal taxpayer and financing incentives. Believe me, utilitarian, they are not. You will hear from other presenters who will illustrate this.

The bottom line is that the Black Nubble site is inappropriate for a wind farm. The facts overwhelmingly go against this project.

In 2006 the developer, himself, did a good job stating one mountain would not be economically feasible. Many years ago Mr. Lee chose this wilderness ridgeline site, placed arrogantly adjacent to the Appalachian Trail. He did reach out at that time to all entities to identify a proper non
controversial site for his wind farm.
At this time I would like to kindly ask that the LURC commissioners the join me in remembering the conservation legacy of President Theodore Roosevelt, the vision of Arthur Perkins, the hard work of the Civilian Conservation Corps and all of those who have in the conversation community both yesterday and today that contributed their sweat, their time, their money so that they could project the remaining natural world most of us deeply treasure.

To the LURC Commission, I would like to thank you for your service, for your courage, and for caring so much about the future of the beautiful state of Maine.

THE CHAIR: Thank you. After Vera is Bob Cummings. Vera, go ahead, please.
MS. TRAFTON: My name is Vera Trafton. I live in
Phillips and I oppose the wind power proposal which we've come here to discuss.

As one of the founders of the Friends of the Western Mountains, I thought about this proposal and the change of siting industrial-scale wind towers on these mountains would bring about since 2002 when we became aware of the threat to the western mountains.

I've been struck by the deep love that most people and visitors have for this area. The mountains dominate the woods, lakes, streams, and towns, and stand for Maine in many

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peoples' minds.
We treasure the quality of natural beautiful and the rural life, which in many ways seems unchanged from years ago. It is also very important to our economic well being that Maine people seek out this area to enjoy what we are lucky enough to have every day. Now the time has come for us to make sure that the source of our happiness and opportunity for prosperity is not spoiled.

It is striking to someone from Maine how cavalier other states are about some of their natural resources. There are states known, for example, for their trout streams, which flow through magnificent countryside. I've walked through sage brush, climbed over at a riverside cattle farm with mountains right in the horizon, but I was never long out of sight of man's changes to nature. Rarely could I enjoy the sense of remoteness that we almost take for granted here in Maine.

Lakes and rivers elsewhere don't enjoy the protection that Maine's inland waters do, thanks to our rules governing the setbacks and development of wilderness areas.

We may grumble about regulations, but when one sees how hard it is to get away from human interference in nature's finest creation, one understands what prompted people in Maine to take early action to protect our wild places.

Our mountains are protected above a certain height, 2700 feet, by rules which LURC enforces. The reasons to leave
these mountains undeveloped were worked out by people with vision and the same reverence and respect to the mountains that many of us still have today.

In April 1972 the first Maine mountain conference was convened. The proceedings make wonderful reading and are a certain reminder of our duty to those who trust us to preserve the wild character of the mountains for future generations.

I'll read you some interesting passages which reflect my concerns and feelings and are as moving and current today as they were in 1972.

Elmer Violette, who was a senator and chairman of LURC, quoted Wordsworth in the conference notes. "Two voices are there, one is of the sea, one is of the mountains, each a mighty voice."

He goes on to say, "our task as a state is to reconcile the use and development of the mountains with our needs and with the environmental needs of the mountains themselves."
H. W. Folger, University of Vermont botanist said, the combined factors of low temperatures, short growing season, high precipitation, shallow acid soils, poor nutrients, and steep slopes create a fragile environment at higher elevations. The environmental break occurs at around 2500 feet of elevation, and above this point the environment approaches sub arctic conditions.

He goes on to say that the highest land use and great expanses of other mountain land in Maine is a source of abundant clean water, which supplies streams and rivers.

Kenneth Stratton, who was in Augusta with the Soil and Water Conservation Commission said, In our mountainous areas we must be concerned about what soil we do have. It is shallow, and because of slopes, subject to rapid erosion. When we lose the soil, we have to plant the associated plant life. This is certainty not desirable.

Ronald Davis, a professor of botany and geology at UMO said, With increasing altitude on mountains, the ecosystems become increasingly vulnerable to damage by man and slower to recover from damage. Higher altitudes are more fragile and require more protection.

This argument is clearly a major one in the establishment of the regulations by the State of Vermont to place altitudes above 2500 in a special protected zone.

I'll end my remarks by quoting Herbert Hartman, Maine Mountain Committee of Natural Resources Council who speaks for me as well.

At the very least, the mountains by their distinct elevations dramatically affect upon us their place as an important feature of the natural landscape. The integrity to be seen, with its diversity of natural components, is itself in many instances reason enough for protected consideration.

Finally, how many of us here and how many others cherish that experience of the natural world for which the mountains are the setting.

The inspiring views and great natural resources and tremendous spans of time, the special companionship created by the sharing of these experiences, which are so different from those of our daily lives.

For many, the mountains certainly provide health, enjoyment, enrichment, and new vigor. As stunted as they will be by pressures, many of the mountain studies could become monuments to our own ignorance, apathy, or greed.

Thank you very much.
THE CHAIR: Bob Cummings is next. And following Bob is Tom Lewis.

MR. CUMMINGS: My name is Bob Cummings, I live in
Phippsburg. I've been involved with Maine trails for at least
40 years. I'm also a founding director and now president of
the Maine Appalachian Trail Land Trust that seeks to protect the trail in Maine from incompatible development.

I work as a volunteer for the Maine chapter of the Appalachian Mountain Club, for the Maine Appalachian Trail Club, which incidentally voted 110 -something to nothing last April to support the opposition to this project, and I also work more hours than I like to think about for two small land trusts along the coast.

I am not opposed -- oh, tonight I'm speaking for myself. I haven't talked to anybody about this.

I am not opposed to alternative energy, but the plain language of the LURC statute should not be forgotten just to satisfy the popular clammer for wind energy.

I believe the global warming threat is both real and serious. Twenty-five years ago I wrote a book extolling the virtues of conservation and how homeowners can reduce their commitment to oil.

But I don't believe we need to support every token wind project where developers think they can make a profit. We shouldn't destroy the best of Maine to protect Maine.

I have no personal bias in this belief other than a love for the mountains and the opportunities they provide.
There are many legitimate reasons for rejecting this project. You will hear about most of them from the testimony of the intervenors tomorrow.

I'll just speak of a couple of things you might otherwise not hear emphasized.

Most importantly, these high peaks, the cluster of 4000 -foot summits surrounding this project, are the jewels of inland Maine. Were it not for the beauty of the coast, these mountains would have been protected long ago. Sadly, Maine has lacked to call attention to this unique Maine. Maine still has no concept of the ecological and potential economic importance
of this region these developers are proposing to change for us.
My wife and I over the past three years have visited most of the wilder places of these United States, from the coast of Maine to near the Arctic Circle in Alaska. As we worked our way west, I began to realize that this high peak region of Maine has equalled or exceeded all the parks we visited. Desecrating this region would be the equivalent of placing wind towers next to Old Faithful or in the high meadows of Yosemite.

Maine mountains have a different beauty than the mountains of the west, but not an inferior beauty. I will stand we live in a northern rain forest. There's nothing like Maine anywhere else in this nation.

I know this is personal observation. A few years ago I took the train out of Boston to Georgia and then walked home on 2175 miles of the Appalachian Trail.

I traversed the Great Smokey Mountain National Park, Shenandoah, all eastern seaport national parks. What I discovered and heard in conversations with other hikers is that Maine is the wildest, most remote and most beautiful section of the entire trail.

Approval of this project would change the many miles of Maine -- many miles of Maine trail from one of the wildest and least developed viewsheds along the long footpath to one of the most developed viewsheds.

One final thought. You have been shown photo simulations allegedly showing what wind towers would look like to hikers and others passing by. They don't show any such thing. Not because of simulations that are necessarily wrong, but because the camera never sees what the human eye sees. As even those casual photographers quickly learns, the camera sees the whole scene, the eye sees a thousand views almost simultaneously, the brain merges these views and concentrates or whatever is most dramatic and unique. If this project is approved, it will be the wind towers.

The impact on the Appalachian Trail will be enormous. The fundamental requirement for LURC is that new developments in this state must fit harmoniously into the natural environment. That is a requirement that is impossible to achieve with 400 -foot lighted turbines, twirling blades, and a landscape bulldozed with access roads on what is now a remote and wild mountain.

The law, LURC regulations, and protection of a unique wild landscape all require that this project be rejected.
Thank you.
THE CHAIR: Thank you, Bob. Tom Lewis is next, and then Wendy Glenn. Following Tom is Wendy Glenn.

MR. LEWIS: My name is Tom Lewis. I'm a resident of Yarmouth. I'm a long-term Appalachian Trail volunteer. These remarks, though, are my own.

Black Nubble-only idea has been rejected in the past by both sides of this issue. A scaled-back project reduces the size impact, it does not reduce the intensity impact on the Maine land.

The project still fails to meet the current standards necessary to rezone this mountainous area. The commissioners rejected the application in January. A revised proposal should be rejected as well.

It's widely known that that there has been considerable bias by LURC staff favoring this specific project from the beginning, and that has been disturbing to many of us.

In the public we expect more open and fair dealing from our State government. In fact, some commissioners speaking at the meeting in January expressed real surprise that staff could have come to the conclusion they did after reviewing all the same facts and testimony.

It appears to many of us that this deal was cooked a along time ago and LURC staff and others were blind sided by the Commission's decision. Unfortunately, that has led to some recent political strong arming that has shifted the focus away from some real issues that need to be considered in this proposal.

Your decision on this project is too important, and as a member of the public, we expect that you will insist on fair and unbiased process.

This remote and undeveloped high mountain region is beautiful and a special place in Maine and is not appropriate for this development.

This has been a controversial site from the start. Anyone who has taken a careful and objective look at the proposal has concluded that this is the wrong place for industrial wind development. It would be certain to many that if wind power siting policy had been developed, it would have ruled out this site, which is the most environmentally sensitive of the sites so far. This may explain why the industry has dismissed a need for such a policy.

The future of wind power does not hang in the balance of this project. With huge government subsidies and administration, there has been a surge of applications recently, and many projects are ongoing. Even our former governor has gotten into this business.

But why some have chosen to jump on the band wagon for this specific project is particularly baffling to me. I can't imagine that we would want this project to serve as a model for wind power development in our state.

On aesthetic grounds, there are some suitable places for wind energy farms on a large scale. With a proliferation of proposals on the way, I can only hope that the State can get it right before we seriously damage some unusually beautiful countryside.

If you approve this one, I'm not sure there are any that you can't -- that you won't approve.

We still have much to learn about using wind power in its current form. Increased enthusiasm for this energy source, combined with politics that attempt to show off our diligence in meeting renewable energy goals can be a dangerous fix.

I urge you to reject this application.
THE CHAIR: Thank you, Tom. Wendy, are you here? After Wendy is Willy -- I think it's Ritch. I don't know if I've got that right or not.

Go ahead, please.
MS. GLENN: Good evening. Everybody has all these written-out statements and after listening today, it became very apparent to me that nobody had done the economic impact study on real estate values and our tourism and recreation industry here.

I guess I do have a financial stake in this in that I live in Carrabassett Valley and I have since 1983. I also own property on Chase Pond, and as we all know, both of those areas are impacted by the proposed wind project.

I guess I was kind of stunned to see that there were no economic impact studies, especially ones that were of a comparable nature of the area other than the one on the Cape, which I don't think we're seeing much credit I guess.

So the other thing that was brought to my attention
today is one of the presentations had 15 ways to conserve and protect our environment from global warming, and I didn't see solar energy or any other alternative energy sources on that list.

The conservation is great, we all need to do that, everybody needs to think about how they do it every day, but there are other alternatives to wind power that aren't being mentioned here.

I think Rebecca had asked the question with regard to the impact on our tourism and the economy in the area, and I was around when they built the biomass plant, and we did see a surge in jobs and a surge in the economy here, which was good for everybody. Like this project, jobs will drop off and we weren't -- I don't think there will be a great economic benefit from the ongoing jobs here.

The reason people come to Maine, buy property in Maine and help Maine day in and day out, they want to come to this area, is because they want to get away from it all. They want to come to vacationland. They want to get out of the cities, they want to get away from industrialization.

My only personal economic impact is there was an industrial project in the Eustis area that never came to fruition because I think people backed out of the contracts as soon as they got word that it was within several miles of where they were buying property.

With regard to the global warming, I think that protecting our mountains as LURC has decided to do in the past is very important. We saw all the studies on recreation this afternoon, and I believe that that's all a more important reason that we should preserve our mountainous areas and our remote areas. People are flocking north here to access those areas. Both motorized and non motorized sports will take advantage of those areas, but they're harder to find and that is increasing property values here. I'm afraid that industrialization of our peaks will decrease property values dramatically. People aren't coming here to see industrialization.

There are tax incentives for solar power that are out there now. They still don't make it feasible for a lot of people to put in solar power. We would like to see that become more feasible for more people. There are a lot tax subsidies that you see for these large corporations for this wind project, and it will be used locally. We're not shipping it through large transmission lines and roads throughout our countryside.

So I do believe in buying locally and supporting local industry.

As far as the housing market goes and everything we can do, people can build smaller homes, heat smaller spaces, car pool. And a couple other things. One thing I don't know

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if the electrical industry has looked at the integrity of the line with stray voltage and lost voltage. I've dealt recently with that and CMP was very concerned about it, and I think we need to look at the integrity of the electrical system with regard to where the voltage is going or being lost as a way of conservation.

And the bats, I knew there was some studies on bats, and as you know, many people are scared about the impact on bats. They're concerned about viruses and other insect-borne diseases, West Nile virus. So we need to protect our bats and birds.

So I ask that you do not approve development over 2700 feet and that you protect our natural resources, which we trust you will do. Thank you.

THE CHAIR: Thank you, Wendy. Willy. After Willy is Duluth Wing.

MR. RITCH: Thank you very much for the opportunity to talk to you. My name is Willy Ritch, and I'm the president of the Back River Alliance in Wiscasset, where we're facing the prospect of a new coal-fired power -- it's really a coal power plant and a refinery kind of all rolled into one to produce up to 9000 barrels of oil, of diesel fuel, a day.

The developer and promoters tell us that we need new power, we need electricity, and they say that their technology, their clean coal technology, is the best that we can do.

I wanted to tell you what this clean coal would mean for my community. It would mean if everything runs properly that the plant would release 12 -- actually, 22 pounds of mercury into the air every year.

Just to put that in perspective, that's more than the combined mercury release of the incinerators in Biddeford Orrington and Minot all put together.

HotraChem, everybody remembers HotraChem. In the old days of the '90s, according to the Maine DEP, they were releasing 13 pounds of mercury every year into the water, and this plant would produce 22 pounds that would be released into the atmosphere.

The coal would come in coal barges. The developers say five of them a week. They're 400 feet long and they are pulled by 80 - or 100 -foot tugboats. I was talking to some lobstermen and scientists today, and they say if this coal plant is built, these coal barges come to town, they're out of business. There's no way that they could survive the damage to their gear.

Imagine the damage to the marine environment if there were an accident or a spill with one of these barges in the Pejepscot and Back rivers where people dig worms and dig clams and lobster and fish for striped bass.

And there's the water that this plant would use, 8 to 10 million gallons of fresh water a day. It would release

120,000 gallons back into the municipal system and it would be discharged in the Pejepscot River.

And I think perhaps most importantly and most relevant to what you all are talking about, it would pump 5.5 million tons of $\mathrm{CO}_{2}$ into the atmosphere every year. There's no one that really believes that that carbon dioxide would be captured and stored. The technology for the capture isn't there yet, and the geology here in Maine is never going to be there to store. So it would be a tremendous contributor to greenhouse gases.

Those are the effects that we would feel in Wiscasset in my community, in my area. But it doesn't end there. I mean, coal has got to come from somewhere.

THE CHAIR: Excuse me, normally I let people go on, you know, say basically what they're going to say, but I have to confess I'm a little lost as where you're taking us.

This isn't a hearing about Wiscasset coal plants. I need to -- I mean, you've got to save those arguments for the DEP. I don't want to be impolite about it. I need you to address the wind farm on Black Nubble, not the coal farm in Wiscasset.

Do you see what I'm saying? I guess I confess I'm a little lost at where you're taking me here -- where you're taking us.

MR. RITCH: Well, I guess my point is that we are all
facing these choices, and in my community we're facing some environmental risks that could be with us for the rest of our lives.

You guys are facing a choice, and I guess what I'm asking you to do is remember that every time you guys choose wind power, renewable power, and allow that to happen, it makes it much less likely that people in communities like mine will face something that could change the face of our communities for the rest of our lives.

Thank you very much.
THE CHAIR: Thank you. Duluth. And following Duluth is Carol Haas.

MR. WING: Good evening. My name is Duluth Wing. I'm from Eustis. I'm a retired forest ranger, and I, too, am against rezoning any of the mountains to accommodate the wind power.

Many that I know believe that the Redington wind power project was not approved because of its proximity to the Appalachian Trail. Assuming this is true, it should not have happened.

I feel that LURC should not be as concerned as they are by hikers from away who come occasionally to view our beautiful mountains and then return to their less beautiful habitat.

There are many other mountains in Maine other than
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the Appalachian Trail -- along the Appalachian Trail -- that need protection from development.

Instead, I feel LURC should be more concerned with the native Mainers who live here, who work here, who fight forest fires here in these western mountains.

I live on Bigelow Mountain for seven months in a fire tower, and many folks passing along the Appalachian Trail, like Bill Schaefer, Grandma Hayworth, and even my neighbor, all great people, but not from Maine.

They seem to have a great interest in the mountains that could be seen from the Appalachian Trail. This seems somewhat selfish to me.

People who live here and our LURC Commission and Natural Resource Council all know that there are many more great mountains that need protection from any form of development.

I guess that less than 1 percent of Maine people have Appalachian Trail affiliation, yet 2000 of our locals have signed a Western Mountain petition against development and many more are here tonight that have a fear that they might sometime see wind power on Black Nubble and maybe after that on many more mountains if the precedent here is set to allow it.

My final words here are four if's. No. 1, if the wind blew steadily so that oil and coal and gas plants didn't have to stand by idling all the time that the towers were
producing power; No. 2, if we needed electricity here in Maine; and No. 3, if we the people didn't have to pay taxes for the government to support the 1.9-percent subsidy paid to the wind power producers, then and only then should we consider a change in the zoning.

So now I urge the LURC Commission to stand fast and continue to protect our western mountains from development. Thank you for the opportunity to speak.

THE CHAIR: Thank you, Duluth. Folks, look, we don't need clapping. That doesn't enhance what Duluth had to say at all. It just wastes time. It's not the right thing to do.

I would appreciate it if you wouldn't do it. If you're happy with what they said, you can clap them on the back later on tonight, but it's not helping us tonight having all this applause. Thank you.

Carol, please.
MS. HAAS: My name is Carole Haas, I live in Cape
Elizabeth. I am submitting testimony in opposition to the Black Nubble project on behalf of the Maine Appalachian Trail Land Trust.

THE CHAIR: Excuse me, Carole, there's so many of these, aren't you an intervenor?

MS. HASS: No, that's my first paragraph. We are not an intervenor, we are an organization independent of the Appalachian Trail Conservancy and the Maine Appalachian Trail.

We are a land trust with a board of directors of Maine people.
But even though we are not intervenors, we do oppose the application to rezone Black Nubble Mountain to allow this wind power, though. We also aren't involved with the Appalachian Mountain Club.

The majority of the Appalachian Trail passes from state to state, from Georgia to Katahdin, through a series of national forests and state forests. The land ownership tradition of the Appalachian Trail runs in Maine has been different.

Much of the Appalachian Trail in Maine is surrounded by private land. Much of that land is under your jurisdiction in the unorganized territories. You have zoning laws that protect some of these lands from development, recognizing its quality as unique and special.

While Black Nubble Mountain is one of those protected places, and for better or worse, you are currently you are the sole protector of it.

Black Nubble lies within our land trust highest priority conservation protection area and the high peak areas of western Maine.

Defined by us as the land surrounded by the towns of Stratton, Rangeley, Phillips, and Kingfield, this largely undeveloped area is one of the three high mountain regions in Maine and is the only one without significant conservation

1 protection. natural values. development.

A series of high mountain ridges characterize the area, including eight of the 14 highest mountains in the state. In fact, this area has 40 percent more land above 2700 feet than Baxter State Park.

Our vision for this region is to retain its remote and unbroken character by permanently conserving 80,004 acres for forestry, recreation, and preservation of the unique

To date we have protected two important parcels totalling 2300 acres on Mount Abraham and Saddleback Mountain. The people of Maine already have an additional conservation interest in this region with their Bigelow Preserve, the Mount Abraham Ecological Preserve, and the protected plan of the Appalachian Trail corridor but much more needs to be permanently protected.

We have recently completed and published an ecological study of the high peaks region undertaken in large part out of concern that residential and commercial development is being proposed for this region with little understanding of the unique and irreplaceable natural qualities that would forever change and likely be lost if you can be persuaded to weaken and dismantle the regulations that were intended to protect those natural values.

Now, it's my understanding that one of the
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intervening organizations, the Appalachian Mountain Club, gave you copies of this report. If not, I have copies in my car.

You are familiar with the various species, some rare and endangered, currently residents on Black Nubble; but that would be directly and negatively affected by wind power

What I ask you to also consider is the larger ecological context Black Nubble is a part of. The mix of ecosystems, natural communities, and species in the mountainous region vary dramatically with small changes in elevation, provides a conservation opportunity as a whole that should not be sacrificed to development.

In the face of changing climatic patterns, large landscapes that derive connections between various habitat would be essential to the wildlife and plant life that would need to follow their habitat to new locations.

The country of Australia has embarked on a project to create a 1700-mile wildlife corridor with the purposes of allowing plants and animals to flee the effects of global warming. The Appalachian Mountains, Black Nubble, and the rest of Maine's high peaks region are part of the equivalent wildlife corridor on our own east coast.

Relatively small areas like the high peaks region that contain sufficient ecological diversity to allow species to adjust of changing climate are rare, and Maine should do all
it can to protect them.
Places to locate wind power developments are nowhere near as rare. Improvements in wind turbine design have made it possible to locate them in flat open areas, like farms, that may have lower wind speeds but are already developed and are close to existing roads, transmission lines, and emergency services.

You have several wind proposals before you. Many are also proposed for land out of your jurisdiction. The pressure to approve this project is political, meaning that it is being promoted for reasons other than those that relate directly to the project itself.

We urge you to be strong and abide by your own regulations. You should not allow development of this or any other project on Black Nubble. Thank you.

THE CHAIR: Thank you, Carole. Lloyd Cuttler, then followed by Gail Merrill.

Is Mr. Cuttler here?
MR. CUTTLER: Long day, huh?
THE CHAIR: Very.
MR. CUTTLER: It's going to get worse. Lloyd Cuttler, Carrabassett Valley, selectman, business person, concerned citizen, have lived here approximately 35 years and going.

You have a tough decision, and it's a decision that 340
nobody wants to hear. I sat here 14 months ago to listen to all the data.

I came in and out today and listened to it again, and to watch two grown men that are scientists debate whether an electron can sneak past Kingfield and make it all the way to Ohio is phenomenal. You can see they all have time and look interested.

I will tell you, however, that that whole process is important and I know you need that data. I'm going to ask you for a minute to bear with me and let's just assume at this point it's a 50/50 shot.

They're opposition, they shared their opinions; and the people that are in favor of building these windmills, they showed the economic benefit. That having been said, I'm going to ask you to look at that 50/50 and say, where do we go from here as a state and as a country.

We are in trouble. We cannot deny the fact that oil cannot fuel this country. We -- forget the environment. Let's not have a debate about global warming. I believe in it but let's not use it as an excuse.

Let's just look at the reality of the fact that these lights are on but it's not because of something that we're doing, it's something that is happening, it's something that we're killing, it's the oil, it's the coal, it's the environment we are ruining.

We need to do something. Wind power is not going to solve our problem but it's a start. We have to accept the fact that there is no solution today. Thirty, 40 years from now we will be out of oil. That's the only thing scientists agree on. We will be out of oil.

We are increasing our demand for oil at an amazing rate that we cannot sustain. Thus, I say to you, what is the solution? I don't think we know. I think we do know it's going to take a lot of different projects.

The environmental groups, that are so concerned with the environment, and they need to be, should be championing this. They should be saying to you, we need something. Maybe we should look at hydro again. Maybe solar. We need wind power.

This is what we need to be doing. Is it perfect, no. Is it going to hurt a little, yes. Sometimes good things have to hurt a little. Nobody will say that a windmill on top of a mountain is as pretty as no windmill; however, I am lucky enough to have travelled around the world and I see windmills everywhere, and I will tell you that when you ride a bicycle up to one and you realize what it is doing, it is a pretty powerful thought.

And I have had Maine guides say to me that I can't imagine sitting on top of a mountain looking at a windmill thinking nothing's being destroyed, we are creating the energy,

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and I'm going back to my car and know that it did do something.
All of us are part of this problem. We all have too many cars, too many computers. I am as guilty as everyone. All I'm asking everyone to do is maybe sacrifice a little.

It's not an easy thing to do think, it's not easy for you. We'll be seeing you again. Think of this as a 50/50 shot. You're going to have to make the tough decision. You're the parent that's going to have to say to the child, this is going to hurt a little but we need to get going and we need to fix the problem.

I will add one more point that I think is important. As you look at these projects -- windmills, solar, hydro electricity -- you need to -- one thing we did not build in is the fact that they need to be able to be decommissioned.

I know developers might not like that, but I think this will help satisfy a lot of people. As I move around the state and I see fire towers everywhere sitting on top of high mountains and the State has allowed to sit there. We cannot allow it to happen, if, if, wind power is replaced by some dramatic fusion process that we develop over the next 30, 40 years.

I believe it this country can do it, but I also
believe that if this country does not wake up and start to embrace these little fixes, it's going to be too late.

Thank you.

THE CHAIR: Thank you, Lloyd. Gail Merrill. Following Gail we have Jack McKee.

MS. MERRILL: My name is Gail Merrill. I am a resident of this area for 28 years, I'm a business owner, and a worker.

I previously expressed how precious these mountains are to all of who have chosen to live here and that they should be preserved for all to enjoy.

When Maine Resources Council produced 18 wind turbines on Black Nubble as an alternative plan, Maine Mountain Power said it was not a viable option and wouldn't work. It had to be all 30 or nothing. Now all of a sudden it is okay.

This proposal has lacked integrity from the very start and is now riddled with impropriety. It would be a very sad day for all of Maine to lose one of nature's treasures so that the large out-of-state corporations and a very few individuals could greatly profit. This proposal is about money, not saving the planet.

It is time we take serious strides for the conservation of energy, not greater production and consumption.

Please once again say no to this ill-fated, disastrous plan. Please, once and for all, preserve our mountains and quality of life we so value in Maine.

Thank you.
THE CHAIR: Thank you, Gail. Does anybody here 344
listen to what I say when I ask you to try to be -- I
appreciate your cooperation. I appreciate that some of you are very passionate about this, but as I tell you, clapping doesn't help how I view the testimony. I can tell you that.

Jack; and after Jack is Alison Hagerstrom.
MR. McKEE: Thank you Mr. Chairman, members of the Commission, Director Carroll, and others, I appreciate your hearing this today again. I was disappointed when we lost last time, but that's okay, we'll try it again. Thank you very much for your willingness to do that.

I am Jack McKee and a resident of Kingfield. I'm old, retired, don't work for nobody, don't earn any money doing that either. Let me get on here.

I want to read first. I'm going to try to summarize.
You have or will have copies of my testimony, so I'm not going to read the whole thing, but I'm going to read a couple of things.

This past year the legislature of the State of Maine passed the following resolution. Resolved, that we, the members of the 123 rd legislature, now assembled in the regular session on behalf of the people we represent take this opportunity to express our unequivocal support for wind power as a means of producing economical electricity, and we encourage the construction and operation of wind power generating facilities in the State of Maine. That is from the

1 State legislature.

Some oppose wind power for a variety of reasons. The main reasons seems to be one of environment. I want to take you to West Virginia. You're going to wonder why the heck is he going to West Virginia. Well, I'll tell you why we're going to West Virginia.

We're going to West Virginia because so much of our power is produced by coal-fired generating facilities. That's not a big secret. People in West Virginia -- we worry about our environment -- people in West Virginia are living in what I call an environmental hell. Here's what's going on down there.

Coal mining -- coal mining companies in
West Virginia -- and this is a strip mining company -- are
blasting up to 800 feet off the tops of their mountains to get the little bit of coal that is there.

Here's what's happening as a result. Seventy-five percent of West Virginia streams and rivers are polluted by mining and other industries. Three hundred thousand acres of hardwood forests in West Virginia have been destroyed by mountain removal mining. That can be translated into something like 500 square miles of forested mountains and valleys and the beat goes on.

The reason I'm bringing this up is because I'm a strong supporter of this particular project, I'm a supporter of wind power generally. My point is this: This is not a Maine
problem. We have this notion that the world starts and stops in Kittery and Ft. Kent. Well, that's not true. The

United States doesn't even stop there, for Heaven's sake.
The people in West Virginia have a terrible problem and we can help. We have a moral responsibility, in my judgment, a moral responsibility to help solve this problem and get rid of coal-powered generator facilities.

Here's a story that talks about global warming. You had a very good presentation this afternoon on global warming.
It's probably the best I've ever heard.
Here's something from our own Waterville Sentinal, but two men from Maine, Gordon Hamilton and Lee Stearns of the University of Maine's Climate Change Institute, researchers studying the arctic ice sheets report that the rate of thaw has been so great this summer that the arctic sea will be entirely ice free in a little more than 20 years, well ahead of projections.

That is a frightening thought. We've got to get rid of the oil, we've got to get rid of coal. We've got to do something different.

Let me close with just a personal observation. My eldest great grandchild -- great grandchild -- is 12 years old this year. If he's fortunate enough to live as long as I am thus far, when he turns the same age as I am right now, it will be 2077. There are six other great grandchildren along with
him.
I hope to Heavens this committee -- this Commission and the people of this state and of the United States are smart enough to understand that if they don't do something now, that kid is not going to enjoy the good life that I have enjoyed.

Part of the greatest generation you can call that, it may be true or not, I don't know, but I've certainly enjoyed my life. If we don't do something, he's not going to be able to enjoy the balance of his life, and I urge you, please, give this is thumb's up. Thank you very much.

THE CHAIR: Thank you, Jack. Alison. And following Alison is Fred Hardy.

MS. HAGERSTROM: Good evening. My name is Alison
Hagerstrom. I'm a resident of Farmington, and I'm the executive director for Greater Franklin Development. We're also located in Farmington. I'm here on behalf of the board of directors in support of this project.

For the past five years it's been my responsibility to create new jobs in the greater Franklin County area. It is the goal of Greater Franklin to be the first in economic development in the region undertaken to replace the more than 1000 jobs lost in the last decade from the traditional industries of agriculture and manufacturing of shoes and wood products.

Maine Mountain Power's scaled-back wind farm on

Black Nubble Mountain will still satisfy an economic need in the local area by providing the potential of five to ten new permanent jobs and 80 construction jobs over the course of one year in Franklin County.

It's estimated that the proposed wind farm on
Black Nubble will create an average of 80 construction jobs over the course of the year. The construction is expected to last one year with an annual payroll of nearly $\$ 5$ million.

The Black Nubble wind farm is also expected to generate five permanent jobs to ready the operation of the wind power facility. These jobs are expected to generate $\$ 250,000$ in payment and benefits. The jobs created by the Black Nubble wind farm would provide a weekly salary well above the average weekly wage for the region.

The latest data regarding wages from the fourth quarter of 2006 indicates that the average weekly wage in Franklin County is $\$ 581$.

The positions created at the Black Nubble wind farm project would pay 900 to $\$ 1000$ per week, well above the wages earned at local jobs in the Farmington labor market area, which as of July 2007 has an unemployment rate of 6.4 percent.

According to the Maine DOL, the construction sector has a total employment multiplier of 1.95 jobs; therefore, the indirect impact of Black Nubble wind farm creation of 80 construction jobs in all the industries is estimated at 76 more
jobs in the Maine economy. Therefore the total economic impact of this wind farm during the construction phase would create 156 new jobs in the local area.

Given that the Black Nubble wind farm will employ five operations personnel, the labor department uses an estimated multiplier of 1.5 , which is an average of all industries. It's calculated that the total employment impact would be 70 new jobs in the region. Therefore the presence of Black Nubble will result in an indirect creation of jobs in multiple industries, for example, suppliers, restaurants, gas stations, retail stores, and services.

The Black Nubble wind farm is an estimated $\$ 110$ million project representing a very significant private investment in Franklin County, as well as the state of Maine. Local benefits consist of lease payments to landowners and tax revenue in Maine Mountain Power's commitment to purchase from local suppliers and other Maine existing businesses in Franklin County.

Tourism is a leading industry sector in Franklin County. I'm not aware of any study or report indicating that wind farms adversely affect tourism. In fact, the review of literature indicates that wind farms and tourism are compatible.

A study performed in November 2003 examining the potential impact of a wind farm and turbines in Vermont found 350
that tourist regions whose primary attraction are nature based also rely on wind farms, along with lodging, restaurants, canoeing, fishing, hunting, wildlife viewing, horseback riding, and skiing, as well as many other activities.

Wind farms appear to increase tourism in certain rural destinations by attracting the curious for the turbines themselves. It has been noted that the business has increased in many areas and the wind farm attraction has inspired new business development.

The Black Nubble wind farm will facilitate tourism in the area by conducting visitor tours. It will help to promote recreation in a tourism-based economy. Wind projects are known to increase tourism in an area.

Natural resource industries have long been the backbone of the economy in the Franklin County area, although forest product companies are in a decline. It is important that we seek new opportunities in renewable natural resource-based industries.

The Black Nubble project will strengthen the economy in Franklin County and it can happen without undue adverse impact to others. A stronger economy benefits everyone.

The Black Nubble wind farm project offers Franklin County a clean industry using a renewable natural resource with excellent wages and benefits for people in this region. The skills required for these jobs can be filled from the available
labor force. This is an important opportunity for Franklin County to keep these people making a living in a place they love to work.

I strongly believe there's a great need for the Black Nubble wind farm because of the high paying sustainable jobs and secondary economic benefits in the Franklin County area, while helping to reduce air pollution and reduce reliance on fossil fuel.

On behalf of the board of directors of Greater
Franklin, we urge the Commission to approve this application. Thank you.

THE CHAIR: Thank you, Alison. Fred. After Fred is Tony Marple. What would Franklin County be like without Fred Hardy.

MR. HARDY: My name is Fred Hardy. I live in the town of New Sharon -- I lived in the town of New Sharon for 47 years. I retired, a retired dairy farmer. We still have a farm my son operates -- he uses the land, we don't have cows anymore.

That proves to you and everyone in here that I am an environmentalist. Even though I support this project, I can't see for the life of me the harm that it will do to the environment.

I'm also one of three county commissioners. I am testifying, however, tonight on my own behalf. The
commissioners all signed a letter, which I believe you received in support of this project.

I, like Jack, think we can't continue to put this off I don't think. We've heard here tonight that we're looking to run out of oil possibly inside of 30 years, and so consequently we can't wait 25 years before we do anything about an electricity source.

Jack's testimony was very pointed, I thought, on destroying mountains in other parts of the country, and I believe that Franklin County certainly -- I think Franklin County certainly has an abundance of wild lands, there's no question about that, and I understand that the views are great.

I just try to visualize -- and I ride this part of Franklin County fairly often throughout the year and appreciate its beauty. But I try to visualize what wind towers might do and I can't for the life of me see the harm that these wind towers can do.

I understand -- I understand the environmental aspects. The road issue -- the roads issue I think seems to be one of the big issues; however, I have a lot of respect for Dave Rocque from the department of agriculture.

I've worked around Dave for close to -- over many years being associated with Soil and Water Conservation District in Franklin County, which I'm one of the supervisors, and I have great respect for Dave's decisions on this.

I know he's been questioned to quite an extent on what they could do to make these roads right, and I only think that we have to make sure that we have to trust him on that and make sure they're built the way they've agreed to build them. That certainly stands out.

So I guess that's about what I've got to say. I can answer any questions if you care.

THE CHAIR: I think you're off the hook, Fred.
MR. HARDY: Thank you.
THE CHAIR: Thank you for coming.
Tony Marple, and followed by Don Nicolson.
MR. MARPLE: Thank you. My name is Tony Marple, I
live in Whitefield. I serve as the MaineCare director for the
last seven months, and before that I was the CFO of Maine General Health in Augusta and Waterville. I've been a lifelong hiker. These mountains are very important to me. I've also been an AMC member for 30 years, although I'm likely to be excommunicated after my remarks.

I've hiked all these mountains many times --
Saddleback, Bigelow, Abraham, Crocker -- many, many times.
This is my favorite area to hike in the state; however, I'm worried about it. I'm not worried about wind turbines, I'm worried about climate change.

I've watched what's happened to these mountains over many years. I'm a winter hiker. Winter hiking, my friends and

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I who winter hike wait and wait and wait for a time we can put snow shoes on. Two years ago there was no winter hiking.

I hiked Little Jackson and I needed crampons all the way up. This is a trend. The ice is out earlier, the snow is not as deep. In my opinion, we created this problem, every one of us in this room, and every one of us in this country have a responsibility to solve it. It's going to mean sacrifice.

As far as I'm concerned, these viewsheds are not perfect. When I hike the Bigelows, I'm looking at this complex, which is a much bigger and more imposing complex than this set of wind turbines will ever be.

My son is a hiker as well. The year after he graduated from high school, he hiked the entire length of the Appalachian Trail. In my view within his lifetime this entire ecosystem will be at risk.

The alpine environment, the subalpine environment, the northern hardwood forests environment, all of this will be at risk. That's not an alarmist's point of view; that is a mainstream point of view in terms of climate forecasting.

So I believe we have to act. I think it's everybody's responsibility. I respect the AMC's position but I strongly disagree with it.

So I think the Black Nubble project is one of many sacrifices we have to make. We all have to conserve.
Conservation is not going to be enough. We need to both
conserve and find alternatives to fossil fuels.
By the way, when you're up on those mountains, you look at the horizon, how many days -- those are the hikers in the room -- do we not see a brown haze on the horizon from coal-fired plants.

Secondly, I've hiked extensively in the Adirondacks. The lakes in the Adirondacks above a certain elevation -- I believe it's about 2000 feet -- are devoid of fish because of acid rain.

We have to deal with this problem and I think this is a good compromise project, and I would urge you to support it.

Thank you.
THE CHAIR: Thank you, Tony. Don Nicolson, is -okay. After Don is Gary McGrane.

MR. NICOLSON: I'm Don Nicolson, and I'm here as a resident of Farmington, Maine. I've lived there for the past 14 years. My house looks out on the most beautiful 24/7 mountains. Mt. Blue is 3000 feet and it never dulls the longer I live there.

Maine mountains and woods have been an irreplaceable heritage for centuries. Today I come to speak for all those persons who are here in the spirit of literally thousands of Mainers and hundreds of thousands more from around the world who say no to the destruction of the most pristine mountains and woods in the world.

Representative Thomas Saviello of Wilton, Maine impressed me when he told many of us that he obtained a Ph.D. in forestry. When he did his master's thesis, Black Nubble was his mountain to work on. Black Nubble -- what troubles him now was his memory of how fragile the soil was on Black Nubble.

How can we forgive ourselves if we commit the outright corrosive destruction of this beautiful mountain? How can we permit the first wind farm in the mountains and woods of Maine when three more projects are waiting in the wings for this approval to go through, and then we will automatically have four wind farms in the most pristine environment in the world.

Once we lose our centuries old heritage, it is gone for good. That means forever. If we approve this wind farm, years later the world will say it wasn't worth a candle.

People in Maine, people from around the world know all about Henry David Thoreau's tramping around our woods with Injun Joe. He put Maine on the world map. These pristine woods cannot be tampered with, otherwise they are no longer pristine.

We are cursed with Plum Creek, that elephant in the room, who does not know they are an elephant. I like the metaphor even better that Plum Creek is an invasive species.

Are these wind farm projects another form of an invasive species? Why don't they set up their wind farms in

Maine where placement really doesn't matter? We have lots of places in Maine with lots of wind, and sometimes we don't have wind in the mountains either.

I've hiked, like many of the people who spoke, I've hiked when I was able. I am no longer able my doctor says and that is sad. But I want my son and his family to hike all over Maine's mountains and woods just like Thoreau did and he did it for years with great pleasure.

Our generation has the responsibility to preserve this invaluable place in Maine. The part of Maine that is the end of the Appalachian Trail is the toughest part of the whole trail. Let us preserve that heritage forever. I could speak for hours about the glory of the Maine woods. Thank you.

THE CHAIR: Thank you. Gary, are you here somewhere?
Okay. And following Gary is David Maxwell.
MR. McGRANE: Good evening. I am Gary McGrane, and
I'm a resident of the town of Jackson. I am also a county commissioner, and I work hand in hand sometimes, maybe glove, with Fred Hardy doing that.

As a county commissioner, I hold near and dear to the fact that the environment is one of my concerns as county commissioner. Another concern of mine is the democratic process and I appreciate both.

Tonight I come to you and I speak in one tongue. I'm a Penobscot Native, and as a Penobscot Native I've looked at

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this project and other projects similar to this since 1992.
This project, I think at this point in time, meets with our commitment to the environment. The original project, the support, we did not lend our support at that time because we felt -- even though the Commission may have felt the application was complete -- we did not feel that way.

We feel at this time this application is complete and we wholeheartedly support the project.

I am presently working at the University of Maine through the Bureau of Labor Education. I have no vested interest in this other than the interest of my constituents.

Back in July of last year, knowing full well that projects such as this magnitude were going to be coming on the horizon again, we took the inordinate steps, if you will, to address the issue of endangered species and the environment.

By doing so we passed a resolution, and I'll be happy to leave a copy with you. We believe this project and some other projects that are coming up meet with our expectations and our hopes. We would hope that if this project is passed, it is followed through to the letter.

As a Native American, I have a long proud tradition for the rest of my life in natural resources. We have a responsibility to our children and the environment. Our environment is inextricably linked to the health of all species and the places they live, including our own.

We have a responsibility to ensure to protect our environment, and as a commissioner, we pledge to protect our environment.

We believe that this project meets our pledge to protect the flora and the fauna and our interaction with our environment. Thank you.

THE CHAIR: Thank you, Gary. David. Following David there's another David Bragdon will be the next speaker.

MR. MAXWELL: My name is David Maxwell, and I have no prepared remarks. I'm going to speak sort of off the cuff this evening.

I had prepared remarks last year that I presented a little earlier than this -- when was the hearing, in September?

THE CHAIR: It was in August of last year.
MR. MAXWELL: It was in August. I was opposed to this project at that time for reasons that I think I well enumerated. I have written my opposition in publications here in Maine, in newspapers, and I've spoken on Maine Public Radio giving sort of a rhetorical basis for the reasons that I oppose wind power development in the western mountains of Maine.

So I'm not going to spend time this evening dealing with those rhetorical objective facts. I want to speak more subjectively as a person who's been coming to this area since 1969 and property owner. I own two properties in this area, one is on Flagstaff Lake and another is on Eustis Ridge, and I
enjoy this area greatly. I tend to come here more frequently than in the past due to the fact that I'm sort of in quasi-retirement.

I was struck by one remark here in particular that referred to Thoreau. When I was a boy growing up in Illinois -- I don't know if those of you who are here ever visited that state, it's relatively flat with cornfields -there wasn't much sense of mountains that I was able to experience, but I did read Thoreau and I was struck by the literary images that he created of the mountains of Maine.

As it turned out, I later moved to Boston where I became a college professor and visited right away this area, and indeed I found that it was just as majestic, if not more so, than Thoreau had indicated in his writings.

That's what led me to come to this area, to invest in this area, to spend money in this area -- a lot of money -over many years, more than 30 -some years, because of the recreational facilities that this area provides and because of my pleasure in experiencing the beauty of these mountains.

Now, that is at risk, and I think it is
inappropriately at risk because the data has clearly not been martialed here to make a case for wind power development in a sense that it's going to solve the energy needs, either in
Maine, in the United States, or in the world.
But I said I would not get into the rhetorical debate
here concerning those issues.
I do want to make one other remark that pertains to an idea that seems to be quite prevalent, it's been voiced here by many of the speakers, and it concerns the view of the mountains.

Many people have referred to the Appalachian Trail as though it was the only view, but there are those of us who go into these woods, who travel around these mountains, who canoe on the rivers, who canoe on the lakes, and who see many, many views other than the ones that have been talked about here that are confined to the Appalachian Trail.

So in closing I would just like to say that in general -- and the specifics of the case -- I am opposed to wind power development in the western mountains of Maine.

Thank you.
THE CHAIR: Thank you, David. David Bragdon. And then after David is Bill Houston.

MR. BRAGDON: Good evening. My name is David Bragdon. I am the executive director of a new nonprofit organization in Maine called Energy Matters to Maine. I'm here this evening to testify in support of this project.

Our organization advocates for energy policies that lower energy costs, promote greater energy diversity, and reduce energy rates. We believe that a sound energy policy is essential to the State's economic vitality and seeks to provide
a voice to the thousands of Maine businesses and consumers who believe that the State's economic future depends upon farsighted policies that lower the price of electricity in Maine relative to other states.

Maine's economic development is clearly linked to the availability and cost of energy. Energy, supply, price, and use powerfully affect the creation of quality jobs, our prospects for long-term economic growth, the vitality of our communities, and our ability to protect the environment.

Maine's comparative energy circumstance is poor. Our average electricity costs are of the highest in the nation, and these historically high prices have cost Maine jobs. The Baldacci administration in 2003 described the cost of energy as "the common thread in recent mill closures in Maine."

The state has lost 30,000 manufacturing jobs in the last decade in significant part due to the energy supply and price disadvantage. Many high quality jobs were of main interest to the energy crisis.

In recent years the State has sought to strengthen economic growth by investing in research and development. But these targeted R and D intensive industries -- like biotechnology, information technology, precision manufacturing, and composites -- often are significant electricity consumers.

We can and we must diversify Maine's economic face, but we cannot escape the conclusion that electricity costs will
continue to play a major role in the locational and the investment decisions of many businesses in the new economy just as they have in Maine's traditional industries.

Your decision on this project occurs at a time when policy decisions occurring outside the state by ISO New England and the Federal Energy Regulatory Commission will increase the cost of electricity substantially, 25 percent above the current level over the next three years.

These increased costs will harm the ability of Maine companies to compete each of these firms outside regions. But your decision on this project can move Maine's energy policy in the right direction. Approval of this wind project will support efforts to lower energy costs, enhance energy security, and ensure energy diversity.

Opponents of Black Nubble argue that the project is not needed because Maine already generates more electricity than it consumes. The argument is faulty and neglects a key aspect of Maine's electricity market.

Maine has one price advantage compared to other New England states, and it is due to the bottleneck effect.
Existing limitations in electricity transmission restrict the amount of electricity that Maine can export to more power hungry southern New England states.

While some consider this bottleneck an obstacle and a reason not to build this wind project, we think that this

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bottleneck is an advantage that provides a modest, but significant, advantage for Maine consumers.

As long as the bottleneck exists, the Maine rate payers will enjoy a comparative price advantage. Additional generation, particularly wind generation which diversifies our supply and utilizes an emission-free renewable resource, makes good sense. Permitting this project to go forward is in the interest of Maine consumers and Maine's economy.

There are many additional reasons for supporting this project. The applicant and other testifiers have identified many of these. As you've already heard tonight, there are local economic development benefits both in the construction phase and the operation phase.

Compared to other forms of electricity generation, wind power has the added benefit of not incurring highly volatile operating costs. It is not subject to the price volatility of fossils fuels, particularly natural gas.

On a day in which today, which oil reached a new high of $\$ 84$ per barrel, and at a time when natural gas prices are particularly volatile due to the threat of hurricanes, this benefit from the project is clearly welcomed.

The price volatility poses a special threat to the State's economic interests because fuel costs are by far the largest single component of the total cost of natural gas electricity generation.

In conclusion let me just say that our organization, Energy Matters to Maine, strongly encourages you to approve this project. We're disappointed that the original project did not receive your endorsement.

We believe that the economic environmental benefits of the project clearly merit its approval. Now, more than ever, the state of Maine needs to support indigenous, cost effective, and environmentally sound energy investment.

Your vote of approval of this project will help promote the state's energy self sufficiency and support long-term economic growth in the state.

Thank you.
THE CHAIR: Lisa, how are you doing? Five minutes? Okay, folks, we need to take five minutes here to let the court reporter rest her hands.
(There was a break in the hearing at 8:09 p.m. and the hearing resumed at 8:22 p.m.)

THE CHAIR: We left off with David Bragdon. The next person is Bill Houston. The next person following Bill is Richard Jennings. If Bill is here, he may proceed.

MR. HOUSTON: Thank you. I first want to start out this evening thanking you guys for your public service. As a former planning board member in the Town of Kingfield, I recognize the significant service you're making in the State, especially in the times of Plum Creek and significant wind

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## power projects.

I certainly know you're not doing it for the money. I would like to thank Commissioner Wright especially for his years of service.

So from there, I'm Bill Houston, I live in the town of Kingfield. I am an environmentalist, I am a wilderness guide, and for these reasons I do support this project.

I totally agree with the posters as we walked in that we need to protect our mountains. I think the last time we met 14 months ago on the Redington project, I was the only one, a member of the public, who spoke in favor of this compromise agreement.

I certainly appreciate you listening to me and the developer. I guess you can blame me for getting you in this mess, but I really do appreciate you reopening the hearing and taking the testimony.

Clearly this is the right proposal, and the site is right. It will provide for permanent protection to Redington Mountain, it will provide clean and renewable energy for the state, and take significant steps to address global warming.

It will also provide what you're charged with is this real protection that our mountains, our children, and our birds deserve.

Clearly the landscape in the world has changed. Your job as commissioners in protecting our mountains is different
than it was 20 years ago. One of my other claims of fame, I guess -- although I've never heard myself and I'm certainly not credited -- is that I am a star of talk radio in Bangor.

Last winter I was asked by a number of environmental groups to do a press conference to speak to the concerns of global warming for the winter recreation industries in the state of Maine and to support the regional greenhouse gas initiatives.

In that press conference, in my 5-minute speech where I spoke a lot about how currently global warming is already threatening our industries, how I have friends who are being laid off because of the winters -- or the lack thereof -- how the businesses in this area are already being affected, I said, we all know that global warming is real and dangerous.

A friend of mine tells me that at least weekly now, whenever there's an occasion to, especially last winter, my friend George on talk radio uses my voice and says, plays the tape that says, We all know that global warming is real and dangerous, and then George says, and the temperature is 20 below. Very funny.

I guess that is the part of what bothers me a lot about the opposition to this project. When I said we all know, there was an article in our recent paper saying global warming hysteria.

I should have known that even though it's well
documented that the oil and coal industry has funded to the tune of hundreds of millions of dollars the few scientists in the world that try to present doubt of global warming, that there would be a few individuals cling to that hope, and I can only figure in their hope of taking no action.

Obviously what also bother me is the short-term and nearsightedness view of the world that when we say global warming is real and dangerous but it's 20 below here, that we can't look beyond Bangor, that we can't look beyond the state.

I think that is part of your charge that is now different. Protecting the mountains here in western Maine is also protecting the mountains throughout the world. We need to take steps. As environmentalists and citizens of the state, we need to take steps to protect our mountains.

What are we going to say to the environmentalist at the Great Barrier Reef where warm seas are killing coral at rapid rates? What are we going to say to our children as we visit Glacier National Park? Oh, yes, there used to be glaciers here.

So with that, I urge you to protect the mountains of Maine by approving this project. Thank you.

THE CHAIR: Thank you, Bill. Richard Jennings followed by Michael Bobish.

MR. JENNINGS: Thank you and good evening. I'm Richard Jennings. I grew up in Belfast, I live now in Fayette,
which no one has ever heard of but it's near Augusta. I've been there for quite a few years. I'm a life member of Sierra, I'm a member of AMC, Audubon.

I first saw Katahdin probably about 60 years ago, and I can assure you, I've seen it lately, it doesn't look the same now as it did back then.

I'm here to the support the planet and also our grandchildren, not just mine but all of ours. You've heard that already tonight.

I do apologize for this non technical thing that I'm going to say, but climate change -- or global warming -climate change is perhaps a little more accurate because of the reasons we just heard. It can be global warming and 20 below in Bangor, but climate change means the climate is changing. It isn't always getting warmer, but it's changing from where it used to be.

As a result of that we heard an excellent presentation earlier today about the effects of climate change and how we're losing habitats. It's like we're on an escalator and the warm habitats are going up, up, up, but the cold habitats are getting knocked and going away.

For centuries we have had climate change, but now for the past 2- or 300 years, however, we have ourselves accelerated it. We've dug ourselves a hole and we are left with no good choices. We have choices. The good ones are

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gone. We have to make less bad ones.
Conservation obviously is the No. 1 thing we all have
to do. As we heard earlier, it's not easy to get us to do
that. Driving our ATVs, me out with my power lawn mower. We all have to make changes.

As was said in a very excellent presentation, there is no silver bullet and wind power certainly is not the silver bullet, but it may in time be the silver bullet or something that would be more effective.

We, meaning you, you've got to make some hard decisions and face the very really sad reality that sacrifices are going to happen in Maine. It's as though the doctor comes in and tells the parent, well, your child will live if I cut off his leg, but it's not a very happy thing. But the planet needs to live, and we need to make the decision to let it do that.

We heard a whole lot this morning about visual impact. That obviously is important. I've hiked just a little tiny pieces of the AT and I certainly appreciate the idea of views, but I also appreciate what was said earlier by Dr. Wake that that view is going to change anyhow, and if we do something to ameliorate fossil fuel use, we may slow down that change.

I'm very concerned about what our grandchildren will see. There will be climate change, it will cause changes that
we may need to moderate that.
What our grandchildren see will change with the presence of wind turbines, I would like to think and hope that it will. If we want to keep it the way it is now, are we being selfish? If I want to go out there and not see wind turbines, am I being selfish to prevent that and thus destroy that view that my grandchildren might otherwise have seen?

It was said earlier today about people who go to Cape
Elizabeth, Ft. Williams, and they go there to see Portland
Headlight. That's a tourist attraction. A lighthouse is a tourist attraction.

But I wonder, when that lighthouse first went up, what did people think then? Did they like it? Did they not? I don't know. I wonder if 100 years from now wind turbines might be a tourist attraction. We heard tonight that they are.

Finally, we do have Friends of the Mountains that speak on their behalf, we have Audubon that speaks for the thrush; but who do we have that speak for the planet?

Thank you.
THE CHAIR: Thank you, Richard. Michael [sic] Bobish, please, followed by Bob Dunfey.

MR. BOBISH: I'm Bob Bobish, I'm a resident of Eustis, Maine. I actually became a resident last summer.

I was first introduced to the western mountains of Maine in 1990 and fell in love with them immediately.

I've heard a lot of people talk about their opinions, I've heard a lot of people talk about statistics that are perhaps very valid. I hope to keep this as short as possible.

I'd like to talk about values. I grew up for the most part and spent most of my life in south Florida, and I saw the instant gratification of land that was developed that was not supposed to be developed in the manner that it was.

Some people look at it as a positive change, and others look at it as destruction of what was there. South Florida used to be a tropical utopia; it's no longer that.

I've seen it happen in other states. I've been on the down east coast. I was attracted to this area because Maine's western mountains are one of a kind. There's nothing on the east coast from Florida to Canada that match what the western mountains offer.

I'm very much -- I'm very much -- my values are very much in line with those that LURC wrote into their conservation guidelines 32 years ago, not to develop above a certain elevation, to protect our environment, to protect our wildlife, and that's what I stand for. That's what my values are. That's what brought me to Maine, that's what will keep me here.

If those guidelines were good 32 years ago, I would think and hope that they would stand to be just as strong and valuable today.

I believe that the six employees of LURC that will
vote on this project -- by the way, I'm very much against this project if I didn't say that earlier on -- I believe the six people who will vote for or against this project are perhaps six of the most important people that are employed by the State of Maine, and I hope that you can go by those guidelines that were written 32 years ago and protect this region and not let anything change the pristine beauty of what we have here and what we have to offer.

Instant gratification is not the answer, and I know that we're in trouble as a nation, we're in trouble with energy as it's been said here by many people. I think anyone that's in this room today and people who come in the next few days will say the same thing; but I don't think the answer is in the form of instant gratification.

There's answers out there, I don't know what they are, I'll be honest with you. But I like Maine the way it is and I hope that you do, too, and you keep it there to protect it.

Thank you for your time.
THE CHAIR: Thank you, Michael. Just for the record, we six are not employees. We're volunteers.

MR. BOBISH: I got the point. Thank you.
THE CHAIR: Following Bob is, I believe it's Claudia King. Go ahead, please, Bob.

MR. DUNFEY: Good evening. I am Bob Dunfey, a 374
resident of York, Maine and an abutter to and great frequent user of the 30,000 acres of beautiful conservation land, the five undeveloped lakes in Maine, and tallest peaks along the southern coast assembled by the York Land Trust and nine other environmental groups. I'm a member of the Mt. Agamenticus to the Sea Conservation Initiative. My credentials, beyond my career in hotels, real estate development, government and politics, which many know me by. I'm a trail runner, ultra marathoner, and I'm a trail maintenance volunteer as well as an outdoors person. I cover many miles of trails a week, 50 miles, plus the training. I compete in trail and road races around the country and events as much as 100 miles. I also enjoy the slower pace of hiking, backpacking, skiing, and snowboarding.

I am member of the board of directors of Earth Share of New England, which conducts workplace giving campaigns for the benefit of 400 environmental charities, including famous names like Conservation Law Foundation, Appalachian Mountain Club, Sierra Club, and the National Audubon Society. The testimony today represents my personal viewpoints.

Perhaps a prerequisite credential for this hearing, I've done the AT from Saddleback to Sugarloaf and enjoyed the many vistas from that section of the trail. Also, I have no financial interest in this project.

I have supported the Redington, now Black Nubble,
wind farm project as it was first proposed, as well as the current version. I appreciate and respect concerns of the opponents and ideally wish we could avoid many of the negative consequences which may occur when the wind farm is built or operating.

I love the outdoors, and I wish we could more easily achieve the goals of greater dependence on green power while minimizing the adverse impact on our environment.

Unfortunately it's not easy to reach these conflicting goals, and we seek that middle ground and create a compromise that we can accept. It is my opinion that this unusual situation with environmental groups opposing each other on the merits of this project is a result of general complacency of most citizens and elected leaders in this state and the country regarding our dependence on foreign sources of oil and the general lack of a loss regarding global warming.

This complacency is apparent within certain environmental groups when they place commendable goals above the dependence on imported oil and globe warming. This country today has relied on the assumption that we always have adequate supplies of fossil fuels. Our lifestyles reflect that assumption.

In 2007, 34 years after the oil embargo gas lines, gas guzzling SUVs and mini vans are common in many family driveways. Those of us who around 1973 personally got the 376
message that reliance on imported sources of oil can be risky, when we had to wait in long gas lines during the oil embargo against western nations.

Back then this country consumed 1.2 billion barrels of oil and imported only 20 percent. Now we consume three times as much, 3.6 billion barrels of oil, and import over 60 percent. Obviously this is a reflection of our complacency, priorities, and lack of real action.

You are familiar with the Honda Accord, a very popular car now built in the United States. It was introduced in 1976 as an economy car with memories of gas lines still fresh. The car got 46 miles per gallon, it weighed only 2000 pounds.

Over the years Honda revised the car to suit American buyers' tastes and to maximize its sales of Accords. This fall that same car is now rated as a large car, as opposed to an economy car, and gets only half as many miles per gallon, weighs over 1200 pounds more, and is almost 3 feet longer.

There are many more examples as Honda has proved, that we are not truly serious about reducing our dependence on imported oil and reducing the consumption of fossil fuels.

Alternative green sources of energy has not been seriously pursued by this state or this country. It is mostly talk and very little action. There are some progressive countries, for example, Denmark, which generates more than 20
percent of its power from wind. We have grown secure with the assumption that there will always be abundant oil to heat our homes and gas to operate our vehicles over the years.

We have lost over 3700 young American lives in the Iraq war to protect our interests in Middle East oil so that we can continue to enjoy our relatively luxurious lifestyle compared to that of most of our global neighbors. These deaths could have been avoided. How many more young Americans should die? How many more wars will we enter to protect our secluded interests?

We have choices: Continue status quo, reduce our dependence on imported oil and our fossil fuels which will accelerate global warming. Choosing a new course for energy independence is not easy. It means change. We naturally resist change.

In the case of wind power, we must locate turbines where the wind speed is adequate and transmission lines are nearby. Most of the times it's going to be a rural location, which are typically a beautiful setting, and perhaps have some other environmental issues.

The wind turbine structures erected on these sites will alter the beauty of that whole vista and hopefully cause minimal negative impacts to the environment. We must accept these compromises at many locations throughout this state with very few exceptions.

The State policy should reflect the bias to encourage the development of wind power. Maine should lead the nation in the generation of wind power.

I encourage each member of the Commission and staff to support the proposed Black Nubble wind farm project and facilitate and encourage other developers of wind power to build projects throughout the state.

Thank you.
THE CHAIR: Thank you, Bob. Claudia. And she's followed by Christina [sic] McNeil.

MS. KING: My name is Claudia King, and I live in Falmouth, Maine, and I'm here this evening with my husband and two teenage sons.

We're very concerned about climate change, and I'm here to urge you to support this wind project. We all have to do what we can to address the affects of climate change. The problem is global, hence, it is local, too.

In 1999, wanting to support alternative energy, my husband and I put some money into this project. Since then, we've done other things to address climate change locally. We've changed light bulbs, we've gotten an efficient car, I and others have convinced the Town of Falmouth to sign the Mayors' Climate Protection Agreement, reducing greenhouse gases, and we bought energy, among other things.

We are told that as a civilization we need to
decrease greenhouse gases by 85 percent by 2050 to avert rapid changes in the world -- that's Maine, too -- and in civilization as we know it today. It's 2007, that's a daunting task.

Cleaning up our energy supply is extremely important. As you probably know, about 60 percent of Maine's energy comes from coal-fired plants, a pretty filthy source.

We support this modified project because it is a good compromise of reasonable property. It will provide a significant source of clean power, it will disrupt a small number of acres, producing less environmental and visual impact than the logging that has been done locally over the last three decades. It will bring jobs, reduce taxes, and will encourage wind development in Maine, and most Mainers support wind development in Maine.

So for our family and all of yours, I hope that you will allow this project to go through. It will just be a small beginning to the large task that we have before us.

Thank you.
THE CHAIR: Thank you, Claudia. Christina [sic], is she here?

MR. McNEIL: Yes.
THE CHAIR: Did I read this name wrong?
MR. McNEIL: Yes.
THE CHAIR: Oh, I'm sorry. It's Christian, right?
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MR. McNEIL: It is Christian. My name Christian McNeil. I live at 64 Winter Street in Portland, Maine. I'm also an employee of GrowSmart Maine, a nonprofit nonpartisan group; however, these words I'm going to express are not necessarily those of my employer.

I should also mention that for three years between 2003 and the fall of last year, 2006, I worked for the Appalachian Mountain Club in New Hampshire.

So I would like to sort of take that as a jumping off point in my capacity as hike crew and caretaker, sort of naturalist, sort of helping guests interpret the alpine environment, and over the course of three years I've witnessed, you know, over the seasons and also over the three years I've witnessed considerable changes to the alpine environment.

First I would like to pass this around. This is a cube of solid graphite. It's 1 pound of graphite. This is the amount of carbon dioxide -- it represents the amount of weight of 1 pound of carbon dioxide, which is approximately the amount of carbon dioxide that every time we drive 1 mile in an automobile or every time we consume 1 kilowatt hour of electricity.

So this is kind of a good way for us to visualize -obviously carbon is invisible -- this is the weight, it's tangible, it's certainly hefty. We have to visualize the impacts of our electricity use, so I'm going to pass it around.

So according to the presentation we heard at the beginning of the evening, this project would save us from 400,000 of those going up into the atmosphere every day. Try to wrap your mind around that. That's just the greenhouse gas emissions.

This project would also offset electricity produced from natural gas and coal-powered plants. Those fossil fuel plants also produce other pollutants, things like sulfur dioxide, which causes acid rain, mercury, which is a highly toxic poison. That's the reason we can't -- pregnant women can't eat fish these days because of mercury. And because mountain weather sort of squeezes out and condenses these pollutants from upwind, mountain alpine zones are extremely susceptible because they receive higher doses of these pollutants than other places.

So the fact is, a lot of people have talked about preserving mountaintops, and as LURC, you have to protect mountaintops and it's an important natural resource. But the fact is, if you fail to approve this project, then all the Maine mountaintops -- not just one -- but all of the mountaintops are going to be put into tremendous jeopardy.

Our mountaintops are going to be subjected to 400,000 of those a day in greenhouse gas pollution alone, not to mention hundreds of pounds of mercury pollution. Mercury is killing Bicknell's thrush, for example, in alpine zones, as

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well as trap streams, creating havoc in fishing streams. Acid rain, it's killing off spruce trees and other sensitive alpine areas. This is happening all over the state of Maine in all of our alpine zones, not just Black Nubble, but everywhere, okay.

So that's a tremendous effect I want you keep in mind.

Secondly, I'd like to talk about climate change specifically. As I noted before, for three years I was with the Appalachian Mountain Club. I was able to notice visibly growth, new growth, of lower altitude spruce trees and birches basically moving up the mountain, just in three years I was there.

Okay, so you can say arguably, say, well maybe that was a just a flip, but the Appalachian Mountain Club's own research, extensive research, which I know they probably they have probably brought to you folks for this issue, but their own research shows that this is happening. Our alpine zones are shrinking because of greenhouse gases and climate change.

I can't -- it seems just so narrow -- such a narrow focus to say that we have to preserve this one mountain, the small footprint on this one mountain, which isn't even a pristine mountain. It's the site of extensive logging in the past.

It's already got logging roads on it. It's not pristine. This is not going to be some paradise lost, all
right. It's been a working forest for decades now. By approving this project, we can avoid disasters affected by the change on our alpine zones.

Finally, I just want to say that this -- these wind turbines will not preclude nature tourism in the area, in fact, just the opposite. I mean, we have a huge visual impact right behind me at Sugarloaf USA. Does that, you know, preclude nature tourism in this area? Sugarloaf is a huge driver of the tourism development in this valley. It's still a huge visual impact and it's a huge environmental impact on local watersheds and the local sewer system and so forth, but still, it's a huge development and huge attraction for tourists.

Similarly, ecotourism development, I mean, you can't build an ecotourism resort without featuring a small scaled wind turbine in your brochure. It goes hand in hand. People have an obvious association with wind turbines and sustainable development, and this would promote activities for Carrabassett Valley.

As far as hikers go, I think the hiker comes to the mountaintop and sees some wind turbines off in the distance and can't think of all of the pollution that's being prevented and can't think of how much clearer his view is, how much further he can see out into the horizon because of those wind turbines creating clean energy and can't think of all the effective climate change, and can't think of all of the 20th century 384
legacy of fossil fuel combustion, and instead only sees an eyesore or some imagined paradise lost. If that's the case, then environmentalism is in a pretty sad state of affairs, and what hope do we have for the future of the environmental epic or for the world at large.

So that's all I have to say. Thank you very much for listening. I hope you'll make the right decision for all of Maine's mountaintops.

THE CHAIR: Thank you, Christian. Basil Powers. Is he still there?

MS. CARROLL: No. I ran into Basil in the parking lot, and he said he was tired and had to go home but he would be here tomorrow and sign up to testify.

THE CHAIR: Okay, I didn't figure we'd get away without hearing from Basil.

Dudley Greeley, then.
MR. GREELEY: Good evening. My name is Dudley
Greeley. I am an adjunct professor at the University of Southern Maine. I'm currently teaching two courses in the business school on Triple Bottom Line Marketing, co-teaching those courses.

I'm here to speak specifically on the topic of whether or not this project fits -- I believe I'm paraphrasing some of the criteria that you're asked to consider -- will this project fit harmoniously with the landscape.

You've heard more than an earful about the ecological landscape. You've heard quite a bit about the economic landscape. I'm going to talk particularly about the social, the human landscape here.

That landscape is changing, as are the ecological and economic ones in this area. Part of the landscape that you're perhaps not aware of is that all the presidents of the universities of the University of Maine System recently signed the Association for the Advancement of Sustainability in Higher Education President's Climate Commitment, pledging their institutions to create institutional structures to determine how these institutions in Maine can become climate neutral and operate without burning fossil fuels and set a date for doing so. The now chancellor signed this document also.

These presidents are part of what most important landscape elements in Maine -- that's the human landscape -and they need your help. Without economically viable, financially affordable clean power choices, these presidents will fail. Their students have asked them to power their campuses using cleaner power. Many of them are already doing this to a small degree. The University of Southern Maine is doing this. This needs to happen. They need your help, they need your help desperately.

The chancellor of the institution of the University of Maine System has it now as the No. 3, kind of, what do you 386
call it, action item. He wants to position the University of Maine System as a university system of choice for those not only in the New England region but across the country to select this institution because of its concern for not just economic and social issues, but ecological issues. He wants the University of Maine System to be seen as an institution of choice by people all over the country for those who care about not just finances, not just their neighbors, but also the planet that supports the whole system.

Without your support, as I said, the universities will fail. Perhaps the most important landscape element that I see here are those people that live not just immediately in the area but those people in Wiscasset who without small partial solutions to the problems that the western mountains face, and they do need your protection. They do need your protection dramatically in many dimensions.

Without small projects like this -- and this is not a huge dramatic project -- if it is successful for 25 or 40 years and we figure out a better way to power our needs, those turbines can be removed. And the viewshed, that one small element of this landscape, this very important landscape, will be returned. It will be returned better than it would have been without this project.

My daughter, who's now at college, would be here tonight if she could be, and she has hiked most of the

Appalachian Trail in Maine. I have hiked these mountains for 40 years, even more, and I implore you, please protect the mountains. Meet the -- pay attention and meet the criteria to make sure that this project fits in harmoniously with the landscape, but remember that the landscape is very different than it was 25 or 50 years, and the landscape includes ecological, financial, and most importantly, human elements in very, very well thought out elements of that human landscape.

The presidents of the University of Maine System institutions, all of them, need your help to make sure that we can power our institutions with clean power. We may -- we may have enough power in Maine to export it, but we do not have enough wind power. Currently, I am forced, through largely economic reasons, to buy clean power to power my home in Cumberland because the options in Maine are very expensive.

My university cannot buy clean power in Maine because it's simply too expensive. The taxpayers would be up in arms.

We need every small project of this sort that we can possibly get going, and we need them as quickly as possible.

Thank you very much.
THE CHAIR: Thank you. All right. Jan Collins, is she here? Waiting patiently.

MS. COLLINS: I think you are the ones who are waiting patiently and I appreciate it. I know you're a volunteer board and I know this is a very long process and you
have a lot on your plate here. Thank you very much for being here.

My name is Jan Collins. I am a resident of Maine, and I have been a resident of Maine all my life, approaching 50 years, and most of that time I have been a resident of Franklin County.

I grew up here hiking in these mountains and appreciate them deeply. In fact, I believe the mountains are probably my heart song, which, as members of LURC I believe is probably part of your heart song, too, because you wouldn't go through this long interminable process if you didn't really care deeply about the undeveloped lands of Maine and I do appreciate that.

As a hiker and also as a scientist, I have often wondered what it is that attracts people to mountains and to the ocean. I have thought that perhaps my reason was because I have lived here so long and because of my ancestry brings me back thousands of years in Maine.

A few years back I read a passage from a book called A Naturalist's Year, in which the author tries to describe some of the ways that birds migrate. He talked about using the stars and the sun and the gravitational pull of the earth, but the one thing that struck me about what he said was that birds also navigate by large geologic features: The ocean and the mountains. They do that because they can hear low frequency
sounds that are emitted by the oceans and the mountains.
I was shocked because it got one line. Where did that come from? Is it possible that we, too, not hear but feel those low frequency vibrations and that in fact the mountains sing to us in a way that we feel but don't hear? Could that account for the attraction that we feel to the mountains and the spiritual nature of mountains that Native Americans have always felt as sacred places and that cultures around the world view the same thing, whether you're in Staten Island or you're in the mountains of Maine. Mountains are considered sacred.

I understand that your process here is to make sure that the mountains are protected. I believe that the foresight that went into this legislation that created a protected zone was as far reaching as Governor Baxter's when he protected Baxter State Park.

His is a permanent legacy. I'm hoping that yours is, too. When I stood on Tumbledown Mountain as a teenager and looked over the landscape, the mountain peaks were endless in all directions, and I imagine that I saw what my ancestors saw hundreds of years ago before Europeans came here because I could not at that time see any development from those peaks.

It is a gift that I would like to give to my children and grandchildren, this sense of wilderness, of an undisturbed landscape.

Over the past summer I visited with my family
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relatives in Prince Edward Island. A recent wind power development there was very apparent. The towers that I saw were the same size towers as you will see should this mountain be developed. They were 400 feet tall, twice the size of the tallest building in Maine. Twice the size of the tallest building in Maine. I want to repeat that. That's what we're proposing on this mountaintop.

When I talked to our relatives there on Prince Edward Island, they told us that it took 17 tractor trailer trucks to bring in the parts to the crane that had to be built on site to lift the parts to this wind turbine, that one track for the crane weighed 35 tons.

It is hard to imagine that a fragile pristine environment on a mountaintop can sustain that kind of an impact.

Another thing that has struck me in reading about this project is the developers say they will only, only, disturb 230 acres of land. The farm that I live on is 100 acres.

When I walk the boundary line from my property, it's a half a mile in four directions, it's a 2-mile walk around the property. Two hundred thirty-three acres, if you don't know what an acre is, doesn't seem all that big, but it's more than a mile square.

A mile on the top of a mountaintop is huge. Most
mountaintops that I've been on, including those that are protected by the AMC, have signs up asking people to stay on the trail so that they will not kill the fragile alpine environment.

What we're saying is, we're going to completely remove the top of this mountain. Can we really say that that's not going to have an impact on the environment?

I had an opportunity to view the film that was put out recently by the Mars Hill residents, and in it a woman became very emotional when she spoke of the blasting that occurred on Mars Hill because she had grown up there and her heart song was attached to that mountain, and it felt like a part of her was being destroyed. I feel that way, too.

Some other things that I learned in Prince Edward Island was, one, that the wind towers had not attracted any more tourist visitors. In fact, tourism went down on Prince Edward Island, probably not because of the wind towers, but because that's the trend.

I also found that it did not in fact increase -bring in jobs. Yes, it did increase the number of jobs during the construction phase, however, most of the jobs that were long term had to go to people who were trained and experienced with wind power, and therefore they went to people that belonged to the company who actually provided the towers, not to local people.

I also wanted to note that many of the other comments made by supporters are either selective or greatly exaggerated. The development of this project will not in fact bring down the cost of electricity in Maine. As you know, maybe the audience does, too, those are set by NEPOOL and in fact there's a suit by the State right now asking that those criteria used to set those prices be changed because Maine is unfairly penalized. We are being asked to support southern New England states, and our rates are inflated as a result.

In addition, you're being asked to carry a very heavy burden. From what I have heard from people supporting this project, if we don't build these turbines, our troops will be stuck in Iraq, that -- the universities will fail, et cetera. Oh, and the mountaintops in West Virginia will continue to be destroyed.

I don't believe that building this will save any mountaintops in West Virginia. I am saddened by the thought, but I believe it is true that if we continue to every day increase our consumption of fossil fuel and energy, that building wind towers will just allow us to continue to increase our consumption of energy.

The only way to save those mountaintops in West Virginia, the only way to save the mountaintops in Maine -- and I believe the mountaintops in Maine are just as important as those in West Virginia and I am shocked that
people believe we should destroy ours here in hopes of saving there.

Unfortunately, this project has no quid pro quo. No mountain in West Virginia will be saved, the university will not in fact be saved, and the troops in Iraq will not come home if we build this.

The reality is, we will destroy a mountaintop in Maine. Mountaintops in West Virginia will continue to be destroyed. The troops in Iraq are there for political processes that are beyond our control. The university can save energy. Theo Kalikow at the University of Maine at Farmington has done an incredible job building their most recent building on campus. They're using geothermal energy, pumping cool air up in the summertime from underground, and that already warmer air is heated in the wintertime, saving them probably -- you would have to ask them -- but up to 50 percent of their energy.

The only way we are going to save mountaintops in Maine, the only way we're going to save mountaintops in West Virginia, the only way we're going to address the energy crisis in the United States is to start taking personal responsibility.

I drive a hybrid car, I hang my clothes out on the line. Every light bulb in my house is a compact fluorescent. I care about global warming. When we all do, we will save mountaintops everywhere and we will also address the energy

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crisis. Thank you.
THE CHAIR: Thank you, Jan. Irv Faunce.
PARTICIPANT: He had to go home.
THE CHAIR: Okay, thank you. Suzanne Sayer, is she here?

MS. SAYER: I'm here but I'm not speaking tonight.
THE CHAIR: Oh, you're not. Okay. Susan Stowell, did she go home?

MS. STOWELL: No, she hasn't.
THE CHAIR: I'm sorry. I didn't see you.
MS. STOWELL: I'm Susan Stowell, and I'm a resident of Wells, Maine and also up here at Sugarloaf. Thank you very much. You folks have a thankless job, particularly on this. I don't envy you but I appreciate what you're doing. First of all, staying awake tonight. I won't be long.

I do not think this is the right thing to do for this place at this time. I'm going to speak in reference to using common sense and economic sense. I don't disagree with needing to conserve but I question the way we might be attempting it.

I think that destroying, changing a mountaintop to put up something that's only 25 to 30 percent efficient doesn't seem to make sense. I can't believe there's a person in this room that would start a business that's only going to have 25 to 30 percent efficiency, and that's what I have read and heard stated. I could stand very well corrected on that.

I think that from what I've read also that there might be -- the cost of electricity could go up because of using this power. It's expensive to generate.

I am quoting some things from the Wall Street Journal on July 9th of this year, and to give you a variety of the costs, now, this is from the International Energy Agency in Paris, they state that wind farms cost between .04 and .14 cents to generate a kilowatt hour. That's a big range there.
I think we're at the high end. Just for comparison, a
coal-fired plant costs between 2.5 cents and .06 cents just so you'll have some information.

One thing to think about for the wind power is the incentives from the government as far as taxes go. I'm going to read this, a few sentences. The lack of a stable long-term regulatory environment has created a wind power roller coaster. Developers were never sure their projects would make economic sense if, a few years down the road, if the regulatory climate changed.

So we could get these windmills up, wind turbines up, and things could change for the tax incentives. Where would the owner be? Where would we be? That is something to think about.

Another thing that's already been brought up is the shortage of wind turbine components. There are about 8,000 parts, I gather, and they're hard to come by. If this group

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that proposes this hasn't ordered their parts, they are going to be many, many years down the road in order to get their parts. Again, there's an article. If you take this at face value, I don't have knowledge to disagree with it or to agree with it, I'm just stating it.

So it's something to think about and maybe ask the company if they put in their order or have they aligned themselves with somebody in Spain where they get their parts. Otherwise they may have a long wait.

I also am concerned about what it might do to tourism. I was on the tourism commission and I know the impact of tourism. We can't deny in Maine, some people may not like it, it's a fact of life, it brings in more money than anything else.

We in this part of the state of Maine cannot afford to lose tourism. Just drive through on your way out up through Jay, Livermore, Wilton you see all the empty storefronts. We cannot have anything that is going to deter our tourism.

A lot of people who have spoken for this project are from the southern part of the state where there are a lot of jobs. We don't have that opportunity to turn away potential income. Yes, it may offer five permanent jobs but at what cost of what we're going to do to the area.

I think people think that we're so lucky to live where we are close to nature and away from civilization. I do
agree with a lot of the earlier statements that it has changed a lot. In the almost 30 years I've been here I still see woods everywhere and I want to continue that.

Just two corrections. One gentleman spoke about the ice going out earlier than usual. It has not on West Lake.
It's been the same thing since the 1800s. It doesn't vary within two weeks. So rest your mind at least for that one lake at the moment.

And Bicknell's thrush is alive and well in Wells. I haven't seen them, but I've heard them flying around when I've been out on bird walks, so that's a good sign for us at this point.

I suggest you consider all the options. You have no choice, but I wish you would consider voting against wind power. I don't think it's going to do what it's tooted out to be.

THE CHAIR: Thank you. Thank you, Sue. Maxine Collins.

MS. COLLINS: I hope to make this short and I do appreciate your waiting so long.

My concern is something we haven't heard about, and that is what's going to happen 30,40 years down the road when these turbines are no longer working? Are you going to make sure that they're going to be dismantled, and if so, how are you going to put the mountaintop back on them?

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They're really going to destroy a lot of land. On top of that, the roads are still going to be there. If the roads are there, if it isn't the wind turbines there, it will be subdivisions because they can get there.

So you, know you, you can have mountaintop or you can have the wind power, and I think as far as everybody worrying about the carbon dioxide, well, a few less miles being driven down the road with everybody's car would save a lot more than these wind turbines are going to. Thank you.

THE CHAIR: Thank you, Maxine.
MS. COLLINS: You're welcome.
THE CHAIR: Phil Coffin, is he still here?
MR. COFFIN: I'm still here. I think I'm last,
right?
THE CHAIR: You are last unless somebody pops up and decides that they want to speak.

THE COFFIN: My name is Phil Coffin, I'm a resident of Carrabassett Valley. I have been visiting this area since the 1960s and I've been living here since 2000 with my wife and three daughters.

We are hikers, I'm an AMC member, I'm an active Nordic alpine skier, a hunter, a fisher. I truly enjoy the surrounding woods, the environment, and I'm here to speak strongly in favor of this wind power project.

I do so for a lot of the reasons already articulated
probably much better than I can do tonight by others. I'm not going to go into any great detail.

I think this is a good project, particularly as it has been formulated. I think it serves the economic needs of this region, which are in fact very important, and it provides a method for developing energy that is cleaner than other methods of energy production that are currently available in this state.

In an ideal world we wouldn't have the need for wind turbines in the western mountains of Maine, but this is not an ideal world. We're living in a global economy. In fact today's New York Times had an opinion of a columnist, Tom Friedman, talked about having recently visited Qatar and China and having been back to those regions to visit the area and noticing the amount of economic development that's gone on there, but also the amount of energy that they are consuming in vast quantities.

We need today take small steps to reduce our dependence on carbon producing fuels. This is one step in the right direction. For that reason I strongly urge you all to support it. Thank you.

THE CHAIR: Thank you, Phil. Well, I guess if there's nobody else here that wants to speak, we'll close tonight's proceeding with a reminder that we're going to continue this tomorrow morning at 8:30.

We'll be here with continuing testimony from the intervenors and the cross-examination of the witnesses. We will -- also we will be hearing from government agencies tomorrow as well. And we'll remind you that we will be here tomorrow night at 6 o'clock to take additional public testimony if there is any.

I guess at least we know of one person who will be here tomorrow night. We will be here at 6 o'clock tomorrow night if there is additional public testimony.

So with that, we will adjourn until 8:30 tomorrow morning. Thank you very much.

*     *         *             *                 * 

(The hearing was adjourned on September 19, 2007 at 9:22 p.m.)
*****
(The hearing resumed on September 20, 2007 at 8:38 a.m.)
*****
THE CHAIR: Good morning everyone. Is everybody ready to go? I don't see any dissenters.

Good morning, we're resuming a public hearing on Zoning Petition ZP 702, and I'm not going to read the rest of that stuff into the record, we've done it once already, that's enough. Just for the record, though, we'll indicate that we have with us this morning Commissioners Hilton, Kurtz, and

Harvey; LURC staff, Amy Mills, Catherine Carroll, Melissa Macaluso, and Marcia Spencer-Famous; and our court reporter, Lisa.

This morning -- today -- oh, additionally we will be joined later today by Commissioners Nadeau and Schaefer.

Today we're going to continue with the testimony of the intervenors and the cross-examination of those people. And I think we've got a full day unless a lot of you give up time. So today -- the length of today is entirely in your control. We're here until 10 o'clock tonight or however long it takes.

Now, the first thing this morning on the schedule is that we're going to do the questioning of the State soil scientist, the Maine Public Utilities Commission, the Maine Department of Inland Fisheries \& Wildlife, I believe the three representatives are here of those agencies, if they would come up front, that would be helpful.

I guess I would ask, the other thing we need to do is we should swear in all of the witnesses that will appear today. Hopefully they're all here. So you folks, if you'll remain standing, and I'll ask the other folks who plan to testify today if you will rise and we will swear you all in at the same time.
(Witnesses were sworn en masse.)
THE CHAIR: Would you gentlemen please be seated. I notice that the agenda calls for the Commission to ask the 402
questions first, but I think I'm going to let the intervenors ask the questions first, and we'll conclude the questions, so I have, I guess, the applicant has the first crack here.

Mr. Thaler, is that your -- are you going to do this?
MR. THALER: I'm going to do one or two of them and
Attorney Tracy is going to do the third.
THE CHAIR: Okay.
MR. THALER: Do you want us to come over to the microphone?

THE CHAIR: Yes, please. I see that we allotted about an hour for this whole process. Hopefully we can -- 15, 20 minutes, is that going to be enough?

MR. THALER: Less than that.
THE CHAIR: All right. Thank you.
MR. THALER: Good morning. I'm Jeff Thaler, attorney for the applicant, and with me is Sarah Tracy. I just have a couple questions for, I guess, Mr. Timpano.

MR. THALER: I was going to ask for the record, Mr. Timpano, maybe you could introduce yourself and the gentleman with you?

MR. TIMPANO: Good morning, I'm Steve Timpano, environmental coordinator with the Maine Department of Inland Fisheries \& Wildlife, and I work out of the Augusta office.

We have Robert Cordes, assistant regional wildlife biologist for this region, who has been principal in pulling
together the comments on this permit proposal.
MR. THALER: Thank you. And last summer we heard, I think, from several members of IF \& W.

In terms of the terms of the materials that were just
submitted into the record by LURC staff, which was August 28,
2007, Mr. Cordes, I guess I just have a question or two for you.

## EXAMINATION OF ROBERT CORDES

## BY MR. THALER:

Q. There's a memo from you to Marcia Spencer-Famous of August 22nd, and you indicated that IF \& W had finished reviewing the revised application for Black Nubble, most of the comments IF \& W submitted last year for the original petition will still be applicable, and you attached those comments.

You then wrote, the revised petition addresses most of the items that we asked to have clarified. A couple comments specific to the Redington Range no longer apply, i.e., the northern bog lemming habitat.

Is it IF \& W's opinion that there is no northern bog lemming habitat on Black Nubble?
A. Yes, as we understand it.
Q. And you also indicated that there were a couple things that you would want to see in either the final development plan or post construction.

Is that generally correct?
A. Correct.
Q. In terms of what's being proposed in the preliminary development plan rezoning petition that's currently pending before LURC, is IF \& W generally satisfied with the nature of the studies and assessment of impacts that have been done by the applicant's consultants?
A. Yes, to this point. We didn't request any further studies. It's important to note that the post-construction monitoring is as important as the pre-construction.
Q. Right. We understand and agree with that.

MR. THALER: I don't have anything further for
IF \& W. I guess just one or two questions for Mr. Rocque.
Mr. Rocque, I'm going to ask you a question and move back to my table just to grab the most recent copy of your comments.

## EXAMINATION OF DAVE ROCQUE

BY MR. THALER:
Q. You sent -- you wrote a letter to Mr. Frick dated August 31, 2007 responding to some questions and some general testimony that Mr. Kimball, I believe, had given; is that correct?
A. That's correct.
Q. As you sit here today, roughly three weeks since

August 31, are the views that you expressed in your

August 21, 2007 letter still your opinions? A. They are.

MR. THALER: Mr. Chairman, I don't have anything further for Mr. Rocque. And Attorney Tracy will have a few questions for Mr. Tannenbaum. Thank you.

MS. TRACY: Thank you, good morning. My name is Sarah Tracy. I'm one of the attorneys for Maine Mountain Power.

## EXAMINATION OF MITCH TANNENBAUM

BY MS. TRACY:
Q. There was some confusion yesterday over whether -- about the effect of wind farms on electricity prices of Maine going back and forth, and I wanted to try and see if I could set the record straight this morning.

Could you please clarify whether the addition of new renewable energy and generation, such as the Black Nubble wind farm, will have the effect of reducing electricity prices in Maine?
A. Well, it should. As we indicated in our review comments, the more generation that is built in Maine and throughout New England would have the effect of displacing more expensive generation, and if you displace more expensive generation, you're going to lower wholesale rates which translate into retail rates.
Q. The other question that was raised yesterday in
yesterday's testimony was whether the Black Nubble wind farm would displace other renewable energy generation sources in the transmission area, and I wanted to draw your attention to the August 1st -- the MPUC's responses to the questions posed by LURC dated August 1st, 2007 in which you stated the following: The question was, will wind power displace other clean energy source (like hydro), and the answer was, because wind and other clean generation sources like hydro facilities have no fuel costs, both should generally operate to their full capacity. One resource may displace another if there's a transmission constraint in the region, in which the resources are located.

Is that your opinion today?
A. Yes, that's the opinion of the Public Utilities Commission.
Q. I'd like to draw your attention to the comments the MPUC submitted following last year's hearing, so it's related to the 90-megawatt facility, wind power facility, which you also incorporated in the MPUC's 2007 review comments.

Specifically I would like to point you to -- these are the August 11, 2006 responses to LURC questions, and the first question is, is transmission congestion a serious concern for this particular project?

At that time the subject was the Redington Mountain
wind power project. As you know that's been down-sized in the current proposal.

Your answer was in -- the transmission congestion was not a serious concern for the Maine Mountain Power project.

Is that still your testimony today?
A. Yes, with the project being reduced, the transmission congestion concerns would also be reduced.

MS. TRACY: Thank you very much, I have no further -oh, actually, I have one more question.

## BY MS. TRACY:

Q. There's also been some information that the pollution avoidance figures, specifically the Black Nubble wind farm will displace 400,000 pounds of pollution on average per day, there's been some information that the process by which Maine Mountain Power arrived at that figure may not be appropriate.

I wanted to get your opinion on whether -- let me back up.

Since you weren't present at the hearing, if I may, just summarize, John Hanisch testified for Maine Mountain Power that that pollution avoidance figure was calculated by multiplying the output of the wind farm by the most recently published ISO New England marginal emissions rate.

In your opinion, is that an appropriate methodology for estimating the average amount of pollution avoided from a particular wind farm?
A. Yes, it's certainly "a" appropriate way of looking at the displaced emissions, and it's precisely the way the Commission looked at it in its 2005 report to the legislature on the viability of wind power.

There's certainly other ways to look at it, but it's certainly one reasonable approach.
Q. This is really my last question. There was, as you know, the legislature recently passed an act to stimulate demand for renewable energy, which requires that Maine increase the supply of new renewable energy generation sources by 10 percent by the year 2017.

Is the Black Nubble wind farm the type of new renewable energy generation that LD 1920 was intended to promote?
A. Yes, that's a reasonable presumption because by passing the law it requires suppliers to have a certain percentage of their supply come from new renewables, and the likely candidate for new renewables -- economics and other issues -- would be wind power, at least in most part, so it's reasonable to assume that the legislature had in mind promoting wind power.

MS. TRACY: Thank you very much. I have no further
questions.
MR. THALER: Thank you, Mr. Chairman.
MR. PLOUFFE: I'm Bill Plouffe, and I'm the attorney representing some of the intervenors here, the Appalachian Mountain Club, Maine Audubon Society, the Maine Appalachian Trail Club, and the Appalachian Trail Conservancy, and I have some questions for Dave Rocque and then more for Mitch Tannenbaum. I don't have any questions for the IF \& W people.

So David, if I could ask you some questions.
EXAMINATION OF DAVID ROCQUE

## BY MR. PLOUFFE:

Q. I don't know if you have your memos with you or not, your e-mails that you sent?
A. The latest ones I do have.
Q. Okay. Well, I'm going to ask you some questions about your e-mail to Marcia Spencer-Famous of August 24th, which seems to be one of the later e-mails in a string of e-mails explaining your position over the past year or so.

You say in the third sentence, the soils and slopes are not -- all capitals -- appropriate for road building, but I did recognize there was no alternative for accessing the mountaintops with the turbines and equipment necessary to erect the towers.

Then two sentences later you said, I have serious reservations about the impacts of such roads on the

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mountain and the integrity of those roads.
And the next paragraph, bottom line, I and DEP have reservations, particularly if the work takes place in the winter, but we agree that the applicant will use the best of road building techniques we can think of.

So I would like to clarify this morning, if I can bring anymore clarity to it, what your position is with respect to advising this agency and let me see if I can -if I have it right -- that first, the soils in this area and the slopes in this area make it in an objective view not appropriate for road building?
A. There are significant limitations that must be overcome.
Q. Okay. And to overcome those limitations, the applicant has to use advanced engineering techniques?
A. I don't know if I would say advanced, but they have to go above and beyond what would normally be required because of the unique situations.
Q. Let's go to the site. How long have you been in your current role?
A. Almost 20 years.
Q. And you regularly review projects for Maine DEP and LURC?
A. Mostly for LURC; I don't review as many for DEP.
Q. In your 20 years, have you reviewed any projects that involved constructing roads that are capable of carrying heavy loads at elevations over 3500 feet?
A. Not that I can recall.
Q. Are the conditions over 3500 feet -- in terms of weather, shallow soils, erosion potential, snow pack -- different from what they would be at 2000 feet?
A. They may but not -- the soils and slopes aren't so important; the weather conditions probably are different. You can find the same kind of soils and slopes at low elevations.
Q. How about at 1000 feet?
A. You can still find steep slopes and shallow soils anywhere.
Q. Are they susceptible to the same type of erosion threats as on a mountaintop?
A. The climate is a factor in the erosion threat, which is different as you go up in elevation.
Q. Is it -- again, going back to your e-mail about serious reservations, what message -- I'm going to ask you -- what message are you trying to give to this Commission regarding building these kinds of roads at these elevations?
A. I'm trying very carefully not to tell them exactly how they should review this, but I want them to be aware of the issues that we don't have a lot of experience in building the kinds of roads that are proposed in the types of environments and locations that these are going to be
in.
It's going to be very, very difficult, not necessarily impossible, but difficult.
Q. I appreciate your candor in that. You've been up to the site on more than one occasion, I think, haven't you?
A. Yes.
Q. Have you calculated how many feet of roadway are on very steep slopes above 3000 feet?
A. No, I haven't.
Q. Have you seen very steep slopes?
A. I have walked in and seen some very steep slopes, yes.
Q. Where the roads are going to go?
A. Yes.
Q. Would you say that they exceeded 30 percent?
A. I didn't measure them, but there were some instances where I guess that that would probably be the case.
Q. So it's going to be very difficult to build these.

I'm going to -- I've got a copy of your memo to Aga Pinette in the Plum Creek case dated August 24th, 2007.

Do you remember writing that?
A. Was that my final comments on the project? I think they are, yes, it's like five or six or seven pages or something.
Q. Yes.
A. Yes.
Q. I'm going to read to you what you wrote regarding the Plum Creek proposal with respect to soils. This is part of what you wrote.

It is my professional opinion that "the test" for rezoning should be the natural suitability of the area for the intended use, not whether or not soils and slope limitations can be "overcome" by engineering regardless of the degree of engineering required.

That is because the greater the degree of engineering techniques required, the more careful and vigilant the maintenance is needed or those engineering techniques may fail. Also, those engineering techniques many times unintentionally interfere with the natural hydrology of the area, which is vital to wetlands, streams, ponds, other natural resources.

Do you remember writing that?
A. Yes, I do.
Q. So applying your opinion of Plum Creek as embodied by that statement to the top of Black Nubble, don't we also have very difficult engineering issues there which would make this Commission very skeptical about allowing this rezoning?
A. If you look at my March 10th comments on the project, 2006, I was right upfront in stating that that was my primary concern and that under -- because I considered the

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tops of the mountains suitable locations for wind power, this is kind of unique. Beginning there has always been, every since Kenetech, my biggest concern, not the towers themselves as much as getting there.

So I try to make it obvious that that was considered.
Q. We can engineer a road to almost anywhere?
A. Yes.

MR. PLOUFFE: Okay. Thank you, David. I appreciate that. Oh, one other question.
BY MR. PLOUFFE:
Q. On the winter construction versus not winter construction, I had thought in the application for Black Nubble that they were proposing winter construction. I heard yesterday that they apparently can do it either winter or some other time of year.

If this were approved, would you recommend winter or summer?
A. I would much prefer summer.

MR. PLOUFFE: Okay, thank you. I have some questions for Mitch.

## EXAMINATION OF MITCH TANNENBAUM

## BY MR. PLOUFFE:

Q. Mitch, I read through your comments last year and this year, and as I understand your statement, you are not here to offer any advice with respect to the proposed site
A. That's correct.
Q. And the Maine Public Utilities Commission really does not have expertise in that area?
A. That's correct.
Q. And your comments could be the same comments if this were a hydro project or a solar project?
A. That's correct.
Q. Because those would help fulfill the renewable portfolio standards that we have in Maine?
A. Right. And generally the point of our comments is that Maine and the New England region needs new power plants that are not gas fired, diverse power plants.

We don't take a position on any particular land use environmental issues relating to any project.
Q. Thank you, I appreciate that.

On this issue of new power plants, it is not the -there was a fellow here last night during the public session -- I'm sure you weren't here -- he was from the Town of Wiscasset where, as you know, there's a proposal to build a 700-plus megawatt power plant.

It's not the position of the State of Maine to oppose non renewable power plants, is it?
A. I'm here on behalf of the Public Utilities Commission, and I can say it's not the position of the Public Utilities

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Commission to oppose non renewable --
Q. Non renewable, fossil fuel-fired plants?
A. Right. We do not have a position that we would, a general position, of opposing such plants.

Again it's important -- diversity is important is the PUC's position.
Q. All of the State policies that you cite, as far as I'm aware, in some way or other have a caveat in them regarding the renewable generation plant being appropriately sited.

Some of them say in accordance with existing laws, some of them say appropriate places.

Am I right about that?
A. Yes, the provisions in the Wind Energy Power Act do have those caveats.
Q. In terms of electric capacity, I've been dying to ask this, I often hear that generates more power than it uses, electric power, is that right --
A. Yes.
Q. -- on an annual basis?
A. We --
Q. What are the percentages?
A. I brought my cheat sheet. Maine has about 3500-megawatt capacity and its needs are about roughly 2200 megawatts.
Q. So 3500 megawatts --

1 A. 50 percent more capacity than we use.
Q. In fact, some of the capacity, such as the gas-fired plants, don't run at 100 percent all the time because they can't sell the power in Maine or outside of Maine; isn't that right?
A. There are times where power plants are not dispatched or not run because of congestion out of the state of Maine.
Q. That's the congestion identified by the Federal Energy Regulatory Commission congestion study at the Maine/New Hampshire border?
A. I'm not aware of the study you're referring to, but it is accepted that there is congestion at certain times of the year, certain hours of the year.
Q. You're not familiar with the National Electric Transmission Study, August 2006, US Department of Energy?
A. I have not read that study, no.
Q. I believe that Kurt Adams testified before Congress on this. You had no role in that?
A. No, Kirk reads a lot more stuff than I ever can.
Q. We had testimony yesterday on the power mix in Maine by generating source, and the numbers seem to stop at 2002, and I get this thing in the mail as a CMP customer, Residential and Small Consumer Standard Offer and Consumer Information about your electricity supply, which I think is mandated by you guys; is that right?

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A. Yes, it is, at the direction of the legislature.
Q. As I this read this thing for the CMP district, this is for June 2007 -- I can give you a copy if you want --
A. I'm familiar with those.
Q. I'm sure you are. I just wanted to confirm, it tells me that my power comes from 25 percent nuclear, 25.7 percent gas, 24.9 percent hydro, and then I have a number of other smaller sources, including biomass, municipal waste, fossil fuel cogeneration, and 6.2 percent of oil, and 9.3 percent of coal.

Do those numbers sound right to you?
A. They generally sound right and I certainty accept that that's what the disclosure label means.
Q. It says that -- they also have a section here on air emissions, it says that $\mathrm{CO}_{2}$, CMP district, this is 22.5 percent less than the New England average.

We're doing okay? We're less than the New England average?
A. I guess I would say being less is better than more. It's probably important to point out that that's not the resource mix within the state. That's the mix of resources that serve CMP's residential and small commercial customers, not the larger customers; and the energy customers may come from all throughout New England.
Q. Okay. So that brings me to my last area of questioning.

I've been reading in the newspaper about Governor Baldacci and the Premier of New Brunswick entering into, not personally, but on behalf of their governments, entering into an agreement to jointly pursue further energy development in transportation.

Are you familiar with that?
A. Generally.
Q. That's my familiarity, too, generally.

I read that New Brunswick's Premier talks about perhaps building a new nuclear power plant, and his idea to be that shipping power, electrical power, through Maine to southern New England and that Maine would join in that.

Is that your general understanding of the direction this is going?
A. I'm not sure what you mean Maine would join with that.
Q. I think there's a joint agreement to explore ways to further produce energy, especially nonpolluting energy -and transmit that to where the real need for this is, which I believe is southern New England?
A. That's right, but there's very serious questions about essentially what's in it for Maine.

I think the idea would be -- Maine, I don't believe, is interested in just being a highway for power going from Canada to southern New England. So there would have to be a benefit in it for Maine's rate payers.
Q. If there were a benefit for Maine rate payers, then would it be along with New Brunswick producing large amounts of power, more than we need here in Maine and shipping it off to Massachusetts, Connecticut, and Rhode Island?
A. I'm not sure I understand that question.
Q. We'd be -- you already testified that we produce about 50 percent more power in terms of capacity than we use in Maine, so if we're going to generate more, I assume that's for export.

We may get a benefit from lower prices, but I assume most of that is for export. We don't need it here in Maine?
A. Again, it sort of depends what you mean by needing it in Maine. I think we try to emphasize in our review comments -- at least from the perspective of the Public Utilities Commission -- the level of electricity rates are very important, a lot of reasons.

Even though there's more generating capacity in Maine than Maine needs, more generation should have a result of lowering rates and minimizing volatility in making the system more secure and more reliable. To define need, I suppose anybody they choose but in the Public Utilities Commission's view, there is a need for more diverse generating resources.
Q. Just a final question. If more wind power comes on-line,
particularly this Black Nubble project, Maine Mountain Power has testified that the reason -- one of the reasons that they are back here for this scaled-back project -they were here last year for 90 megawatts on two mountains and now it's one mountain -- was that they see a change coming down the road in terms of the economic return on this so-called RECs and other things like that, carbon offsets and so forth, which means more revenue to them.

How does that square with the position that some people take that more wind could lower the price of electricity to the consumer?
A. Well, the fact that a wind project in Maine or elsewhere in New England gets the value of RECs, it adds to the economics of the wind project wind. It will make a wind project more viable than it might otherwise be, although I'm not testifying necessarily to that fact.

It is the existence of wind projects or other generating resources that essentially have no fuel costs once they're built and operating, so they're going to run for the most part. When they run, something else will be displaced because there's a fixed amount of need in every moment throughout the day.

So if a wind power project is running, something else is not going to run, and that something is likely to be gas or some fossil-fuel plant.

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Q. That's because gas is the highest price on the stack of load?
A. Yes, for the most hours.
Q. Where's coal usually on that stack load, towards the bottom, towards the bottom?
A. Towards the bottom. And certainly there's a fuel cost to coal plants; there is not for hydro, generally, there is not for wind. It's small for nuclear, so those tend to be the ones that will run when the wind is blowing or when the water is flowing.

So by taking more expensive power off the margin, or displacing that, you end up with lower wholesale rates, realtime wholesale rates.

The realtime wholesale rates is what people look at for lumber wholesale contracts, and those wholesale contracts obviously translate into retail contracts.

The fact that a wind plant is getting the benefit of RECs does not mean that the wind plant will not have the effect of lowering or stabilizing electricity rates.

Again, any individual small project, I'm not saying it's going to have a significant affect on rates, but what we need is diverse projects of varying sizes throughout the region.

MR. PLOUFFE: Thank you, Mitch. Appreciate your time.

That's all I have.
THE CHAIR: Thank you. Do any of the other intervenors have questions?

MR. TRAFTON: I'm Dain Trafton. I represent the Friends of the Western Mountains, and I have a couple of questions for Mitch, only for you, Mitch.

## EXAMINATION OF MITCH TANNENBAUM

BY MR. TRAFTON:
Q. The first one is, has the Maine Public Utilities

Commission seen the wind data that was collected by Maine Mountain Power for this project?

Have you seen that wind data?
A. I have not and I'm not aware of that anybody else has seen it.
Q. Therefore, you -- I'm going to say you but I mean generally the PUC -- therefore, you don't know exactly when this plant will produce electricity and how much it will produce at any particular time and for how long.

We're talking here obviously about likelihoods based on that wind data.
A. No, I do not.
Q. Has -- I want to ask you a question about this claim that the operation of the Black Nubble plant will reduce the cost of electricity for consumers in Maine, and that first question is background to this question.

Has the MPUC conducted a study to determine exactly how often the output of the Black Nubble plant would actually knock off a top bid from the bid stack and thus have some effect on reducing the wholesale costs, as you've just put it, and if you know how often that's likely to happen, have you determined exactly what the effect would be?

And notice, I'm talking about the Black Nubble wind plant, not a collection of plants. I would like to know, have you conducted that study?
A. No, we have not, and we have not said that the Black Nubble plant by itself is going to have a significant impact on rates or rate volatility.
Q. Thank you. One more question. Two more. Have you conducted a study to determine -- this has to do with the claims about displaced emissions -- have you conducted a study to determine which emitting plants in the area will actually be forced to cut back by the output of the Black Nubble wind plant, when that will happen, what the plans are, and how much cutback will occur?

Have you conducted that study?
A. We have not conducted a study like that, no.
Q. Final question. Is there anything in LD 1920 that would compel the LURC commissioners -- I'll stick with that word -- compel the LURC to approve the rezoning of

Black Nubble for the sake of this wind plant even if their rules and regulations would lead them not to approve it?
A. No.

MR. TRAFTON: Thank you very much.
THE CHAIR: Mr. Wilby.
MR. WILBY: Good morning. Dave Wilby, Independent
Energy Producers of Maine for the supporting intervenors' group.

Mr. Plouffe raised a few issues. I just wanted to
clarify with Mitch.

## EXAMINATION OF MITCH TANNENBAUM

BY MR. WILBY:
Q. Mr. Plouffe raised the MOU in discussions with

New Brunswick. Have you read or looked through the Phase 1 study that was produced a month or two ago?

In the context of that MOU discussion, I think the
Public Advocate's office was involved in drafting that?
A. No, I was not.
Q. Thank you. Since some congestion issues have been raised and discussed a little bit this morning, I just want to ask you to clarify.

Does congestion reduce costs for Maine consumers?
A. Generally, yes.
Q. The units that are not dispatched, the fossil units, is there -- is the fact that they are sometimes not
dispatched tend to occur more as a result of congestion or more as a result of economics?

In other words, are they not dispatched -- the days that they're not dispatched, is it because they're economic units to run or because of congestion issues?
A. If I understand the question, even if there's no congestion, these fossil units will be displaced when these wind units are generating power.

If there is congestion, more of it will be displaced.
Q. In the course of a year, let's say, do you agree those facilities are not dispatched, does it tend to be more due to congestion or more due to the economics?
A. Are you talking about the congestion out of Maine?
Q. Yes.
A. I think it's probably more economics, but I have not done a study of that nature.
Q. Thank you. This issue of the degree to which Maine may or not have excess generation, does Maine -- the 25 percent that Mr. Plouffe referred to in the CMP Residential Consumer Standard Offer, 25 percent nuclear power, where does that come from?
A. From a power plant.
Q. Does it come from a nuclear power plant in Maine?
A. Absolutely not.
Q. So Maine imports a fair amount of power, certainly nuclear
power, and from time to time other resources?
A. That's correct. That's the point I was trying to make before is what serves customers in Maine comes from all over the region, and power in Maine serves customers outside of Maine.
Q. And there are periods of time, for instance, I would say the first half of 2006 -- maybe all of 2006, I haven't checked the data -- in which Maine is a net importer of power; but there are periods, substantial periods, in your understanding, in which Maine isn't a net importer.

Is that a fair statement?
A. That's my understanding, yes.
Q. And it wasn't so many years ago -- I don't know off the top of my head -- but within the past decade Maine was a substantial importer of power on a multi-year basis, particularly when Maine Yankee first went down.

Is that an accurate summary of history?
A. It is certainly true that over the decades Maine has needed power and has imported a significant amount of power.
Q. A large percentage of Maine's current capacity is natural gas facilities -- stop me if you think that's incorrect.
A. That's correct.
Q. And a number of those gas plants, specifically the Calpine facility -- has had substantial economic problems,

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bankruptcy, frankly -- it's not unreasonable to be concerned about the future of these natural gas facilities.

Is that a fair statement?
A. Run that by me again.

THE CHAIR: Ask a question, Dave.
BY MR. WILBY:
Q. You were at Greenville on the 1st, I think, for the briefing. Did I understand Chairman Adams to say that these fossil and natural gas plants could be moved out of Maine?
A. Yes, he said that.
Q. In so doing, we could lose capacity, and so the point being that the degree to which Maine has excess capacity is not necessarily a permanent condition?
A. Yes, that's correct.

MR. WILBY: Thank you.
THE CHAIR: Ms. Browne.
MS. BROWNE: Good morning. Juliet Browne for
TransCanada. I have just a few questions for Mr. Tannenbaum.
EXAMINATION OF MITCH TANNENBAUM
BY MS. BROWNE:
Q. Mr. Tannenbaum, you were asked by Attorney Tracy about your comments last year on what was then a 90-megawatt Redington project and your statement that transmission
congestion was not a serious concern.
Do you recall those comments?
A. Yes, I do.
Q. Now, one of the things that has changed since your comments last year on the Redington project is that there is now a Kibby wind project that would interconnect at that same Bigelow substation; is that correct?
A. That's correct.
Q. That project is actually pending before the Commission now and is scheduled for a public hearing I think in less than two weeks?
A. That's my understanding.
Q. I just want to make sure, because there tends to be some confusion on some of these issues, that we are clear on a couple of things.

Neither project has priority to access the transmission capacity; right?
A. That's correct.
Q. In fact, the ability of any particular -- just let me back up for a minute -- when we talk about congestion, there is something called system congestion, correct, and that would refer to the ability basically to get the power out of the state of Maine?
A. That's -- I'm not sure I've heard that definition but I'll accept.

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Q. This is not my area of expertise and I'm sure the Commission would appreciate your expertise and not my attempt to characterize it.

But there's also what we call localized congestion; right?
A. Yes.
Q. So that the two projects interconnect at the Bigelow substation and the ability for either project -- or any generator -- to access the existing transmission capacity from Bigelow to Wyman is governed by a set of rules through FERC and ISO; correct?
A. Yes.
Q. And they effectively hour-by-hour, day-by-day to access any of that transmission capacity?
A. Yes, to the extent there is congestion.
Q. So in the event there were congestion, it would be fair to say that congestion would be -- and to the extent that congestion were an issue or a concern -- it would be fair to say that it would be a concern equally for any generator that is interconnecting to the Bigelow substation?
A. Yes, that's correct.

MS. BROWNE: Thank you, I have nothing further.
THE CHAIR: Thank you. Have we covered all the intervenors? That being the case -- Mr. Mahoney.

MR. MAHONEY: We don't have any questions. THE CHAIR: Okay, thank you.
Gwen or Rebecca, any questions from our panel here?
MS. HILTON: My questions are for Dave.
EXAMINATION OF DAVE ROCQUE
BY MS. HILTON:
Q. In the letter to Mr. Frick, the last -- I think it's the very last comment that you made -- the problem is getting equipment to the mountaintops, which must be by road.

I do believe that the construction techniques agreed to for both wind farm projects are the most appropriate available and should work but they are not proven, at least on such large-scale projects me Maine. So there is potential for problems.

I guess a couple things I'm wondering, have there been situations perhaps in other states where these types of roads have been constructed to wind power projects?
A. I haven't done any such research, so I don't know, but it would have to be also the same kind of soils and slopes and climate to be applicable. It couldn't be like out in the Midwest where it's dry and they have all different soils.
Q. I see. So it would have to be at a location where soils --
A. It would have to be the same conditions that we have --

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the soils, the slopes, the hydrology, the amount of rainfall, snow.

All those factors would have to be applied because -and the temperatures would all be factors.
Q. I guess that being the case, are there certain conditions that you would like to see put on this to be assured that it is constructed so it's not going to cause any environmental harm?
A. The point I'm trying to make is we don't have a lot of history to look back at -- and I've done a lot of soul searching on this ever since Kenetech, it's been quite a few years -- and all of the ideas that I had and have gathered from talking with others, the applicant has been agreeable to incorporate into the techniques used to build the roads, so they are willing to use all the techniques that I think would be the most appropriate to do this work.

Of course, this is in the zoning phase, we haven't got the specific plans; but they have agreed that that would be appropriate and all of the techniques that I suggested, they agreed to use.
Q. I see. And winter construction.
A. That just is -- you've very cold temperatures and the snow to deal with and the frozen material, so it makes it really, really difficult because you can't compact fill
properly if it's frozen. If it's frozen, when it thaws it shrinks and moves and there's water in it.

We did discuss that at length when they were proposing the original project some of the techniques that might be used -- heated truck bodies and removing the frozen surface, et cetera. Of course there's still the snow and those conditions, but they did agree to use whatever techniques would be appropriate to do it that time of year, so technically it would be possible to do it. It's very expensive and very slow but technically possible.
Q. Would you have any particular concerns, though, when the snow starts to melt and the spring rains come?
A. Well, that would be an issue regardless of when you build roads because -- even if they build them in the winter, they shouldn't be up there actively working during a snowstorm, and if you get a heavy rainstorm in the summer, you shouldn't be working.

So you have to work around the climate. So if you get heavy rain and snow melt and everything is soft, you have to stop. It's just like logging, you know, when they're logging, they have to have a season where they don't work.

You would even have to do that regardless of the time of year. Even the summer is not a great time of year in 434
the mountains because they get heavy thunder storms. There's no great time of year in the mountains compared to lower elevations.
Q. Don't you get more water infiltration when the ground is not frozen? If it's frozen, the water's just running off?
A. A lot of those soils you have to understand are very shallow, either bedrock or hardpan, so there isn't much that infiltrates anyway. That's one of the issues.

It's a very thin layer of receiving material before it starts running off, and that's why one of my biggest issues has been the hydrology, how to handle all of that water that you don't see because it goes into the organic depth and then rides along the hardpan just below where you can see.

You put a road in with the septic, so now you're going to have to get that water to the other side so not to upset the hydrology below where that road is going. Then if you collect that water and put in somewhere else, then you have to deal with it as a problem.

If you collect it and spread it on the other side, a similar manner in which we see, that's the best technique possible and requires some of the techniques that I proposed and they accepted to use.

MS. HILTON: I see. Okay.
I think that's all that I have.

THE CHAIR: Thank you. Rebecca.
MS. KURTZ: Gwen asked one of the questions that I
was going to ask, but the other one is for Mr. Rocque.

## EXAMINATION OF DAVE ROCQUE

## BY MS. KURTZ:

Q. You said the last time you were up there walking around with the engineers and the road folks that you had seen some very steep slopes where the roads are supposed to go and some of them may be in excess of 30 . Was that 30 degrees?
A. Yes, 30 percent.
Q. Did you -- while you were up there, did you see any alternatives to those slopes where they could put those roads? Or is that they've go to work with what they've got?
A. I didn't really hike around the mountain to figure out which was the best path. I had assumed that they had chosen the best path because there wouldn't be much of a logical reason to not do so.

The two issues you face when you try to go up a mountainside is you can go up a really steep slope, but it may be a short distance, or you can kind of circle around the mountain, you know, and put miles of road in, but it's less slope.

Each of them have pretty significant impacts on the 436
Q. Thank you. If I recall correctly from the hearings in 2006, there was testimony or it was brought out that the roads that were drawn on the Redington/Black Nubble project were sort of drawn on as being those as being the least visible, it was more of a visibility issue than --.

Instead of placing them where they would be most appropriate, given the soils, have you gotten that sense, that maybe that what -- the placement of the roads on this project, it's been about visibility as opposed to
appropriateness?
A. No. Because this is a zoning application and it's not the actual development permit, I understand that they have given more information than they need to; but I know the general conditions of the mountains include all the range of significant slopes and soils and wetlands that have to be overcome.

So I haven't really keyed in on the exact location because I figured it could be changed some. In the toolbox approach, which I mentioned earlier, it would be appropriate to me as you're constructing -- some of the features that I'm concerned about, you can't even tell they're there until you actually start working on the site because of the unique boulder and organic covered areas.

So you may actually have to relocate pieces of road that you didn't think you had to because you can't anticipate the conditions.

In normal -- if you were doing soil mapping in lower elevations, you can anticipate conditions knowing vegetation and other factors pretty well. You get up into the mountains and it becomes much more difficult to anticipate exactly what's what.

So there needs to be flexibility, so I wasn't so focused in this zoning application exactly where the roads were going, but I just assumed that the path they chose

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was the best mix between all the issues that were out there. And then I would take -- later on if this got approved -- and review the subdivision application to see if the appropriate measures were being used in the appropriate locations.

MS. KURTZ: I just have one more question, to Dave anyway, and one to Mitch also.

## EXAMINATION OF DAVE WILBY

## BY MS. KURTZ:

Q. I guess -- well, last spring there was a significant erosion problem on a project in Rangeley Plantation that I understand was one of the worse ones you had ever seen in your 20 years' experience?
A. Yes.
Q. Can you tell me what it was about that project, without saying where it was or anything, but what was it, the factors, that gave rise to that significant erosion issue?
A. Okay, it was very close to Rangeley Lake, it was on a very, very steep slope, and there was a cut of probably 30 or 40 feet deep where the water table was probably about 2 feet.

It was done in the March/April time, which is the worst time of year you can actually work on the soil because the ground had been frozen, and as the frost thaws, because it expands, when the frost melts then the
ground tries to compress.
But if you have a vertical cut that froze and sticks out and then it thaws and it just sloughs off, and this was happening. Every night it would freeze and then every morning it would slough off.

All this stuff was just oozing down to the lake, and it was very difficult to install erosion control measures because the ground's frozen, so you can't embed and entrench and that sort of thing, there's no buffer area, so that was what -- it was done at the absolute worse time of year.

If they had done it in July and August or September and stabilized the site and put in the appropriate measures, it probably wouldn't have been as big a deal.
Q. Would those similar issues arise if these roads were built --
A. Yes.
Q. -- in March or April on Black Nubble?
A. It would depend on the exact techniques they used, because if you didn't have to do -- if you're going to do a lot of cutting into the ground and have a lot of groundwater seeping out, that would have to be dealt with because that would make a very difficult condition.

But they proposed such things as uphill diversions to 440
get rid of the water so when they're going to work would be okay, temporary diversions, then they would put the hydrology back to go across the road. So these were all taken into consideration.

Again, this is a zoning application, so they gave general ideas of what they're going to do, but not specifically of what/where because those details had to be worked out.

It's kind of a conceptual thing, but they were taken into consideration. That was a big concern of mine.

MS. KURTZ: Thank you very much. Mitch -- this question keeps coming back, and I don't want to write it in my notes and have it be wrong and reflect that in my notes later.

## EXAMINATION OF MITCH TANNENBAUM

BY MS. KURTZ:
Q. Mr. Plouffe asked you about -- I'm going to try to read it as I wrote it verbatim.

If a wind power plant is running, something else will be displaced, I think this is what you said, usually natural gas.

Is natural gas more expensive than coal?
A. Yes.
Q. So the most expensive thing gets displaced?
A. That's right.
Q. So when wind power is running, natural gas would get

5 Q. So most often --
A. It will be gas or oil that will be displaced.
Q. And coal will continue to -- coal-fired will continue to operate?
A. Yes.

10 Q. They won't be displaced?
A. They will not be displaced by wind.

MS. KURTZ: So in my notes I recorded it correctly.
Thank you very much.
MS. HILTON: These are questions for Dave.
EXAMINATION OF DAVE WILBY

## BY MS. HILTON:

Q. When you talk about using the toolbox approach, who makes the decision which technique to use? Is it the applicant, the folks that are involved in construction? Are you involved in that at all?
A. I did discuss with the applicant about the techniques that I thought should be used in the various different situations they would encounter, so those are known.

What you don't know as you're going up the mountain, as I said, because of the unique conditions, you don't

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know when they're going to get one of these things. It's basically a screen that's been filled with boulders in the past by erosion and then organic over the surface.

So you walk across, you have no clue, but all of a sudden you're digging a trench and you find it. So when you find that "thing," this is what you should use. When you find these other conditions, this is what you should use.

So that concept has been agreed to that each of these conditions require special techniques to use, but just not where they're going to be used. That's what I mean by the toolbox is that they're going along and they encounter them.

It isn't like it's a random thing, we don't know which technique to use under which condition. That should have been already decided and would certainly be decided when they did the development application.
Q. I see. So you think that you pretty much identified those conditions that you may run into?
A. Yes, the different kind of scenarios that could be envisioned have already been addressed with various techniques, and I'm reasonably comfortable with what they've proposed.
Q. In this kind of a situation, would you or maybe anybody on the LURC staff be going out and inspecting it on occasion?
A. That would be my recommendation. It's not my role or authority to do that, but I would offer my service and would hope that that would be utilized to go up there on occasion and see what techniques are being used and how well they're working, because some of these have not been tried and proven. There might be some adjustment that is necessary just to make sure that those are being applied properly, yes.

And there should be an engineer. One of the things that I suggested was somebody who is knowledgeable about such techniques be present at all times, and that person should be in contact with me that if they're encountering a situation that's a little different or something isn't working or they have another idea, can they do that.

So hopefully that's how this project would be handled so that I would be -- because I have a cell phone as well as -- I'm not in the office much of the summer.

We could discuss these things and I could go up and look. That would be my suggestion.
Q. Are you saying that this engineer would be sort of independent of the applicant?
A. That would be my recommendation. It would have to be somebody of that nature, yes.

MS. HILTON: Good. Thank you.
THE CHAIR: Going back to the fish and wildlife issue
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just for a minute, and I'm going to ask you what is probably a bit unfair, but I don't know if you've read any of the prefiled testimony in this case, but we have, it appears, differing opinions about the Bicknell's thrush, we have competing experts kept telling us two different things.

The answer you can give me is either no or we'll think about it.

Have you read that testimony?
MR. CORDES: We have.
THE CHAIR: You have?
MR. CORDES: Yes.
THE CHAIR: Do you want to authorize any opinion on how I might balance those two kind of competing views?

MR. CORDES: I guess it was the department's opinion that overall Bicknell's habitat won't be affected severely adversely.

There would be limited permanent construction. I think it's 42 or 35 acres, something like that. There's plenty of habitat on the surrounding landscape, and the Bicknell's are likely to reoccupy the site after the construction is started.

What limited mortality would be from displaying males. Males outnumber females $2: 1$ is the current thought -research indicates that, and that the limiting factor on the species is female mortality, and the range is not in their breeder range.

THE CHAIR: Thank you very much. Appreciate that. MS. SPENCER-FAMOUS: Excuse me, Bart, I have a follow-up question.

THE CHAIR: Go ahead, Marcia.

## EXAMINATION OF ROBERT CORDES

## BY MS. SPENCER-FAMOUS:

Q. It just occurred to me as you were answering the question about the displaying males, how long a period does that display go on in days?
A. That's something I don't have expertise on. I would have to ask Tom and he could get back to you on that.
Q. I was wondering about that, and I wondered about there being specific locations where there's been identification of a breeding pair, could there be potential for -- again, you don't have to answer -- could there be potential for a limited time of not having certain turbines operate during the displaying period?
A. I think that would be an appropriate mitigation to that.
Q. So you could get back to Tom with that.
A. I also think -- I would have to talk to Tom a little bit about this as well -- the likelihood of a male striking through the cleared pad would be limited to, as they come up from where they're in in the forest canopy, the pad will be cleared and won't have that preferred vegetation.

There's still a potential for strike. It's not our
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opinion that it's not undue.
MS. SPENCER-FAMOUS: Thank you, that's interesting. EXAMINATION OF MR. CORDES
BY MS. KURTZ:
Q. It just occurred to me, you said that the birds at risk would be the males. Do the males help the females rear the young?
A. Again, that's not something that I have expertise on.
Q. So you -- so at this point we don't know if the male or males were killed, whether that would impact the reproductive success of the female and the chicks.
A. That's one concern that Tom Hodgman had relayed in earlier communication and earlier comments.

MS. KURTZ: Thank you.
THE CHAIR: Thank you. Just maybe a couple of questions for Mitch. These electrical questions are all very interesting.

## EXAMINATION OF MITCH TANNENBAUM

## BY MR. HARVEY:

Q. Just to you help us understand a little bit, in the testimony in prefiled there's been all of the information Mr. Adams gave us in Greenville is part of this record, okay, just so that's clear.

Mr. Plouffe has introduced into evidence which is a particular mix of fuels for CMP, which all of us get, but

Mr. Adams basically said that about 39 percent of all the fuel was natural gas, and CMP said it's 25 percent.

Apparently there's a difference between what the State of Maine utilizes and what the New England grid utilizes. I guess that his testimony related to the New England grid is not specifically to that of the State of Maine.

Is that a fair way to interpret the information? I'm trying -- in fact, it says, New England Generating Capacity by Fuel Type is the title of the chart. It was in his presentation to us in Greenville.
A. Right, I have that before me. It shows that in the region, 40 percent of the generating capacity is natural gas.
Q. Right. So his chart is regional, the CMP numbers apparently reflect only state of Maine numbers?
A. No. The chart you referred to is generating capacity. It's what's available in the region as opposed to what's generated and used.

In Maine -- in Maine, and this is based on 2004 natural gas -- generating capacity is about 60 percent of the mix within Maine.

Again, that's the capacity, that's what's available for use, that's a different --
Q. Of the 3500 megawatts of capacity in Maine, you said that

60 percent of that is natural gas?
A. That's correct. And the disclosure label refers to the energy that's being used by Maine consumers, or more specifically small consumers in CMP's territory, and that could come from anywhere within the region.
Q. Okay. The question of transmission congestion seems to be of concern to everybody here.

We were told yesterday that -- and probably these are two different issues -- but to maintain their place in the queue, the applicant was going to upgrade the transmission line as he had originally proposed for the original proposal.

Of course what that implied to us -- I thought anyway -- I interpreted that meaning that they had priority on all their transmission capacity.

Now we're saying that -- Ms. Browne's questions seem to indicate that everybody had to share that line and there was a mechanism of sorting out how the sharing occurred so that in effect there was no congestion, I guess.

That seems to be a major issue in this whole hearing. One of the issues is whether or not any of this power -we're all trying to make sure that if this thing goes, the power gets used effectively.

I think these are two different issues. Maybe you

## can help me.

 zero fuel costs here. that's not a bad thing.A. I haven't read the testimony and I'm not too familiar with the issue of maintaining a place in the queue.

There are at least two categories of transmission that might be of relevance, and when a project like this is built or the Kibby project is built, there will be need for transmission to connect the project into the grid.

That's generally referred to as a generator lead. A generator lead is really the responsibility of the facility, the generating facility, to pay for. And there may be issues of sharing a generation lead.

I'm really not sure what that issue might be or whether I'm even correct if that's the issue.

But it is true that as far as the greatest concern, no generator has the rights to use that transmission by virtue of being first, second, or third in line. Once you're built and operating, everybody has equal access to the transmission grid, and if there's a congestion issue, the cheaper generating facility will essentially get the access by virtue of being cheaper.
Q. So assuming that both of the prices are zero, then how do we decide, I guess? We made a lot of claims that there's
A. Right. I'm not familiar with exactly how that would work. My assumption -- and I probably shouldn't talk about

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assumptions -- is that there would be some kind of allocation of the existing transmission for projects that both aim at zero fuel costs.

But I think that -- and our comments have indicated that for these projects to be economic, they need to run, and they need to run in order to get the production tax credits, the federal protection tax credits.

They need to run in order to get the value of the RECs, both of which are very likely to be necessary to make these plants economic.

So there is good reason to assume that the congestion issues will be resolved one way or another and the system builds in incentives for these congestion issues to be resolved. At least in my view, it's unlikely that these wind facilities could be built and then not operate.

To the extent there is congestion here and there, that would act to lower electricity rates in Maine, and

THE CHAIR: This is a fascinating subject but I guess
I had better not go any further, because sometimes I wonder
about some of the relevance of some of this.
I think it's instructive for all of us, at least in a
bigger context, to understand some of these issues.
I guess the bottom line is -- and I think obviously you'll have an opportunity to respond in written comments
here -- that you get a sense of some the things that we'd like to hear about, I guess, making sure -- I think the Commission certainly wants to make sure that if this thing is created that it actually does what it says what it says it's going to do.

MR. TANNENBAUM: The PUC would certainly be happy to respond to any particular issue. Like I said, I'm not sure what came up yesterday or what that issue is, but if we were pointed to it, we could respond in writing if that's the pleasure of the Commission.

THE CHAIR: Okay. I think -- like I said, I could ask a lot more questions but I think I'm going to forego that opportunity because we've got a lot of other folks to hear from today and we're behind schedule a little bit.

I want to thank all of you for being here to make yourself available. I know you had to rearrange your schedules to do that. I think that your comments were very important to this proceeding, so we thank you for being here.

Our next order of business is we're going to hear testimony from the National Park Service, and we've allotted 20 minutes for that and then there will be obviously the questions by ourselves and the various intervenors.

MS. UNDERHILL: Good morning Mr. Chairman and members of the Commission. Thank you for the opportunity to be here today.

It seems we have had incidents and accidents and some
allegations since we were all gathered here together last
August in this room. In that regard, I would like to assure
the Commission, Ms. Carroll, and Mr. Thaler that I am
authorized to wear this uniform, and I am authorized to testify
here today on behalf of the National Park Service and the Appalachian National Scenic Trail.

I do not need to go on at any great length because you have my prefiled testimony, and the National Park Service and others who have testified on behalf of the Appalachian National Scenic Trail to date have been extremely consistent in their testimony.

I care deeply about the Appalachian Trail, having devoted almost 30 years of my life to its care and protection. I have a 32 -year-old daughter and a 19 -year-old son, and I often refer to the Appalachian Trail as my middle child.

The applicant has inundated you with information about energy replacement and displacement in their effort to reduce impact to the extent practicable to all kinds of resources, including scenic. You've had witnesses try to put the fear of God in you about global warming and the necessity of approving this project so as to avert local disaster.
You've been given all kinds of cute little sound bite statistics about what this project would do to make the world better.

But all this information, it seems to me, is
essentially irrelevant and begs the question: You are Land Use Regulation Commission, and you are guided by legislation, policy, and the standards and criteria in your Comprehensive Land Use Plan. Your job, I think, is to determine if this project in this location can legitimately be approved under your existing guidance.

We have consistently stated that we recognize the benefits associated with the development of renewable forms of energy, and we believe that wind power is an important component of energy generation in this country.

We also have consistently maintained since the first time Harley Lee ever approached us about developing a wind farm in this location that it is not a good location in terms of the negative impacts it would have on the Appalachian Trail.

I do not know why the Natural Resource Council of Maine decided to toss the Appalachian Trail under the bus on this one, but it is not something we will forget any time soon.

Mr. Thaler has presented his own supply of sound bites like this project over 20 years being the equivalent of replacing 3 million traditional incandescent light bulbs. I wonder why we don't just do that instead of building this project. I'm surprised at how little advocacy there has been for conservation.

The mountaintop removal in my home state of West Virginia is heartbreaking, but to think that approval of

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this project and desecration of your beautiful western Maine mountains would do anything to reduce or eliminate that activity seems rather naive to me.

The sound bite that is particularly irksome to me and false besides is the assertion that our concern about this project in this location is tantamount to zoning nearly 1.5 million acres of Maine off limits for wind power.

This statement is hyperbole and just plain misleading. All sections of the Appalachian Trail do not have the same scenic values. The section at stake here is one of the most remote and scenic of the entire 2175-mile foot path. It is considered by many to be one of the absolute jewels of the entire trail.

Portions of the Appalachian Trail in Maine, such as within Baxter State Park, are already off limits to wind power. Beyond that, we evaluate proposed projects on an individual basis taking into consideration the value at stake at any given location.

I'm going to stop there and let Erik Crews, my companion and landscape architect with the forest service, elaborate on his testimony and conclusions that this project represents an unacceptable modification of the landscape.

Thank you for letting me share information with you about the Appalachian Trail and how significant we believe it is to the people of Maine and to the people of this country.

Thank you.
MR. CREWS: Good morning. My name is Erik Crews, and
I'm a landscape architect with the US Forest Service. I've
been with the agency about 16 years, and over that period of
time have conducted scenery impact analyses for over 150
projects. I specialize in this area and have since the
beginning of my career.
I prepared a scenery impact assessment of the
Black Nubble wind farm as a consultant to the National Park
Service, Appalachian Trail Unit. I based my analysis on components of the USDA Forest Service Management System and Scenery Management System. Both systems are currently in use by the Forest Service. These are the covers of those two manuals.

These systems use three basic components to assess desired Scenery Management objectives and to determine potential impacts associated with proposed activities.

These three elements are: Viewer concern level, viewing distance, and landscape character.

The visual management system's approach is the sensitivity level, distance zone, and variety class, respectively.

Black Nubble as seen from the Appalachian National
Scenic Trail is considered sensitivity level a Level 1
individual management system because of its national
significance. It's a congressionally designated National Scenic Trail and managed as a unit of the National Park Service.

The area also has regional significance because of Mount Abraham is a State preserve. Another reason to support the classification is the high visual sensitivity is that research shows that the majority of recreation users have a high expectation to experience quality scenery.

The viewing distance or distance zone is determined in the scenery inventory process by identifying a measured distance from the viewer to an object or land form. And a project level analysis, more specific information, is obtained through site visits, and distance zone is determined by the amount of perceived detail in the landscape.

All views analyzed for this project are middle ground and background views. Middle ground views extend 3 to 5 miles away from the viewer where the viewer can still see details such as vegetation, masses, or rock outcrops.

Background views are those beyond the middle ground and extend to the horizon. Generally background views reveal only land forms, which are often obscured by atmospheric haze. Some patterns may be visible in the landscape; the details are not.

Landscape character refers to the physical features of the land: Water bodies, vegetation, rock outcrops, and
human modifications. It also refers to the uniqueness of the landscape as compared to other landscapes in the area or region.

Black Nubble is seen from the Appalachian Trail and side trails. It has a predominantly naturally appearing landscape character. The logging activities, the military base, and two ski areas are in the vicinity. They represent minor intrusions into the scenic landscape along the National Scenic Trail.

The striking and beautiful mountain, Black Nubble would be considered in the digital management system as a Class B common landscape. Bigelow Mountain, with its jagged rocky ridgeline and steep slopes would be considered a Class A landscape.

To determine the visual quality objective best suited for managing the scenery of Black Nubble, the Visual Management System considers components: Sensitivity level, distance zone, and variety class. As stated, Black Nubble would be inventoried as sensitivity Level 1, variety Class B, and is seen in both middle ground and background views.

This matrix, which comes from the Visual Management System handbook shows that middle ground and background landscapes in variety Class B, sensitivity Level 1 views should match the partial retention visual quality objective. This is consistent with how the scenery visible from the Appalachian

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Trail is managed on National Forest lands.
This just creates a baseline reference of how lands with this level of scenic sensitivity and character and at these distances would be managed. You can see I've drawn a little box around the two categories that would apply in this situation.

Partial retention visual quality objective requires all proposed activities to remain subordinate when in the context of the characteristic landscape and barred from naturally occurring form, line, color, and texture.

This photograph shows the natural appearing character of Black Nubble, the views from the Appalachian Trail, and Saddleback Junior. Black Nubble is seen in the middle ground at a distance of 4.1 miles. Details of vegetation masses are visible, and those are rock outcrops. Note the distant mountains behind Black Nubble. These are considered the background, the blue hazed-covered mountains just beyond the ridge.

The Appalachian Trail and side trail viewpoints considered in this analysis were Saddleback Mountain, The Horn, Saddleback Junior, Mount Abraham, Spaulding Mountain, Sugarloaf Summit, and Crocker Mountain.

Computer simulations were produced for each of these viewpoints. To accurately replicate real-world scale, these images must be viewed at a distance of 1.4 times the image
width. For example, an image projected at 10 feet wide must be viewed at 14 feet away to replicate that real-world scale.

This is a view from Saddleback Mountain.
Black Nubble is seen at 5.6 miles away, 18 turbines would be visible, as well as associated roads and landings.

This is a simulation of the view from The Horn. Eighteen turbines, roads, and landings would be visible at 4.6 miles away.

Exhibit C simulation is a view from Saddleback Junior. Sixteen turbines would be visible at a distance of 4.1 miles, as will roads and landings.

This is a view from Mount Abraham summit, 6.3 miles. 18 turbines would be visible. The view from Spaulding Mountain at 5.1 miles; Sugarloaf summit at 6 ; and Crocker Mountain at 3.2 miles.

To determine whether the proposed development would meet the inventoried partial retention visual quality objective, I look at a degree of contrast between the turbines, roads, and landings and the elements of form, line, color, and texture in the surrounding landscape. I also look at the scale of the entire project and of the individual turbines within the context of that landscape and the land forms.

As was demonstrated in the computer simulations, the overall scale of this project will be excessive, encompassing the entire mountaintop, and the scale of individual turbines is 460
totally unrelated to anything else in the landscape.
Contrast in form, line, and color are extreme, barring from no other landscape elements. These impacts will be long term, if not permanent. The partial retention visual quality objective cannot be met with this level of scenic impact.

The Visual Management System categorizes this type of impact as unacceptable modification. Unacceptable modification is used to describe activities of a scale or size which are excessive or poorly related to surrounding land forms where the overall extent of activities is excessive or where contrast, and form, line, color, and texture are excessive. Unacceptable modification includes those impacts which exceed ten years' duration.

The Visual Management System was designed for use on National Forest lands; however, it's the most widely utilized scenery inventory impact assessment tool available. It's been used by the other government agencies, private organizations, and has been taught in universities throughout the United States and Canada.

How does this scenery analysis relate to LURC permitting regulations?

Under LURC standards, Chapter 10.25-E, Item B, it states that proposed structures and other visual and intrusive development shall be placed on locations least likely to block
or interrupt scenic views.
In the previous hearing Dr. Palmer indicated the views would not be interrupted because there was not scenery behind Black Nubble and Redington. But the photo simulations and photographs show that scenic background mountains are visible.

Construction of 18 turbines along the ridgeline would most certainly interrupt scenic views of these background mountains.

Chapter 10.25-E, Item C states that development shall preserve the natural character of the ridgeline. The natural character of the ridgeline cannot be preserved with construction of this wind farm. It will be drastically and permanently altered.

This photo is of a similar project at Mars Hill, I'm sure you're all familiar with this. The Black Nubble proposal would construct the roads and landings for each of 18 turbines. These landings would create a terraced effect across the ridge. Black Nubble landings would be rectangular. The appearance of roads and terracing would not retain the natural character of the ridgeline.

Maine Mountain Power engineers plan to construct roads with a toolbox approach. Currently the site specifics of cut-and-fill is not known, therefore, scenery impacts cannot be fully analyzed and compliance with the LURC standards 10.24 and 462
10.25 cannot be determined.

I might add that none of the simulations in mine or Mr. DeWan's accurately depict the road and landing and cut-and-fill because the information is simply not available.

Chapter 10.24 requires the proposed activities create no undue adverse effect on existing uses, scenic character, and natural and historic resources in the area.

I looked at three different web dictionaries for a definition of the word "undue." Dictionary.com defines it as unwarranted or excessive; American Heritage dictionary defines undue as exceeding what is appropriate or excessive; Merriam-Webster's says, exceeding fitness or excessive.

Undue adverse effect means the same thing as Visual Management System classification of unacceptable modification. The scale of this project is excessive, the contrast in form, line, and color is excessive and the duration of impacts is excessive.

Chapter 10.24 requirements cannot be met with the Black Nubble wind farm proposal.

One might ask why two landscape architects can come up with such different conclusions. Individual management systems, there are the three components that I described before, and I've addressed each of those three components and my analysis differs from Mr. DeWan's. Under viewer concern, Mr. DeWan based his user concern levels on a hiker survey which
used flawed simulations that he originally prepared.
In the simulations he has displayed today, he has included information about how far away the simulations must be viewed to accurately depict real-world scale. The simulations used in his hiker survey did not contain that information.

The fact that he's included that in the hearing this year to me indicates that he's recognized the flaws in the simulations at this point that was inherent last year.

I basically used the concern levels on the viewer-type recreation, which research has shown have a higher expectation for quality scenery, the national significance of the Appalachian Trail and the regional significance of Mount Abraham.

The second component, the view distance, Mr. DeWan bases his analysis on measured view distances to determine the middle ground and background, which is a component of both the Scenery Management and Visual Management System, but that type of view distance determination is more appropriate for a landscape scale inventory.

The Visual Management System says that to the extent the middle ground is 3 to 5 miles, whereas the Scenery Management System says 4 miles. The reason that that change was made in the system was to simplify the process of inventory mapping on a large-scale scenery inventory. When a National Forest landscape architect might be inventorying a million
acres of land, in a map exercise, it's difficult to determine if the middle ground is going to be 3 or 5 miles.

That's a site-specific determination that is made during a project level scenery analysis such as this. That's where our views differ on this. I based my analysis on the amount of detail that is perceived in the landscape from specific viewpoints.

The third component is landscape character. Everything that I've read from Mr. DeWan, he continually describes the visibility of all the human modifications in the landscape -- the Navy base, the logging activities, the ski areas -- when in fact there's only two locations on the trail in this area where these ski areas are visible, and they're minor intrusions compared to the overall landscape character.

The Navy base is barely noticeable, you see the roads, and you see some of the logging activities; but the overall character of the landscape is that of a naturally occurring landscape. That's what I based my analysis on.

When looking at a map, yes, ski area developments are in very close proximity to the trail. You just don't see them. The don't play a role in the overall context of the experience of what the hikers have out there.

The fourth item, which is from the LURC standards, Chapter 10.24, Mr. DeWan defines the term undue in your standard of no undue adverse effect as no more than necessary.

An example, a statement such as the construction of Black Nubble wind farm would create no more adverse effect than necessary. This is a very low threshold to me. That means that the applicant would have to actually deliberately create adverse effects.

I define the word undue as excessive, as do the three dictionary references that I showed, and I believe that the construction of Black Nubble wind farm will create excessive adverse effects.

Thank you.
MS. HILTON: I have just a couple of questions. I think I know the answer to one of them.

## EXAMINATION OF ERIK CREWS

## BY MS. HILTON:

Q. You mentioned that the ski slopes were minor intrusions early on in your presentation here.

Is that because you can only see them from two locations from the AT?
A. The two locations they are visible from in between Saddleback Mountain and The Horn, and then over on Crocker Mountain.

The duration of views and the overall experience that one has, they don't represent a major intrusion visually. From the other views, such as Saddleback Junior or Mount Abraham, or Spaulding Mountain, they're not visible

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at all.
Q. So what would it take for them to become a major intrusion?
A. Significant contrasts and form, color, line, texture of the surrounding landscape, and the longer the duration of the viewer, the greater the contrast.
Q. So if you were, say, driving at the entrance or driving along the public road out here and you looked over and you saw Sugarloaf from the mountain, what would that be?
A. From down here, that would be a significant impact. But you have to put that in context of the viewer concern level and the surrounding landscape.

Within the content and the character of this development and the viewers that would be using the area, they may perceive that as fitting within the context of this area.
Q. One other question. How far away would this wind farm have to be such that it would not be considered excessive?
A. In the Visual Management System, the terminology that I described, the undue -- excuse me, the unacceptable modification is not dependent on viewing distance at any viewing -- for that classification in the Visual Management System it specifically says regardless of distance, viewing distance.
Q. So it wouldn't matter how large they are?
A. It's all -- when you do this type of analysis, it is all based on how they appear in the landscape from specific viewpoints, so trying to come up with a hypothetical situation takes away from the process, the methodology of assessing scenery impacts.

## EXAMINATION OF ERIK CREWS

## BY MS. KURTZ:

Q. The testimony that we got from you -- or your testimony that's in black and white, that diagram, the dqo matrix, it doesn't show it in color, so I couldn't tell on here what you had outlined. Could you go back to that slide.
A. If you follow the chart, the Class B landscape, the middle ground sensitivity Level 1 in the background, sensitivity Level 1 down to the two blocks that say PR, which stands for partial retention, in the Scenery Management or Visual Management Inventory process, that would be the desired management based on the conditions of these three components: Distance, sensitivity level, and landscape character classification under the Forest Service Visual Management System.
Q. So partial retention of the view --
A. No, a partial retention is terminology specific to the Visual Management System that is defined as impacts. It remains subordinate to the character of the landscape, and it borrows from the form, line, color, and texture of the

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surrounding natural landscape.
As I said before, this is the objective -- at my National Forest in North Carolina, it's the minimal level of scenic protection offered to the Appalachian Scenic Trail, the Blue Ridge Parkway, and other areas of high visual concern.
Q. The length of the trail has been described as somewhere around 30 miles, and I'm not sure if that goes from Bigelow or how far back it goes. That's a number we'll be hearing somewhere else.

How much of that ridgeline -- or how much of that trail is ridgeline and how much of that ridgeline -- how often are you at the top looking out seeing a 360-degree view opposed to down in the valley or in the woods where you can't see, you know, more than 20 feet into the woods?

How much of that 32 -mile length is panoramic, 360 view?
A. I don't know how to answer that specifically. I did a GIS analysis using aerial imaginary and overlaid it with other data, scenery analysis from the turbines back across the landscape.

In that analysis, picking out areas of deciduous forests or open alpine areas that passes through, I determine at about 9 percent of that 34 miles, I believe it is, that you would have views over to this area.

When conducting a scenery analysis, you use the worst-case scenario. When I conduct a scenery analysis, if it's in a deciduous forest, I always do it leaf off.

You consider it for average, good visibility. If you have in a section of a trail, for example, if you have two or three prominent viewpoints or vistas, those are the areas that you analyze impacts for.

Those types of areas would also be used by day hikers, possibly, and they may go up to say Saddleback Junior and sit for a half hour or longer.

So your duration of view from the user could be highly variable. So you want to consider the impacts in the worst-case scenario from the most open viewpoints.
Q. I think that's sort of where I'm trying to go. I'm just wondering, how much -- when I hike, I like to hike but I'm generally looking for a view. I run a day camp and the kids always want to go to the mountains where they can see something at the top.

I'm just wondering how much of that 32 miles -- 9 percent would be 3.5 miles -- when you get -- how much of that experience, that ridgeline experience, are you going to be able to see the turbines?
A. Of that 9 percent, I don't have the figures at hand of how much of that is ridgeline and how much of it may be from mid elevation location such as Poplar Ridge or some of the

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other locations. I didn't break it out like that.
Q. Okay. I was listening -- trying to figure out, sort of synthesizing some of the language.

Is it safe to say -- not safe to say -- as you describe form, line, and color and seeing something within a landscape that you're looking at whatever you're seeing is within an aggregate or within a larger picture? Are you seeing something within a larger picture?

I guess the metaphor that I keep coming up with was Stonehenge. When you see Stonehenge, you see all the individual blocks but you see the whole thing.

Would this be comparable -- would the turbines be comparable to maybe painting one of those rocks bright pink, the Stonehenge rocks, bright pink or purple or something that we see a broad field that you recognize as a landscape but then there's something that is out of place.

Is that an accurate metaphor?
A. I would say that's a fair analogy because what you're looking at in a scenery analysis is the contrast between introduced elements and the landscape character.

The fact that this -- the predominant landscape character is that of a natural appearing landscape, a forested landscape, and you introduce these large white linear features that are moving, that will create an
extreme contrast between those introduced human-created elements and the natural landscape that is being viewed within.

So yes, when you look at Stonehenge and you see the gray of all those rocks and the form of the overall structure and one of them is bright pink, then there's an extreme contrast there.

I would say that that is a good analogy.
MS. KURTZ: Thank you.

## EXAMINATION OF ERIK CREWS

## BY MR. HARVEY:

Q. Just to question you on these computer simulations because applicants, I think, were all photographs that tried to demonstrate views.

How do you -- in terms of accuracy, because the views -- many of the views that they presented in their testimony tried to illustrate there were filtered views, and most of your computer simulation kind of look to me like we're standing on a fire tower looking from each one of these viewpoints looking across. I'm sure that's not what you intended.

How do you give us kind of the immediate foreground that we're looking at in terms of the filtering effect, because pretty clearly when you're walking through most of the woods around here, there aren't that many cases there 472
are open vistas.
I know that's not true everywhere. I'm just trying to make sure that we're looking at the same thing here. A view is a view, and it shouldn't look a whole lot different depending on whether you took the picture or somebody else did.
A. Right, right, I understand your question. The viewpoints that I analyzed, with the exception of the Crocker Mountain viewpoint, are all open vistas. They are not filtered-through foreground vegetation.

At Mount Spaulding the viewpoint is standing above the tree line, and Saddleback, The Horn, Saddleback Junior are an alpine area with low vegetation. The foreground vegetation and terrain is depicted in these simulations as this one, the land drops away from you in front there, so you don't see it as much.

But in these other areas you see some of the land there in front of you and some of the low growing vegetation.

These are the open viewpoints, the exception being Mount Crocker. The reason I included the Crocker viewpoint is because it's the closest, and in this environment a single weather event could destroy the foreground screening vegetation.

When I do scenery analysis for a timber sale, for
example, I consider vegetative screening. When I do a scenery analysis for something such as a broadcast tower, a federal highway project, anything that is a long-term or permanent modification to the landscape, I do not consider that as screen.

The vegetation could be eliminated through disease or a weather event but the highway or the broadcast tower or the wind turbines are still going to be there.
Q. I'll let the applicant, perhaps he may ask you some about some of these views. I'm looking at the Crocker Mountain one. It doesn't look like the one I saw before. Anyway.

Just tell me why would you use -- why would you use a computer simulator as opposed to a real-time view? There's the ones you took with a digital camera. Why do you think these are better than the other?
A. With the computer simulator view, all of the viewpoints that are analyzed, the atmospheric conditions can be set to the same settings.

If you use a photograph, for one example, each time you get out there and take the photograph, your atmospheric conditions are going to change.

So you can't compare the impacts from Viewpoint 1 to the impacts of Viewpoint 2 because conditions change when you move from one viewpoint to another.

With a computer simulation, the atmospheric
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conditions are set at a linear gradient across back into the distance.

So it's the same for each simulation. If you look at the simulation that the turbines are 4 miles away and you look a simulation where they're 6 miles away, the effect of that haze is relative to the distance that's being viewed and can be compared from one simulation to the next.

That's one of the advantages.
Q. So should -- I assume when I'm looking at these that I'm looking at the best case scenario in terms of the view opportunity, from a weather perspective, I guess?
A. It's obviously -- you know, these are produced where there's not a heavy fog or anything obscuring the view. The haze distance setting is an average for summer obscurity but there may be days when it's clear.

Another advantage that I might mention is that with the simulations with this computer program, it actually has the ability to show cut-and-fill across the terrain. Had that information been provided, I would be able to model what that would look like, the cut-and-fill of the roads and landings, but that is not depicted in these simulations because the information was not provided.

But that's a huge advantage of a computer simulation as well.

THE CHAIR: I can appreciate that.
EXAMINATION OF PAM UNDERHILL

## BY MS. HILTON:

Q. Two things, one question for Pam Underhill. You may have already mentioned this and I missed it.

When you talk about this portion of the AT being the most remote and scenic of the AT and jewel, does that wording, or that identification, show up in any kind of comprehensive plan for the AT or any kind of document that looks at that AT?
A. I think I said it's some of the most remote and scenic. In my prefiled testimony I identified several other sites, like within the Smokey Mountains National Park, the White Mountains of New Hampshire, the Roan Mountains of Virginia, so there are several places.

In our Comprehensive Plan for the Appalachian Scenic Trail, we do talk about managing areas, preserving the remote areas of the trail. Obviously in its over 2000-mile trek from Maine to Georgia, it goes through a variety of landscapes. It comes down through the mountains, crosses valleys and rivers. It even goes through some small trail towns.

The sections that are now remote and somewhat pristine, we do have management direction to try to preserve those areas of the trail.
Q. That's something that's in writing?
A. Yes.
Q. That's part of the plan?
A. Yes.

## EXAMINATION OF ERIK CREWS

## BY MS. HILTON:

Q. The other -- I guess just something that I noted is that in your simulations, I don't think I see any evidence of like logging or logging roads, clearcuts?
A. The data that I obtained did actually have logging roads in there. From some of these views, they're not evident. When you go back to the actual photograph, you analyze this in detail and they're just not that evident.

This is a photograph from Saddleback Junior here. When you compare the simulations to the photograph and try to pick out the roads that are you included in the simulations, they're just not all that noticeable. This is why you're not seeing them.

MS. HILTON: Thank you.
MR. CREWS: Thank you.
THE CHAIR: Rebecca, Gwen, are you all set?
With that being I guess we'll move on to
cross-examination.
MR. THALER: Mr. Chairman, if I could suggest, I've got to move some stuff over. We're almost at our break time.

Can we take our break now?
THE CHAIR: I think that the court reporter might enjoy that.
(There was a break in the hearing at 10:38 a.m. and the hearing resumed at 10:54 a.m.)

MR. THALER: Good morning Ms. Underhill. I'm going to stand because I'm getting old and my eyes need distance.

Mr. Crews, I have a few questions for you.
EXAMINATION OF ERIK CREWS

## BY MR. THALER:

Q. I believe you said -- and I just want to confirm for the record -- that the VMS or SMS assessment approaches that you have talked about are to be used on federal lands only; is that correct?
A. No, I did not say that. They were written by Forest Service landscape architects but have been used extensively by nonfederal agencies.
Q. Are you aware that the Land Use Regulation Commission had last year a consultant, Jim Palmer, on scenic impact issues?
A. Yes.
Q. Did you see Mr. Palmer's comments to the Commission after the hearing last summer about your use of the US Forest Service approach on evaluating impacts of the project on private land?

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1 A. I don't recall seeing that.
Q. Let me show you a memo from Mr. Palmer to Marcia Spencer-Famous that was then copied to all parties dated August 8th, 2006. I ask if you would read aloud as I give copies to the Commission and Sarah Tracy gives to the intervenors his paragraph No. 1.
A. Erik Crews presented the US Forest Service's approach to classifying their land. It does not apply to LURC private lands because the management value goals are different.
Q. Is that the first time you saw Mr. Palmer's statement?
A. It is.
Q. Now, you testified last summer that you had gone up to part of the 34,32 miles on the AT in this area in June 2006; correct?
A. Yes.
Q. Have you been up there since the two days in June 2006?
A. No, sir.
Q. Had you been there before June 2006?
A. No, sir.
Q. During the time that you were up there, you didn't get to Crocker Mountain, north or south; correct?
A. That's correct.
Q. You didn't get to Poplar Ridge, either; correct?
A. No, I did not.
Q. You didn't get to Spaulding, either?
A. No.
Q. So, when you -- let me hold on for a second.

Your testimony that you gave last summer included a simulation of a view of what was then proposed. The simulation was a view from Sugarloaf Cirque; do you remember that?
A. Yes, sir.
Q. You remember that from Sugarloaf Cirque at that time, according to your simulation, you were fairly close to the Redington winds turbines?
A. Yes, sir.
Q. Let me show you again what will be an MMP exhibit. This was your Exhibit D-4-B, simulated view of proposed project from Sugarloaf Cirque.

Do you recognize that?
A. No, this is not my work.
Q. Was that Ms. Vissering's?
A. I couldn't say for sure.
Q. All right. It does say photo by Jean Vissering.

Would you agree generally that you, when you did your simulation, you had turbines roughly in that location, roughly those sizes?
A. This is -- that would be difficult to say without having other images to compare. I have not seen this before.
Q. You would agree, though, that the current project -- the
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revised proposal -- is different in that there would be no turbines visible from Sugarloaf Cirque; correct?
A. I would agree, yes.
Q. So the Black Nubble turbines that are proposed now would not be seen by anybody at Sugarloaf Cirque; correct?
A. Yes, I would agree with that.
Q. Now, Commissioner Harvey was asking you some questions about Crocker Mountain, and I understand you've said that you haven't been there.

Let me just show you -- we'll show you in a minute your simulation of Crocker and I believe you testified -try to stand out of the way of the Commission here, I'm sorry, it's a little awkward -- that -- orally you said this morning that all your simulations were open views except for Crocker; correct?
A. That's correct.
Q. This view that you're showing here certainly looks like it's open in that you don't have any trees blocking any of the turbines that are displayed in that simulation; correct?
A. In the written testimony with which this was submitted, there is a -- well, on the image right there, there is a disclaimer stating that foreground vegetation may be more dense and that this image was included because it's the closest view to the proposed project and that since the
project is a long-term impact, that vegetative screening from critical viewpoints like this should be considered -the screening should not be considered; the viewpoints should be considered.
Q. So here, as you're using a computer simulation, but it's not showing what somebody hiking today up on Crocker Mountain would see; correct? I mean, taking the turbines aside, you wouldn't be able to see Black Nubble when you're on the summit of Crocker Mountain; correct?
A. I understand it's visible for the surveyor cut.
Q. I'm talking about on the summit, not off the summit on the surveyor cut.
A. No, my understanding is that the vegetation screens the view of Black Nubble at this point; and as I said, the point of even including this was to demonstrate that if a weather event occurred that eliminated the vegetation, the wind farm would still be there, it would be visible.
Q. In fact, and you are aware that the Appalachian Mountain Club's book on these mountains said that Crocker is a wooded summit?
A. No, I was not aware of it.
Q. In terms of your discussions about Sugarloaf mountaintop, would you agree that -- that's accessible by a short side trail from the AT; is that correct?
A. It is accessible.

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Q. It's an official -- whatever --
A. Blue-blazed trail, yes, sir.
Q. On that blue-blazed trail, you've been up to the top of Sugarloaf?
A. Yes, I have.
Q. And you agree that there's several large cell towers, buildings, picnic tables, chair lifts, things like that?
A. Yes, I do agree with that, and hikers along the Appalachian Trail can choose to take those side trails or not.
Q. Right. In fact, I think you indicated that you saw a number of hikers or people up there who didn't seem deterred?
A. We saw hikers that came up from the resort.
Q. Now, you also testified about where you might be able to see the ski resorts; do you recall talking about that?
A. Yes, sir.
Q. Have you been over to the Bigelows, to the west peak of Bigelow?
A. No, sir, I have not.
Q. Are you aware that from the west peak of Bigelow -- were you here yesterday when Mr. DeWan testified?
A. No, sir, I wasn't.
Q. But you've reviewed his photos; correct?
A. I reviewed his written testimony, yes.
Q. Are you aware that from the west peak of the Bigelows you can squarely see all of the -- most of the slopes, the ski slopes of Sugarloaf?
A. Yes, I am aware of it.
Q. Are you also aware that from the west peak of the Bigelows you can see the Sugarloaf golf course, lagoons, things like that?
A. The viewpoints that I analyzed were included in my list. I didn't analyze any viewpoints from the Bigelows.

Scenery analysis is a site-specific task. When you get over there on Bigelow Mountain and look back this way, the landscape character is different.

It's different than what is described for the viewpoints that I've analyzed.
Q. Now, you have as your second photo Turbine 9, the cut in the Turbine 9, Mars Hill; do you recall that?
A. Yes.
Q. Where did you get that photo from?
A. It was e-mailed to me by J. T. Horn of the Appalachian Trail Conservancy.
Q. You haven't been up to Mars Hill?
A. No, sir, I have not.
Q. Are you aware that the applicant's experts have said that they're going to be clearing for the turbine base pad maybe $1 / 8$ of what had to be done at the Mars Hill

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Turbine 9?
A. I read in Mr. DeWan's testimony the specifications of the dimensions of the clearing pads, the rectangular clearing pads.
Q. So you have no personal knowledge that the photo you showed of Turbine 9 in Mars Hill will have any resemblance at all to what will be done if this project is approved at Black Nubble; correct?
A. I don't think anybody knows how it will resemble what's done at Black Nubble because the grading plan, site-specific road and landing design, has not been disclosed.
Q. Are you familiar with LURC's process of a preliminary development plan and a final development plan?
A. I've heard it referred to, yes, sir.
Q. You're aware that we're here on a preliminary development plan?
A. I'm aware of that, but if you are seeking to analyze potential impacts from proposal, the specific information, site-specific information is necessary to fully analyze those impacts.
Q. Would you agree generally, Mr. Crews, that from last summer to this that the proposed turbines for the project are approximately three times further from the Appalachian Trail than they were before?

In other words, before the closest would have been approximately 1 mile, and now it would be approximately 3 miles?
A. That varies with each specific viewpoint analyzed; but from certain viewpoints, yes, the distance is greater, yes.
Q. Would you also agree that in terms of lighting, previously there were 30 lights proposed, now it's down to 7 ?
A. I would -- that's what I've read in the proposal and that's -- I would agree that fewer lights would represent a reduced impact; but when analyzing scenery impacts, you analyze what the proposal is and what the contrasts are within the context of the characteristic landscape.
Q. Mr. Crews, in your testimony, your 2007 testimony, you mention in one location that there would be visible -- I think it's 18 out of 30 turbines. You agree that that must have been a typo. There's not 30 turbines proposed under the revised plan?
A. That definitely is a typo that I must have missed.
Q. Sometimes typos happen.
A. They do.
Q. It doesn't mean there's any evil intent behind a typo?
A. Certainly not.
Q. In terms of your prior testimony -- by the way, you said in 2006 that at the Sugarloaf summit the view is dominated

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by three communication towers, a ski lift terminus, and two large buildings, and that's because you can actually walk from the trail and touch those structures; correct?
A. The side trail empties out into a large open area up here at the top, and yes, you can go right to the base of those towers.
Q. And you can't go right to the base of the Black Nubble towers and touch them from public property; correct?
A. Unless it's posted otherwise, I would assume so.
Q. Well, let's --
A. I've not been there.
Q. Have you been to Stonehenge by the way, since the question came up?
A. Yes.
Q. So have I. If you had a pink Stonehenge pillar, you could actually put your hand on it because that's public property; right?
A. No, actually they've got it gated off.
Q. Well, you can get within 20 feet of the pillar; correct?
A. Whatever distance, you can see them, yes.
Q. You can see them from about 20 feet away as opposed to the turbines on Black Nubble from which on the AT the closest point that somebody on a public road could get where they could see it would be 4 miles; correct?
A. The question related more to the idea of contrast and
color, particularly in that case. In any scenery analysis, the contrast that you're analyzing is specific to a viewpoint and the distance that the object being viewed as and what the user concern was.

MR. THALER: Mr. Chairman, how much time do I have?
THE CHAIR: 10 minutes.
MR. THALER: 10 minutes, thank you. And I apologize
for talking quickly but I'm not given much time here this morning.
BY MR. THALER:
Q. Mr. Crews, it's also my understanding in response to a question from Commission Hilton that your position is that basically if you can see wind turbines, even if they're 15 miles from the Appalachian Trail, that would be an unacceptable modification; correct?
A. When I answered that question what I was describing is the terminology used in individual management system. Certainly on a site-specific analysis, as any introduced element in the landscape, is further away from the viewpoint then the impacts of that are reduced.

No, I wouldn't say that at any distance that it would be an unacceptable modification.
Q. Last summer you said 10 miles, do you remember that, that was at least a minimum that you said if you could see it from 10 miles away anywhere along the trail, that would be 488
an unacceptable modification; do you recall that?
A. It depends on the extent of the project at the time. When you're talking about the full project across the two mountaintops, those seen from a distance of 10 miles with the excessive scale of those projects.

It would probably be determined to be an unacceptable modification. As you may know, the Avery Peak across the way here is 6.1 miles, and you can see the 20 -foot high structure on it, even on a day like today that's fairly hazy.
Q. I agree. Were you here when this exhibit was marked yesterday?
A. No, sir, I was not.
Q. I'll represent to you this was, I believe, Exhibit 22-B and commissioners and Ms. Underhill was given a copy.

You're familiar with the concept of relative height; correct?
A. Sure.
Q. You even talked about it in terms of the hiker survey when you said that was one of the flaws of Mr. DeWan's analysis because you said the hikers weren't told how far away from their eyes to hold the pictures; is that correct?
A. Correct.
Q. Were you aware that Market Decisions, who did the survey, had on the photographs how far -- on the back of the
photographs -- how far people were to hold them and they instructed people on that?
A. The examples that I saw in the hearing last year did not have that information on them.
Q. If you hold 22-B out approximately 24 inches, and we look at The Horns on Bigelow, which is 9.7 miles, pretty close to 10 , you'll see the relative height of the turbines.

Would you agree with me is maybe -- Mr. DeWan what has .19 inches. Do they look about .19 inches to you?
A. In my opinion this is clearly useless information. Any scenery analysis is conducted on a site-specific basis and you're determining the contrast of the introduced element within the elements of the characteristic landscape.
Q. Mr. Crews, I understand that you may not like or agree with Mr. DeWan's analysis. I have a simple physics question for you.

Would you agree that a turbine, the Black Nubble turbine -- you know the stacks of them, you've simulated them -- from 9.7 miles away are going to be if not .19 inches, surely less than half an inch high.

Would you agree with that?
A. I would assume that the calculations used to develop this document are correct.
Q. So is it your testimony that seeing something that maybe is .19 inches high 9,10 miles away is an unacceptable

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modification?
A. When you do a scenery analysis, you have to look at the whole picture. This is one stick figure on a piece of white paper.
Q. I asked you a general question. I'll restate the question.

Is it your position that seeing -- even if you saw all 18 Black Nubble turbines from 10 miles away a quarter inch high that that would be an unacceptable modification that this Commission or no Commission or board anywhere should permit?
A. No, it has to be determined on a site-specific basis.
Q. Let me move quickly to your dictionary definitions of undue.

You said that your definition of undue was excessive. Did you then go and look at what the definition of excessive was on your Internet dictionaries?
A. No, sir, I did not.
Q. I'll represent to you that excessive by dictionary.com is going beyond the usual necessary or proper limit or degree. Webster, exceeding what is usual, necessary, proper, or normal.

So being more than necessary is comparable to what Mr. DeWan's definition was; correct?
A. In the context in which I heard him make the sentence at
the hearing last year, the sentence that I included in my presentation seemed to be more appropriate that no more adverse impacts would be created than were necessary to build the wind farm proposal.
Q. I just have one more question for Mr. Crews and then I have a couple for Pam and then I'll be done.

Did you -- I have to ask a preliminary question and then ask my last question to you, Mr. Crews.

Did you review all the prefiled testimony or only that of Mr. DeWan in terms of the applicant's testimony?
A. Just Mr. DeWan's.
Q. So you didn't review Mr. Lee's prefiled in which he provided the Maine legislature's definition of undue adverse impact; is that correct?
A. No, sir, I did not see that.

MR. THALER: Moving to -- do you want me to call you
Ms. Underhill?
MS. UNDERHILL: You may call me what you like. EXAMINATION OF PAM UNDERHILL

## BY MR. THALER:

Q. You mentioned that the Commission should be familiar with the law and we agree with that.

Are you aware that -- you quoted the Maine Trail System statute in your testimony; do you recall that?
A. Yes.
Q. Are you aware that what, for example, the Land Use Regulation Commission did pursuant to that statute was to in part create a subdistrict called a P-RR subdistrict that would include the Appalachian Trail running through the unorganized territories, are you familiar with that?
A. Yes.
Q. Are you also familiar that in a P-RR subdistrict there's a 250-foot wide buffer on either side of the trail?
A. I thought it was on 200 feet on either side of the trail, but I am aware that it exists.
Q. It's certainly not 1000 feet or a mile or 2 miles; correct?
A. Yes, correct.
Q. Let me just ask you quickly, the Black Nubble property is private property; correct?
A. Yes, it is.
Q. Does the National Park Service have a scenic easement on any portion of the project site?
A. No, we do not.
Q. Has the National Park Service sought to acquire a scenic easement or purchase either Black Nubble or Redington?
A. No.
Q. We've seen photographs, particularly again from the Bigelows, for example, west peak and I'm sure you're familiar with it, looking from the Appalachian Trail back
towards Sugarloaf where you have a very nice view of the ski slopes up behind us here and the lagoons and things like that.

Did the National Park Service oppose the development of the ski resort or any expansions of Sugarloaf?
A. Not that I'm aware of but I'm not exactly sure of the timing and scheduling of when the Sugarloaf ski area came into operation or when it's been expanded.

But I did -- I have indicated in my testimony previously that the National Park Service alone cannot protect all of the values that are important to the Appalachian National Scenic Trail, and we would like to create a climate of concern around the trail, and we would appreciate LURC's assistance in helping to protect this national resource.
Q. A climate of concern, as you describe it, could be 10 or 15 miles away from the trail; correct?
A. It depends on the section of the trail and the values that are at stake.

MR. THALER: Mr. Chairman, I have no further questions. Thank you. Did I finish under 20 minutes?

THE CHAIR: I'm going to have to give Mr. Plouffe a few extra minutes, I'm sure.

I assume you're next, Mr. Plouffe.
MR. PLOUFFE: I think so.
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THE CHAIR: Come right up.

## EXAMINATION OF ERIK CREWS

## BY MR. HARVEY:

Q. While we're transitioning here, Mr. Crews, did you -- the applicant, of course, had the obligation to do a complete analysis of a huge area around this wind farm proposal and presented a lot of viewpoints.

Your simulations did not include all of the viewpoints that he provided; is that correct?
A. That's correct. I only analyzed from the viewpoints of this section of the Appalachian Trail.
Q. From --
A. From this section of the Appalachian Trail from Saddleback Mountain to Crocker Mountain.
Q. So your views were selected based on the proximity to the trail and the project; right?
A. That's correct.

MR. PLOUFFE: I'm Bill Plouffe, and I represent a number of intervenors. I really only have a few questions. I might not even use my whole 10 minutes, Mr. Chairman.

## EXAMINATION OF ERIK CREWS

## BY MR. PLOUFFE:

Q. Going to the bottom line here, cutting back this project from Redington and Black Nubble to just Black Nubble, has that, in your professional opinions, significantly changed
the visual impacts on the Appalachian Trail?
A. It certainly reduces the impacts because it's one mountain instead of two; but in the analysis it was determined that the contrast with the form, line, color, texture and overall scale of the project is still excessive and represents a significant impact.
Q. Did Mr. DeWan's visual impact assessment follow the methodology in either the Scenery Management System or Visual Management System?
A. He made a reference to it in a few locations, but he didn't follow the methodology exactly as is spelled out in the systems.

He placed much greater emphasis on items that are less important in the process described in the Visual Management System.
Q. You were unable, based on the information that you had available to you, to model the cut-and-fill aspect of the roads on Black Nubble; is that right?
A. That's correct.
Q. If you had had that information and assuming that there are cuts-and-fills, what would be the likely impact of those visually?
A. They -- the cut-and-fill would increase the visual contrast between the disturbed areas and the surrounding landscape.

On steep slopes where the road traverses the slope, the cut-and-fill could be extensive. Where they are blasting into rock, the color contrast of the white rock against the forested landscape could be very noticeable.
Q. So if you, from a layperson's perspective, were to look at a cut-and-fill you see rock or some kind of riprap above the road and the same below the road instead of natural vegetation?
A. That's correct; or in certain cases if it was solid rock, you may see a blasted vertical cut face above the road, and then the fill material or overcast -- side cast materials from that blasting down on the lower side of the road.
Q. So without that information, would it be fair to say that you cannot do a complete visual impact assessment?
A. That is absolutely true.
Q. But your visual impact assessment, even without that, concludes that this is excessive?
A. That's correct.
Q. I believe there was testimony in written form from

Dr. Palmer. You've been asked one question about his testimony last time.

I believe it said that the human eye cannot make out forms at anything beyond 8.9 miles.

Do you have a comment on that?
A. It depends on what the object is, the size of the object, the atmospheric conditions, the typical atmospheric conditions at the site.

To make blanket statements like that without taking into consideration the site-specific information can be very misleading.
Q. Mr. Thaler gave you a handout of what Mr. DeWan prepared of windmills supposedly representing the height of windmills at various points, and you began to tell him that you didn't think that was useful information.

Could you expand on that?
A. Well, once again as I've said repeatedly, when doing a scenery analysis, it is a site-specific task.

You take into consideration the landscape character from a specific location as seen from a specific location. You take into consideration your concern level, you take into consideration how the objects will appear in the landscape and how they will contrast with form, line, color, texture and the existing landscape, and looking at a stick figure on a piece of white paper has no resemblance whatsoever what these things will actually look like on the ground.

So in terms of a scenery analysis, no, I don't find this to be useful; from a physics standpoint as Mr. Thaler described, it's interesting but it has little relevance to

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a site-specific scenery analysis.
Q. Yesterday we heard Mr. DeWan talk about holding one's hand out and moving -- spacing the index finger and the thumb and gauging the visual impact by how high that is, a variant on that figure you just looked at.

Isn't it true as a matter of physics that the mountain ridges also fit within a fairly small space between the finger and thumb and distances?
A. Absolutely. Depending on the viewing distances, yes. In the 16 years that I've worked with the Forest Service and done Scenery Management, I've never been taught or seen anyone assess scenery impacts by that technique.

MR. PLOUFFE: Thank you, Erik.

## EXAMINATION OF PAM UNDERHILL

## BY MR. PLOUFFE:

Q. Pam, when was the Appalachian Trail designated as a National Scenic Trail?
A. In 1968.
Q. So if Sugarloaf Mountain was constructed -- the Sugarloaf Mountain ski area were constructed before 1968, would there have been any opportunity for the federal government to comment in favor or in opposition?
A. No.

MR. PLOUFFE: Thank you. That's all I have,
Mr. Chairman.

THE CHAIR: Thank you. NRCM. While Peter is coming down here, Mr. Crews --

## EXAMINATION OF ERIK CREWS

## BY MR. HARVEY:

Q. In just listening to your presentation on your scenic
system that you used, it seems kind of formalistic and that's not a criticism.

It obviously has to work. You're almost saying that there is a very objective system and there are assumptions involved here.

Is that true? Are you personally making assumptions that drive how the analysis comes out?
A. That is the beauty of using a standardized system such as the Visual Management System and the Scenic Management System.

It introduces an objective methodology, a repeatable methodology, that can be used from project to project, and by following the process and applying the definitions of the various terminologies, we're able to come up with the most consistent and objective means to assess scenery impacts.
Q. So I guess it's -- your contention is that there are very -- you don't have to make any key assumptions here that might drive this analysis one way or the other?
A. The determination -- through the use of the simulations 500

minutes, right?
MR. DIDISHEIM: I've got 10 minutes.
I'm Pete Didisheim, and I'm with the Natural
Resources Council of Maine, and I have some questions for
Mr. Crews to begin with.
THE CHAIR: Is that microphone on? Your voice sounds a little -- I don't know if everyone's hearing it, that all.

## EXAMINATION OF ERIK CREWS

BY MR. DIDISHEIM:
Q. Mr. Crews, one of your simulations, Exhibit F, is of what a hiker allegedly would see of Black Nubble from the top of Sugarloaf Mountain; is that correct?
A. Yes.
Q. And you've been to the top?

1 A. Yes, I have.
Q. I'd like to talk a little bit about the development that exists on the top of Sugarloaf Mountain. I'd like to show a few slides.

Just so that we are all quite aware of what is at the top of Sugarloaf Mountain, the second tallest mountain in Maine, if you can just click through some of these, there's three cell phone towers, is that correct, to the best of your knowledge?
A. Yes.
Q. And there is four buildings up there to the best of your knowledge?
A. I recall seeing two. I'm sure that that's correct.
Q. Quite a large structure. There's a chair lift?
A. Hm-hmm (indicates yes.)
Q. Guide wires, here you can see the large facility. Looking over towards Redington and Black Nubble the chair lifts?
A. Yes.
Q. Now, your simulation includes none of this, none of these objects in the foreground. Can you explain why?
A. Yes, because when you stand below those objects with them to the back looking to the west, they're all behind you.
Q. The blue-blazed trail that comes up is not below any of this, so how does a hiker get below any of this?
A. I would disagree. The blue-blazed trail comes up from the

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west and comes out into the opening below into the west of all of this.
Q. These were taken five days ago.
A. Have you been to the site?
Q. Yes, I've been several times.
A. Then you'll realize what I'm saying is correct.
Q. So none of these are relevant to a visual assessment if you're surrounded by these structures?
A. Yes, they are. They are relevant in terms of the context of the surrounding landscape, yes.
Q. You have said that the ski areas visible -- this is the corner of the National Trail corridor, this is about 150, 200 feet from the summit; correct?
A. I'll take your word on that.
Q. So the boundary of the Appalachian Trail is pretty close to the top?
A. Again, I'll have to defer to you on that.
Q. You have said that the ski areas in the area are essentially invisible, little visibility and visible from only two small locations; is that correct?
A. From the trail itself, that's correct.
Q. From the trail itself. You made a very discrete distinction there. Not from any of the side trails.
A. The two locations that I was referring to are the view between the Saddleback and The Horn looking back toward
the Saddleback ski area and over at Crocker Mountain.
Q. Have you been to either of those locations?
A. No, I have not.
Q. You had a quote earlier this morning, you just don't see development. When you were saying, you just don't see development, you weren't talking based on personal experience?
A. I was basing that on the views that I did experience while on the trail and from photographs that I've seen as well.
Q. This is about 50 feet from the top of Sugarloaf looking down on this village.

So would you call this fitting -- blending in with the environment?
A. I'm not used to the term blending in with the environment. No, that is on the other side of the summit. That's on the east side of the summit looking down.
Q. In looking over what you described, this is Bigelow Range in the distance; right?
A. I believe that is correct.
Q. You've not been to the Bigelow Range?
A. No.
Q. And the Bigelow Range you mention is a Class A in terms of visual resource?
A. Hm-hmm (indicates yes).
Q. So all of this village, six-story hotel, base lodge, lifts

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hundreds of condominiums are all in the relative foreground, about two miles' distance in front of a Class A visual resource?
A. And viewed from the top of the ski slopes. I have no involvement in preparing any sort of scenery assessment associated with the development of this resort or classifying the inventory.

It's really not relevant to the viewpoints that I analyzed for the Black Nubble proposal. Yes, obviously there's a resort right next to a State preserve that we classify as Class A.
Q. They might be relevant to the hiker's experience?
A. Absolutely. It will definitely affect the hiker's experience from the Bigelows.
Q. And it's not subordinate to the landscape?
A. Absolutely not.
Q. So it's probably considered unacceptable if you ran it through your system?
A. It's an existing impact.
Q. And it's more than 10 years so it would meet one of those criteria?
A. When you're doing a site-specific analysis, you're analyzing the existing condition of landscape and the effects of a proposed activity within that landscape.

If you are now proposing to put a water tower in this
landscape, then it wouldn't be that noticeable within the context of that existing landscape.

That's not how the Scenery Management System works.
Q. I just want to be sure I understand. You had simulations of seven locations, and you've been to two of those, as best I can tell -- the top of Sugarloaf and Saddleback Junior -- but you have not been to five of the other ones? The Horn, Hebron, Spaulding, Crocker, and Saddleback, you've not been to any of those sites?
A. That's correct.
Q. So the simulations were done where, based on?
A. The simulations were done based on photographs and GIS data of the locations along the trail.

I took geographic information system data, digital elevation model, and a superimposed aerial imagery to show where the open areas of the landscape existed and where the Appalachian Trail route crossed through those open landscapes.

I identified those points and brought those into the visualization software from the GIS application and were confirmed with Appalachian Trail Conservancy managers.
Q. This is the view from Spaulding. You had a simulation in which there are no trees. This was taken four days ago at the top of Spaulding. This is the view that exists today.
A. The view that I prepared for Spaulding was based on the

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GIS coordinates from an ATC employee and a photograph taken at those GPS coordinate locations, and you're much further down the slope of the opening to where the trees obscure the view quite a bit more than the photograph did.
Q. Do you know when that photograph was taken?
A. I would have to look back and provide that information to you some other time.

When considering long-term impacts such as a wind farm, as I've stated before, vegetative screening really should not even be considered.

Look at those trees --
Q. Those trees are growing back. Can you agree that they can also grow back and obscure a view?
A. Oh, absolutely. Absolutely.
Q. Are you saying that you only consider eliminating screens to increase the view and you don't consider them growing back and obscuring the view?
A. When you do a scenery analysis, you want to analyze for the worst-case scenario.
Q. And the worst case is blowdown anywhere to open up any view, so really what's the difference between an opening and a closed section of the trail?
A. Well -- I mean, that's a good point. The fact that we have identified numerous open views that have clear views to the proposed development, those are the viewpoints from
which the most critical views exist and they need to be considered in the analysis.

But you're right, at any point along the trail where there are filtered views, vegetation could be killed by a weather event or a disease and more views opened up and that is a critical thing to consider.
Q. Other views could open up and views could disappear?
A. It's possible. In the alpine areas it's very unlikely that vegetation taller than what's typical for those alpine areas, such as Saddleback Junior, it's unlikely those would grow high enough to obscure the view.

MR. DIDISHEIM: How much time do I have? 5 minutes.
THE CHAIR: That's being generous. Look, it's 11:30, now. I don't want to start Mr. Plouffe's testimony until after lunch because it wouldn't be fair to him for consistency.

This is an important topic and we're all interested in it, so I'm going to let the discussion go, but we're going to be done by 12 o'clock.

MS. UNDERHILL: Mr. Crews actually has a plane to catch out of Bangor.

THE CHAIR: We're going to be done by 12 . We've got one more questioner. If we're done before 12 that's even better.

I think the Commission's interested in this
discussion, and I assume all the intervenors and the applicant
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are as well. I don't want to cut it off and then go home and wonder why we didn't ask all these questions.

If everybody will buy into that, that's what I'd like to do, thank you.

MR. DIDISHEIM: I don't have many more questions,
Mr. Chairman.
BY MR. DIDISHEIM:
Q. I just want to make sure, most of these simulations were done on your computer in North Carolina I presume?
A. That's correct.
Q. With data that was given to you electronically and a few photos?
A. Could you repeat that?
Q. With data that you gathered electronically and photos that were submitted by organizations in opposition to the project?
A. I used a variety of data sources for GIS analysis and for the simulations that included GPS coordinates, trail location data, USGS digital information models, USGS aerial imagery, and color orthophotos. I used the CAD file from the applicant. Many different data sources.
Q. But very little of it was first-hand experience on the trail?
A. I hiked a section from the --
Q. Your testimony has the two sections that you've hiked?
A. Right.
Q. Collectively you've touched maybe 5 percent of the segment of the trail?
A. Maybe that.
Q. You included the photo of the Mars Hill Turbine 9 when you testified that you had not visited that site, but you include it because it's of a similar project.

I assume by similar you just mean that it's a wind farm?
10 A. It's a wind farm on a mountain ridge.
11 Q. A wind farm on a mountain ridge?
12
A. In this region.
Q. You have said that your scenic and visual analysis system can be used in any location. It can be applied generally across the landscape, not just --
A. Hm-hmm (indicates yes).
Q. Okay. Now, if the ridge were within a few miles of the Appalachian Trail, I presume you would apply your system and conclude that it was unacceptable?
A. It would depend on the site-specific analysis.

MR. DIDISHEIM: I have a couple of questions for Pam. EXAMINATION OF PAM UNDERHILL

## BY MR. DIDISHEIM:

Q. Pam, you've been to the top of Sugarloaf ski area.

Do you believe that it's --
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A. Actually I have not been to the top of Sugarloaf ski area.
Q. You've not been to the top of the mountain?
A. No, I have not.
Q. Can I maybe have for the record clarity of how much of the trail between Route 4 and 27 you have been?
A. I have hiked up from Route 4 to the top of Saddleback and over to The Horn and a little beyond The Horn and back.
Q. So you've not been to Saddleback Junior, the Poplar Ridge?
A. I'm sorry, I have been to Saddleback Junior.
Q. Saddleback Junior is as far as you've gone, but you haven't been to Poplar Ridge to Spaulding?
A. No, I have not.
Q. The stretch, Orbeton stream, any of that stretch?
A. No.
Q. That's helpful. So you have walked this stretch leading up to The Horn and you can look back and see parts of Saddleback ski area.

When did you do that hike?
A. Well, it would have been back during the time when we were involved in the issue of the ski area expansion, so that was around 2000, 1999, in that vicinity.
Q. Okay. So do you have any reason to disagree with an observation that if one is walking that hike today and looks back towards Saddleback, you would see a lodge, parking lots, condominiums, and ski slopes?
A. My recollection is you see very little of it. As you're coming back from The Horn towards Route 4, you see it for a very short duration.
Q. But that's based on your recollection and that could be --
A. Clarify --
Q. -- based on a current photo?
A. Right. I've been to the ski area. I'm certainly well aware that they have done improvements to the base lodge and other activities down lower on the mountain.
Q. So you have not been to the top of Sugarloaf ski area. So the photos that I just showed you with all the structure, you weren't really --
A. I haven't touched that stuff.
Q. Did you review and approve the photo simulation from the top of Sugarloaf and these other ones that Erik Crews did?
A. I don't know what you mean by review and approve.
Q. As they were submitted into the record, did you receive them, take a look at them as part of your packet?
A. I certainly did, yes.
Q. But you had no first-hand knowledge of the cell towers, the buildings, the chair lift, all the other activities up there?
A. I'm aware that they're up there and I have great confidence in my staff and my colleagues.
Q. But you did nothing to suggest Erik that maybe you should

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A. No, I think Erik addressed the fact that what we were looking at were some trails looking out at Black Nubble.

You know, Peter, certainly the trail has a great variety of experiences on it. We can't undue existing development nor do we seek to.
Q. Some of those structures possibly were introduced since the establishment of the National corridor?
A. And you make decisions about where -- you pick your fights. Where there's already an area that's compromised by human development, you're going to have less concern about additional development going there.

Where there are sections of the trail that are pristine, there's an objective to maintain that.
Q. Do you have any data --

THE CHAIR: How much longer are you going here now?
MR. DIDISHEIM: Two questions.
THE CHAIR: We've got to wrap it up here.
BY MR. DIDISHEIM:
Q. You had said quite emphatically this morning that the National Park Service does not support a protected scenic buffer around the Appalachian Trail.

The Appalachian Trail has 281 miles in Maine?
A. 285 in length.
Q. Could you name a stretch --
A. Excuse me, did you say we do not support a scenic buffer around the trail? We've been very dedicated to creating a scenic buffer around the trail.
Q. Okay, a protected corridor of 3 or 4 miles?
A. Okay.
Q. You haven't established a position on that, that you would

9 like a protective corridor of 3 or 4 miles on both sides 10 of the Appalachian Trail?
A. No, we have not sought that, sought to acquire that kind of interest with the trail.
Q. Can you name a stretch of the Appalachian Trail in Maine within 4 miles, or at 4 miles, where you believe a wind farm would be acceptable?
A. Not off the top of my head.

THE CHAIR: That's it. CLF, are you asking questions?

MR. MAHONEY: Yes, we are.
THE CHAIR: You've got 15 minutes.
MR. MAHONEY: Good morning. My name is Sean Mahoney.
I'm with the Conservation Law Foundation. I have questions for you first, Ms. Underhill, and then for Mr. Crews.

## EXAMINATION OF PAM UNDERHILL

BY MR. MAHONEY:
Q. First of all I want to thank you both for your service. I don't think anybody here disputes that the trail is a national treasure.

That said, I was surprised, to say the very least, at some of your remarks this morning, Ms. Underhill.

Is the really the position of the National Park Service, DOI, and the federal government that global warming is irrelevant to this proceeding?
A. I think what I said was that the charge of this Land Use Regulation Commission is to evaluate the appropriateness of this use on the landscape.

I am not disputing in any way on behalf of myself,
the National Park Service, the Department of the Interior, or the federal government that global warming is a concern.
Q. Is it irrelevant to this proceeding?
A. I think it's not relevant to the charge of this Commission.
Q. You were here yesterday for the testimony of Dr. Cameron Wake; correct?
A. Actually I was not. I left the proceedings before he testified.
Q. Are you familiar with the Northeast Climate Impact

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## Assessment Report?

A. No.
Q. You stated at the beginning of your testimony this morning that the Commission has been presented with "cute little statistics about global warming." You made that statement?
A. I said sound bites.
Q. You said cute little statistics. What cute little statistics were you referring to if you missed Dr. Wake's testimony yesterday?
A. I'm referring to some of the information that has been in the prefiled testimony. I was referring to some of the statistics of the Natural Resource Council of Maine and I specifically elaborated on those.
Q. Did you review the testimony of Dr. Wake who provided explicit testimony on the impact of global warming in this area of the state of Maine?
A. No.
Q. Is it your position that the undisputed impacts of global warming will not impact the Appalachian Trail?
A. We are all concerned about the impacts of global warming. It's a huge issue. And there are impacts that could result to the Appalachian Trail from global warming.

Obviously we've got tough tradeoffs to deal with here.
Q. That said, you still believe that global warming is not an issue for this proceeding?
A. I don't -- I don't -- I don't know.
Q. You stated that you're from West Virginia?
A. I live in West Virginia now.
Q. Have you personally witnessed the destruction from coal mining, and by that I mean both surface or mountaintop removal, as well as underground mining?
A. I have not visited sites in West Virginia. I certainly have seen plenty of that activity in photographs and news and whatnot.
Q. So you're aware of the impact that not only the mining has but also the actual burning of coal has on the environment and habitat that the Appalachian Trail goes through?
A. Certainly.
Q. In your view, would you rather have a new coal plant and all the impacts associated with that, or new renewable sources of energy?
A. I don't have an answer for that. That's not my area of expertise. It's not my place to testify on that. I'm here to provide information on the Appalachian Trail.
Q. Is it fair for me to assume that by your statement that NRCM threw the Appalachian Trail under the bus and that you won't forget it, that you disagree with NRCM's position on the compromised or scaled-back version of

## Black Nubble?

A. I was very disappointed in their position on that, yes.
Q. Going to your specific testimony, you state that the opposition of the National Park Service here is based solely on the location of this facility; is that correct?
A. Yes, I did.
Q. How much of the Maine Appalachian Trail is high value?
A. I'm not sure what you mean by that.
Q. You make a distinction in your testimony between high value and low value portions of the trail and the high value portions of the trail deserve greater protection than low value portions of the trail?
A. I have not systematically gone through and zoned the Appalachian Trail in Maine in my mind. I'm just very well aware that this section of the Appalachian Trail is considered one of the jewels of the entire trail.
Q. By this section, do you mean just the 32-mile section or 34 -mile section between Saddleback and Sugarloaf?
A. That is the section I'm talking about.
Q. Did that also include, also, the 100-mile wilderness section?
A. No, that is further north, and that's also a lovely section of trail.
Q. Is that high value?
A. I think it probably could be.
Q. Any other portions of the trail that you could state today that would qualify as high value?
A. I think in my testimony I referred to the trail on the Great Smokey Mountains.
Q. No, I'm talking about the trail in Maine.
A. I'm not prepared to say at this time.
Q. So about 132 miles of the 285 miles of the trail, at least, are high value?
A. Yeah. But Sean, in terms of the 100 -mile wilderness, to say that that section of the trail has high value is not to say that there might not be places to site wind farms that would not have an undue adverse impact on the trail.

Those kinds of analyses have not taken place. They will take place on a site-specific basis.
Q. In your rebuttal testimony last year, you stated that you were opposed to anything that was between 1 to 5 miles of the Saddleback to the Sugarloaf portion of the trail; correct?
A. I don't have my rebuttal testimony right in front of me. I know my testimony has indicated that there have been some ten wind projects proposed -- or some eight wind projects proposed within 10 miles of the Appalachian Trail, and this is the only one that we have opposed.
Q. I'll ask you a question about that in a second.

That 1 to 5 miles would be either side of the trail;
A. We would have done a visual analysis, yes.
Q. Were those documents filed with any public agency?
A. I don't know offhand.
Q. Are there any of those wind power projects within 5 miles of the AT?
A. I would have to get back to you on that.
Q. Does anybody else at the National Park Service -- would anybody else at the National Park Service have more information than you would on those projects?
A. Anybody in the National Park Service?
Q. Is there anybody else who would have that information more readily available than yourself?
A. I could check with somebody on my staff who was the primary person working on that, and I could get you that information.
Q. You state in your testimony that since 1968 100,000 acres of land have been purchased out of easement or in fee to protect the trail.

How much of that has occurred in Maine?
A. I think we've acquired some 30,000 acres as part of the protected corridor for the trail in Maine, approximately.
Q. Since 1968 ?
A. Yes.
Q. And the National Park Service has acquired that land?
A. Yes.

1 Q. Where is that?
A. Where is it?
Q. Yes.
A. What do you mean where is it?

5 Q. Where along the trail was that land purchased?
6 A. Starting at the New Hampshire border and --
7 Q. Let's start between Saddleback and Sugarloaf.
8 A. I guess -- I'm sorry, I don't quite understand the
9 question. Is it meaning where was it acquired?
10 Q. I'm asking, was any of that land, 30,000 acres, within the Saddleback to Sugarloaf stretch of the trail?
A. Yes, it was.

3 Q. Where?
A. Well, we acquired a protected border for the trail from the Route 4 extending up. It's a combination of State and federal land. I guess I just don't get what you're asking.
Q. Does any of it extend beyond the 500 -foot buffer that is part of the LURC zoning requirements --
A. Yes.
Q. -- or regulations?
A. Yes.
Q. Where is that?
A. I don't have detailed information at my hands right now. I'm sorry, sir, I certainly can provide it to you. I

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wasn't prepared to answer that kind of question.
Q. Are there any ongoing efforts to acquire land within that 32-mile stretch of the trail, Saddleback to Sugarloaf?
A. Not at the present time.
Q. When did you first find out about this proposed project?
A. The original project or this current project?
Q. The original project.
A. Well, I first became aware of Mr. Lee's interest in putting a wind farm there back in -- sometime in the 1990s I believe or early 1990s. Is that what you're asking?
Q. Sure. Thank you. Since that time has there been any effort to purchase land in fee or easements in that area that was being considered for wind power development?
A. No, we did not seek to purchase Redington or Black Nubble Mountain.
Q. Did you seek to purchase any of the land around that area?
A. We certainly sought to purchase land across Saddleback Mountain and did.
Q. And did. In your testimony you've criticized the mitigation of this project.

Do you not consider the development restriction on Redington Mountain mitigation?
A. I think it's very weak mitigation if it can be considered mitigation at all. It doesn't -- it's not a permanent conservation easement on that mountain.

I think this body already determined that that mountain was not suitable for wind development, so it seems like a rather hollow gesture to me.
Q. What other type of development would the Park Service object to on Redington Mountain? Would it object to sporting camps?
A. I'm not prepared to answer that. I don't even know exactly what a sporting camp consists of.
Q. Has it objected to -- has the National Park Service objected to the plans by the Western Mountain Foundation to have a hut and trail system?
A. No, we had a few concerns about specific elements of that proposal but the overall proposal in general, no.

MR. MAHONEY: Thank you.
EXAMINATION OF ERIK CREWS

## BY MR. MAHONEY

Q. Mr. Crews, your testimony today stated that in your Visual Management System you used a worst case scenario, which is leaf off; correct?
A. Yes, in deciduous forest.
Q. How much of the trail between Saddleback and Sugarloaf is deciduous?
A. I don't have that information. I prepared a GIS analysis that utilizes some of that information, but I don't have that in front of me right now.
Q. When you were doing your analysis for conifers, you assumed that they stay leaf out or did they --
A. In the GIS analysis that I did, I was specifically looking at sections of trail that would offer open or leaf-off deciduous use. That's specifically what I was looking for at the time.
Q. What percentage of users of the AT use the trail during leaf-off period?
A. It depends on the part of the country you're in. Where I'm from quite a few.
Q. How about in Maine?
A. I don't have that information, the percentages of users.
Q. Are you aware of what the season is for through hikers?
A. Up here it's probably September or October. So no, to answer your question, I'm not --.
Q. The Visual Management System and the Scenery Management System, you chose to use the VMS and not the SMS in this case; correct?
A. Yes.
Q. You did that because it was -- in your testimony you said the Visual Management System is closer to the LURC regs and closer to the analysis, but closer to the terminology of the LURC regs and closer to the terminology of the applicants.

When does the Forest Service make the decision to use

Visual Management as opposed to Scenery Management?
A. That's made by the managers. There are many forests that have chosen to continue using the Visual Management System.
Q. My question is: What are the criteria that you use to decide between using one or the other?
A. It depends on which system is used and incorporated into the forest plan, the management plan for that forest.

That choice is made by the forest managers, depending on their preference of the system and the various components of the system.
Q. Now, you didn't do a Scenery Management System analysis of this project; correct?
A. The two systems are virtually identical. The main reason for the update to the Scenery Management System was to incorporate a way to assess the value of cultural landscapes and historic landscapes. It also changes the way that constituent input is gathered and incorporated into forest planning efforts, and some of the terminology was changed.
Q. So does the Scenery Management System involve more public input into the analysis?
A. At the forest planning level. Not more, it just clarifies ways that that information is gathered. In the NEPA process in the federal lands management, it's dictated by

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NEPA.
Q. This project isn't on federal land, it's on private land so NEPA doesn't apply?
A. That's correct, but you were asking me about how this is incorporated into forest planning.
Q. So a Visual Management System is something that is prepared by fed staff without a lot of -- without public input; is that correct?
A. Restate that.
Q. The Scenery Management System you stated has public input into what's considered in that evaluation, and the Visual Management System, I'm asking, is prepared without any public input?
A. No, that's not correct.
Q. So what public input was provided for your analysis?
A. I'm not sure I understand your question.

I analyzed the impacts as proposed by the applicant from the viewpoints identified.
Q. Maybe I'm confused. I thought you told me that the Scenery Management System, one of the changes, incorporates a number of things that the Visual Management System does, and one of those was public input, public uses?
A. It has a description in it of how to gather constituent information. The Visual Management System, forest
planning, and the NEPA process all public input on national forest planning.
Q. So the Scenery Management System is only used when NEPA applies?
A. All actions on federal lands and grounds NEPA is used.

THE CHAIR: Mr. Mahoney, we're at 12 o'clock.
MR. MAHONEY: One final question, please.
THE CHAIR: I'm done.
(There was a luncheon break in the hearing at 12:02 p.m. and the hearing resumed at 12:40 p.m.)

THE CHAIR: I think we're all set to go. Melissa, are you ready? Lisa, ready.

Mr. Plouffe, please proceed.
MR. PLOUFFE: Mr. Chairman, this is the panel of the opposing intervenors. I'd like to introduce each one of them to you sitting at the panel.

This is J. T. Horn, who is here representing the Appalachian Trail Conservancy. This is David Field, Dr. David Field, I should say, from the Maine Appalachian Trail Club. This Jean Vissering, who is a consultant to the Appalachian Trail Conservancy, and she is a visual analysis expert. This is Jody Jones from the Maine Audubon Society, and she'll be testifying on wildlife issues. This is Dr. Kenneth Kimball from the Appalachian Mountain Club.

We have 50 minutes and we're going to start off with

David Field showing an aerial view of the area of the project. Then he's going to sit down, and we are going to go into Ken Kimball's testimony, Jody Jones, Jean Vissering, J. T. Horn, and then David Field will wrap it up. Thank you.

DR. FIELD: This shows the general landscape the Appalachian Trail runs through, Saddleback, up around by Redington, and so forth. This just shows the general landscape of the AT with Black Nubble in the middle here and the trail running from near Route 4 up to near Route 27, which is the relevant area. I don't know why we've been talking about the view from Bigelow at all. But this is a map certainly you have seen.

The yellow apparently represents alpine areas.
Appalachian Trail to Abram, in this first little piece, and this is flying in a small fixed-wing plane. Looking over, that's the Saddleback Mountain Range. Right here in the foreground, going what's called the false summit, which is the saddle on Saddleback. Then up to The Horn. The videographer was leaning out the window. I was getting the wind in the back seat. It wasn't completely still. The Kennebago Mountain in the background. Just flying along the alpine zone on the Saddleback Mountain Range.

Again, this is The Horn. And then there is a large saddle between the horn and Saddleback Junior. Once again, as you look at this, folks, just keep in mind what you're seeing could be better but we'll deal with what we have. You can see

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harvesting along here. It's -- I think you can see pretty well some of the tremendous steepness on the face of this ridgeline and on the central summit area of Black Nubble in these pictures.

We did do pretty much of a 360 there. That's a piece of the road leading up to the Navy SERE, Survival, Evasion, Resistance, and Escape training facility.

Once again, a little clearer, you can see some of the fir ways on Black Nubble in this picture and the openings for some of the test areas for the proposed wind towers. Once again, Flagstaff Lake and the Bigelow Range in the background there, and then looking out towards the Kennebago is Route 16 between Stratton and Rangeley.

That's just a quick overview.
DR. KIMBALL: I want to go through and give a little bit of context. I think, as you know in the CLUP, it talks about not only mountains, but it also talks about areas of mountains, and I think you're all very familiar that in the state of Maine there are actually four mountain areas that have extremely high concentrations of natural ecological recreational resources: Mt. Katahdin, western high mountains area, which we're talking about here today, Mahoosuc Range, and 100 miles of wilderness.

The western high mountain region resources are extremely high, the greatest expanse of high elevation land in

Maine, that is about 2700. A great selection of the high peaks in Maine, cited as a priority area in northern Appalachian Ecoregion by both TMC and the Wildlife Conservation Society. It's got the largest contiguous forest in the western mountain region, and it's major fir-heart-leaved birch subalpine and alpine communities, greatest expanse of Bicknell's thrush habitat. One of the most active stretches on the AT. I want to point out that Black Nubble is not an undistinguished peak in this area.

This gives you a quick context. I think you're pretty familiar with where Black Nubble is right now. It shows the summit as subalpine, alpine areas and so forth.

One thing I think that needs to be kept in perspective here the juxtaposition of Black Nubble with the SERE Navy-based property. Here I've just highlighted and bold where the wind project would be, but also look at juxtaposition to see this project from the AT, the Bigelows and Mt. Abrams preserve because there's a lot of protected lands and high value ecological landscape.

This is looking to Saddleback ridge out towards Black Nubble, and again, I think you can get the sense that there's a lot of ecological integrity moving across.

I want to point out that in the testimony we provided, this is just quoting from the US Fish \& Wildlife Service, which has really coveted the Navy property.

Why is that? Because it's high importance of property for conservation of migratory birds and species listed on the wildlife. Most of the 12,000 acres is forested upland, largely undisturbed and pristine, and a very late successional stage, and you notice from ridge to bottom land, almost to the ridge on Black Nubble, very old and largely undisturbed forests, extremely rare in Maine. Only about 5 percent of the forests in Maine are late successional. Most conservation easements do not provide for that type of protection.

Due to the size of the property and the rarity of lakes, succession, it may be one of the most ecologically valuable tracts along the northern end of the AT.

Is the Navy property entirely wilderness? No. Is it ecologically an area of significance? Yes, it is.

If you take a look at the project itself in the layout of the maps -- I'm sorry, the layout of the roads and the turbines, particularly Turbines 10 through 18 , you're sitting in the middle of an exemplary community. It was documented this summer by the Maine Natural Areas program. The roads to the turbines go dead center in the middle of it. I want to talk about this a little bit more.

This is what the fir-heart-leaved birch community looks like. In the left and upper right photos, the left is with less exposure to the wind, the upper right is more exposure. The lower right is one of the openings, and I think
you can see that ecologically these are entirely different types of communities.

There was a lot made about how small this community was. This is just taken from Mr. Didisheim's testimony, and actually the Maine Natural Areas Program has documented 17, now with Black Nubble 18, of these community types. If you take a look at where it hits, it's actually No. 11 in the largest, and No. 12 is only 72 acres in size.

I'll also point out that the $\mathrm{B}, \mathrm{C}$ ranking, unlike the way it was presented yesterday, is not an important ranking, it's actually above viability ranking. To get on the $\mathrm{B}, \mathrm{C}$ rankings, you have to have -- it only means that it's limited to 20 to 100 occurrences.

The 35 acres and the roads are built dead center through, so there's going to be a tremendous amount of impact, and in the Maine Natural Areas Program description, this is called pristine, except for the openings for the Met towers. I'll also point out that the tree ages are 75 to 100 years. It's very typical of this type of forest. That's the longevity of these species in this kind of environment.

We did go through the site and there was a lot of discussion about steep slopes. There's 3000 feet in elevation and higher, probably about 6,000 feet of road on slopes, 33 to 55 percent of the hike. I don't have time to go down through all of these statistics except to say that particularly for the

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higher number turbines, you're working on extremely steep slopes.

Now, the CLUP goes through them in your regulations, and you're more familiar with them than I, but some of the key things that you look at are visual impacts -- obviously the AT, this is one of the highest mountain road projects in Maine. Extremely steep slopes, soil and severe erosion ratings, wildlife. It has now been documented that you have a pristine fir-heart-leaved birch forest community, 300 acres. Bicknell's thrush has been identified there now.

It's contiguous, almost, with the SERE project. It's got very high ecological value. The technical feasibility here, honestly, is going to be very challenging since I think the documentation earlier this morning and yesterday demonstrate this will be a new thing for Maine.

CLUP. Is this the best reasonable site? We also have Maine's goal of 10 percent of 350 megawatts coming out.

Well, earlier on it was sort of presented this is one of the few, if not only, sites out there. But I think you're all aware from the press and everything else, Mars Hill built 50 megawatts, Stetson and Kibby coming up, almost another 200.

Just a few days ago a project in the planning stage came out, 50 megawatts. The upper St. John Valley, possibly 500 megawatts. Township 19, 50 megawatts in varying planning stages. This excludes the additional megawatts of other
renewables that could come on-line, like biomass, hydro, hydrokinetics. This excludes the existing considerable hydro in Maine.

One of the things that was presented yesterday, and actually I would confess is the research of AMC, I was guilty of following the same hypothesis, but the real question here is are these fir-heart-leaved communities and the Bicknell's thrush really at risk to climate change, or could they be the resilient gene pool, the islands in the sky, to recolonize displaced species, particularly in the low elevation fir forests in the future.

We've got ongoing research, and I would be happy to answer questions later about it, but if you take a look at the historic record of what's happened, pollen microfossil data at the high elevation sites from Mt. Washington through some work by Spear shows that in the warming and cooling periods in the last 9000 years post deglaciation, the middle and low elevation forests changed and responded. The subalpine forests and alpine were uncoupled and did not change, why?

If you look at the temperature record on
Mt. Washington, which is one of the few high elevation weather data assessments we have, you see that it is actually not performing the same way for low elevation sites.

The warming trend in the last 70 years -- remember, the numbers were given to you yesterday -- were from 1970 on.

This record is from 1935. These are in degrees centigrade, but the annual temperature increase up there has been a little bit more than .5 degree, and the winter temperatures have been a little bit less than 1 full degree, whereas in the lower elevations you're seeing something around a 4-degree change. I'll also point out that the summer temperatures here have actually decreased.

I can't go through the reasons here, but as I said I'd be willing to explain it, but the northeast subalpine forest and treeline are highly dependent on exposure to wind, clouds, moisture, mechanical damage, and the heavy rime ice, not temperature. These ecosystems are in and above the planetary layer in the atmosphere.

The other thing I'd point out is in the climate change strategy, there's actually legs to the stool: Technology, renewables -- which we're discussing here today -energy efficiency, and adaptation. The high elevation balsam fir communities are less sensitive, probably, to climate change than the large spruce/fir forests in Maine, and they may be your effusion in the future. Black Nubble has an exemplary community.

MS. JONES: Good afternoon Commissioner Harvey and members of the Commission. My name is Jody Jones. I appreciate the opportunity to come before you to talk about the wildlife impact of the Black Nubble project. I appreciate your
time.
You heard a lot about the undue adverse impacts, and one of my team members is going to be talking about several of these, but I'm primarily here to talk about the issues associated with migrating birds and bats and the undue adverse impact on Bicknell's thrush, the species and the core habitat.

I just want to remind you that the passage rate over Black Nubble is twice that of any other survey done at any other wind power facility. Insect contamination. There are 30 profound targets at that one radar site, we're heading towards the project area.

According to a National Academy of Sciences report, a forested ridge has been identified as one of the highest risk areas for migratory birds and bats, and 90 percent of migrants do not alter their flight path when approaching in an individual study on the site.

No survey effort was done in July and August, and this is identified by the applicant as a critical time period for bats. The risk for birds and bats is a function of both the altitude and the passage rate, so with really high capacity rates, it's important to understand what percent is below the blade area. That's a very important part of the puzzle.

Our conclusion is that the applicant has not met the burden of proof for determining undue adverse impacts to migratory birds and bats.

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The Bicknell's thrush has been documented as occurring up on Black Nubble now, and we believe that Woodlot Alternatives and NRCM have not -- have underestimated the impacts associated with the species.

The impacts go beyond the footprint. It's not just a 64 acres of temporary or permanent clearing or the six male Bicknell's thrush identified as potentially breeding in the area by NRCM.

I'd like to go through the risks of collision with the turbine blades. There are two parameters I'm going to talk about.

Any time you put a road through or develop an area, you create disturbance in the habitat, and that can be from noise, it can be from human activity, it can be from movement of the blades. All those things degrade the habitat.

There's also the opportunity for invasive species colonization, through trucks coming and entering the area, which will degrade the habitat.

Bicknell's thrush are very susceptible to predation. Squirrels have been found to be a real problem, and when you get this edge effect, you also get increased predators in the area as an effect from the formation of the roads.

There are also micro climate changes when you create surfaces from a solar pane, and this is really a problem for the subalpine forest. All these are documented in multiple
sources that were not considered by Woodlot, the National Academy of Science Report, Lambert, who's done a lot of work on Bicknell's thrush, and Drew Langston, also cited by NRCM.

I'd like to talk a little bit about the risk of collision, which IF \& W also had some concerns with.

Habitat is identified as having higher risk in the timing of the courtship display. I'd just like to take an opportunity to describe a courtship display of Bicknell's thrush. It's much like a teenage boy. If you have teenage sons, you know that their insurance rates go up, and there's a reason for that.

They have high-risk behavior associated with car driving, and it's sort of like that with the birds. The go up and they are showing off for mates, and they do it single mindedly right in the area of the rotor blades.

They're bubbling, and have been documented as the most common fatalities reported at wind energy facilities.

All of these have courtship displays like the Bicknell's thrush.

Now, the importance of global warming, I think Dr. Kimball explained a lot of these. The landscape models cannot predict site-specific changes. In Iverson, which was responsible for a lot of these predictions of the complete loss of spruce/fir forests do not predict changes -- perfectly appropriately for landscape modelling but not appropriate for 540
site-specific sites.
Iverson's model averaged the elevation across counties, and Maine's are pretty big. So we concluded that the highest elevations will be the last to change and will be the refuges for the Bicknell's thrush as global warming continues.

We have to remember, 3200 -foot elevation is only $1 / 20$ of 1 percent. That's our analysis in terms of what the impact is going to be.

These islands in the sky will become even more critical as the habitat changes due to global warming, and because the birds nest in very limited habitat, it's going to be disproportionate to the species impact.

I'd like to talk a little bit about -- there's the map, we're going to hand that out. The areas above 3200 feet.

I'd like to also talk a little bit about the fact that the project support is misguided in that it will not replace coal -- we heard that -- it does not reduce mercury contamination, which is a big problem for Bicknell's thrush. The Black Nubble project will not protect the wintering habitat.

The Black Nubble project has not met the burden of proof for risk to migratory birds. It will destroy and degrade habitat; and NRCM testimony says that there are potentially up to 44 males in that area, and will put the Bicknell's thrush at risk of collision.

This site will become even more critical due to global warming, so our message is to get the site right and choose projects that do not have the multiple complex that this site has.

MS. VISSERING: I have a handout. It's really not for looking at while I'm doing the presentation, it's for reference later.

Hello, my name is Jean Vissering. I'm a landscape architect. At the present time I am working in support of four wind projects, two of them are in Vermont, one in New Hampshire, and one in Maine, which is the Kibby project.

I've had the opportunity to view many projects across the United States and Europe, and I have been involved over several years in about 12 projects. That would be involved professionally.

I don't take on a project without doing a minimum of one and up to three days of field assessment in order to determine whether or not I can support the client's position.

I have had in those 12 projects found significant concerns with only two of them, and of those, they were for very different reasons. Of course, I have seen many projects that I think fit very well into their settings.

Now, I do believe that wind energy is an essential component of our energy mix. We are in the early stages of sorting out meaningful siting and evaluative criteria, and of 542
course, high elevation ridgeline sites have historically been considered to be very sensitive sites for a variety of reasons. They also happen to have very high wind resources.

So I think that we will find sites that are suitable but there will also be ones that are inappropriate.

Now, I don't need you to read this entire chart. I want to focus actually on what's on the left.

Now, in evaluating wind energy projects, I think it's important that we not focus on whether people find them beautiful or not because we're never going to find agreement on that point. We can and should be focusing on the specific resources involved in the site and its surroundings, and of course the visual assessment, we're always looking at, usually looking at, the site from outside areas.

Now, Erik Crews used a methodology, as he noted in his prefiled testimony, that is considered to be the basis of all other methodologies. The methodology that I have used is the one that I have adapted. It uses the same principles in that methodology, and it's the same methodology that I use in evaluating all wind projects, it's the one that appeared in the National Academy of Sciences report that I was involved with.

I have to say that the three criterion that I have seen in Mr. DeWan's assessment, the relative height, angle of view, and weather factors are not something I have seen as major components of any other methodology that I've seen.

On this particular chart what I want you to focus on is the left-hand column. These are six factors, six
indicators, that I think are the most important indicators in most wind energy projects: Documented significance, scenic quality, viewer expectation, uniqueness of the resource, duration of view, and proximity to the project.

I've highlighted on this slide the documented significance because I think -- it's partly because I can't illustrate that with a photograph -- but also I think it's one that is very important in looking at an indication of broad public concern and value for a particular resource.

To rise to the level of a National Park is really the highest level of sort of public concern. In addition, of course, the Appalachian Trail has been identified specifically several times in the CLUP.

In terms of looking at significance, documented significance, if you look -- this is a viewshed map. Ignore the pink, that's not what I'm really interested in talking about.

The green areas are areas that represent an ongoing -- ongoing efforts to protect resources in this area. It has been a focus of protection efforts because of the special resources in this area. In turn, of course, those protected areas contribute to the scenic quality.

The tan area is the 12,000 -acre Navy SERE facility.

You can also see from this map that the trail is really making a circle around Black Nubble in a sense. Black Nubble is really a focal point in this landscape. You also get a sense of the duration of view. We have been primarily concerned with that between Route 4 and 16, which is a 34 -mile stretch because of the great proximity.

I want to talk a little bit about the idea of scenic quality. Scenic quality is something that can't be identified and articulated, variables that contribute to scenic quality. Here we're on The Horn looking over towards Black Nubble. What we have here -- one of the primary indicators of scenic quality is diversity. We have diverse topography, diverse vegetative patterns, you add rock elements or perhaps water, you're increasing the amount of diversity. This is a great example of a highly diverse landscape.

As we look back over The Horn and towards Saddleback, you can see some of those very high elevation ridgeline environment, the alpine meadows, the rock faces extending over much of those high summits of those three mountains, increasing, of course, the duration of view of the project.

Then we're up on Saddleback where that continues to -- you continue to have those high alpine foregrounds with very diverse vegetation.

Now, here you can see another indicator, which is the idea of scenic or diverse and intact foreground, middle ground,
and background, so you have a very diverse and intact foreground, the middle ground is the area which would be where you can see details. In most landscapes it appears as green as opposed to blue. And in many landscapes it's that layering of the mountains in the background that also contributes to the view. All those are mountains are contributing to the distant view.

Another factor in this particular landscape is from many viewpoints Black Nubble is seen as the next ridge over, so it is the most proximate ridge that we see. Keep in mind, of course, as Erik pointed out, our simulations don't include roadways.

Now, the diversity of this experience is partly in the different environments as you hike along the trail. This is the crossing at Orbeton Stream. Near Orbeton Stream is this viewpoint, which is very different in character. It's a wooded setting, you're at very close range here, 3.3 miles, and you're looking up at Black Nubble instead of right across or down at it.

Another type of viewpoint is Spaulding Mountain where you're seeing it behind Redington, and, of course, this is near a campsite and it's where directly looking west of the view where people come to look at sunsets.

Now, yes, there are places where you're travelling through the woods, and that's very integral to the experience 546
of hiking a trail. The trail is deliberately maintained as a single track to minimize any disturbance to that landscape.

Of course, it's a high elevation view. That tends to be what hikers want it to be, and here's a different type of view towards Black Nubble from Mount Abraham.

All throughout this area, the Black Nubble Mountain is both a very distinct feature in its form, it's also part of that inner circle of high peaks, so it's very much a part of this landscape.

This is a view looking from the Saddleback towards the Saddleback ski area. Another indicator of scenic quality is the intactness, what level of disturbance exists, and there's been a lot of discussion about that. Clearly the view from Sugarloaf is the most significant view, some of you have been up there, the worst of the views more the Appalachian Trail. This is more typical of the Saddleback ski area.

You can see that the ski area does not extend up to the ridge top anywhere, it -- the changes in the landscape are fairly low in contrast, and not -- certainly not prominent in the view. So certainly there are a number -- a few of, I think we counted probably two places on the trail plus Sugarloaf, where you do get glimpses towards the ski area. I showed this one last time. That's the view from Saddleback Junior towards Sugarloaf. You can make out the tiny portion of the top.

There's from Mount Abraham and -- but I think that
the point here is that because we do see occasional glimpses of development from the trail, I'm not sure that the logical conclusion from that is that it would be appropriate then to develop an entirely new area with a new -- entirely new development of fairly significant scale.

Okay, so we'll return to the chart here. I think the issue with the Black Nubble project is not that it's visible from the AT, but it is how it is seen, over what duration, and what proximity. All wind projects are going to be visible from many locations, from lakes, ponds, hills.

These particular mountains are highly scenic, they are documented as significant, they are unique resources. There's a long duration of view, and they're highly proximate.

The issue that I have here is that this project raises concerns in all six indicators.

So this is my last slide. So the issue here is not the number of turbines, the issue is the site. This is a poorly selected site for this project. There are many possible sites for wind energy projects in Maine as you're discovering.

This one happens to be adjacent to one of the most remote and scenic sections of the Appalachian Trail and would very much change the character of this unique area.

Thank you.
MR. HORN: Good afternoon. My name is J. T. Horn. I worked for ten years for the Appalachian Trail Conservancy. I 548
left my job with ATC back in July to pursue another professional opportunity. And last night as the comments went, one of the members of the public indicated his appreciation for the hard work of the LURC staff and Commissioner Harvey reminded him that you all are volunteers. I'm getting a similar experience on this stage of the case.

I've stayed with this project for two reasons: One is out of professional courtesy of my former employer, ATC, but also because I think the big issues here are grave in terms of the impacts of Appalachian Trail.

In the Park Service testimony this morning there were a number of questions about some of the details of this proposal and the Park Service's familiarity with the site. One of the things about the Appalachian Trail as a 2000-mile long resource is that management is inherently local and for the most part it's private.

The trail is made up of about 4,500 volunteers who contribute 200,000 hours of service in terms of doing trail maintenance. That resource here in Maine means the Maine Appalachian Trail Club, who Dave Field represents, are really most knowledgeable about the site, about the property, and that the Park Service coming from their headquarters in Harpers Ferry, West Virginia is not necessarily in a position to answer some of those really, really detailed questions when they are looking at the trail from a 2000-mile perspective as opposed to
this section of trail here in Maine. So if the Commission has questions, either Dave or myself will be happy to answer them about the various site-specific issues that have been raised.

I wanted to reflect back to the January meeting where you guys voted to overturn the staff recommendation and move towards a denial. In the discussion that I heard at that meeting, there was a very strong sense that this project -- as a two-mountain project -- had some very significant issues. One of those issues was impacts on the Appalachian Trail. Certainly there were other issues as well.

I'm here to tell you that the logic that you applied in moving towards the denial for the two-mountain project applies to the one-mountain project as well. The impacts are still grave, they're still severe, and I find that they're undue.

I also want to put this in context of terms of ATC's position on this issue for many, many years. When Endless Energy first started doing their exploration in this part of Maine, we were very clear at the outset that the Redington Range and Black Nubble was not an acceptable site from our point of view. We were on record with that at the very first time that LURC viewed the meteorological towers, and based on Mr. Lee's testimony yesterday, it appears that you were on record opposing the site even before he purchased it.

And so I guess I want to just be very clear that we
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have been consistent on this issue, we've given the applicant fair warning, going back over 15 years at this point, this is a highly problematic site.

Why is it a problematic site? Well, as Ken had talked about in some of his testimony, this is the most significant mountain area in Maine. It's the largest area above 2700 feet, it's almost a 4000 footer. One of the things that's important about that, though, is that this is the only area outside of the Mahoosucs and outside of Katahdin where you get above the treeline.

In terms of talking about scenic impacts and the impacts to recreation, that above-tree-line hiking experience is something truly rare and unique in Maine. There are not many places where you can go to get above the treeline. The Bigelows, Mount Abram, Saddleback Range, Saddleback Junior are some of the only places that you will find, other than in Baxter and other than in the Mahoosucs, to do that. That resource and the scarcity of that resource is something that I really think has not been emphasized enough in the proceedings.

So, let's talk a little bit about wind energy in terms of how Maine policy deals with it. I mentioned last year that getting ready for last summer's hearing, I read the whole CLUP, which is quite an undertaking. It's a very impressive document. There's a lot in there that talks about the resources of the unorganized territories in Maine, and in the
section under wind energy, it's very clear that not all mountain areas are suitable for wind energy development. Page 59 is very clear about that.

Elsewhere in Maine policy we have very explicit references in the Maine Wind Energy Act of 2003. I'm going to read you a quick section: It's the policy of the State that political subdivisions, agencies, and public officials take every reasonable action to encourage the attraction of appropriately sited wind energy related development.

When you go through all of the testimony Mr. Tannenbaum put forward, the testimony of the intervenors who support citing the regulatory environment, in all of those documents that I have reviewed, there is this caveat for appropriate siting.

Finally I want to talk a little bit about the burden of proof in this case. You, in your CLUP, in the Chapter 10 rules have set the bar very high for rezoning from a protection district to a development direction. The criteria is specifically is substantially equivalent level of protection.

This case is a high-conflict case. This site is a very fragile site, very close to protected resources, and it's safe to say that the testimony that this intervenor cohort is putting to you is that this is a higher conflict site than any of the others that are currently under review by LURC or are proposed in terms of the preliminary analysis that we've done.

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There's a number of things in the CLUP and in the Chapter 10 rules that are high hurdles to cross. It includes best available site, structure shall be located in designated areas to reasonably minimize the visual impact, structure shall be placed least likely to block or interrupt scenic views. For ridge top projects, the development shall preserve the natural character of the ridgeline, and many, many others.

In conclusion, I want to just offer you four
thoughts. These, I think, are the best encapsulation of the issue that's before you.

No. 1, you place a high value on your mountains.
It's very clear in the CLUP and all of your documents; No. 2, these mountains, the western mountains, are amongst the most significant in Maine; No. 3, wind energy can be done at lower elevations far from public resources of statewide significance. We've seen other applications that seem to be doing that and doing it on a profitable basis; and No. 4, wind energy on Black Nubble is a high conflict project that does not meet the criteria.

MR. FIELD: My name is Dave Field. I'm speaking on behalf of the Maine Appalachian Trail Club. You already have my prefiled testimony, and I'll repeat only that the central issue of this case from the perspective of the Appalachian Trail community is aesthetics. That's the core of the trail experience and much of the main experience that draws business
to the state and the region. They don't come for the black flies.

The most extensive visual impact of this proposed development would be that from the Saddleback Mountain Range. I testified before you a year ago last month that from the AT, the proposed development on Black Nubble would have by far the greater impact of all the development that was included in the original Redington Wind Farm project proposed.

You have site visits to a number of existing or proposed wind farm development areas in Maine. I understand that most of you have never hiked across the Saddleback Range -- Rebecca, I bet you've been up there -- or visited the peaks from which Black Nubble would have the greatest impact.

Your staff, in the PowerPoint at your meeting last January, showed you a single picture from the Saddleback Range taken from a point which was perhaps the furthest possible away from Black Nubble. I want to show you now what you've missed, but first I want to repeat a statement from my testimony last year.

From personal experience, I tell you no simulated or photographic representation of the views of the proposed development site that are along the AT comes close to views experienced from the trail itself. Again, I understand your constraints and how busy you are, but it really is unfortunate that you won't have before you vote a relevant site visit.

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This first picture is taken standing right on the Appalachian Trail footpath looking at Black Nubble, which unfortunately was misidentified in the applicant's paperwork as the Redington Pond Range.

Now, what I'm going to do is, you are now standing on top of Saddleback Junior. I'm going to go through a 360-degree panorama. I want you to see the level of development, of visual impact, of human intrusion that is evident from this alpine peak.

Here we're looking over Poplar Ridge towards Cranberry Peak on the Saddleback Range. The fir ways on Crocker, and the shoulder of Redington Pond Range -- oh, and you're looking right at the Navy SERE camp. This is the best view of the Navy camp from the entire Appalachian Trail. You can see a little bit of a roof right there. That's it. Next.

Moving to the right, you're looking at the heavy development on Sugarloaf. Spaulding Mountain. Incidentally, when Harley Lee proposed a wind farm on Sugarloaf, the Maine Appalachian Trail Club in response to LURC said, fine, it's so screwed up already that a few windmills aren't going to make a difference. It's a marginal impact that we took into account.

Looking across when, Hudson Pulp and Paper owned this land, this was all heavily cut for many, many years. You can see the impact of a hundred years of timber management.

Now you're looking out at the Mt. Abrams Range
looking down into Orbeton Stream valley. Again, these are all taken from the summit of Saddleback Junior. There is a greened-up Mead Corporation clearcut. Here's a little from Farmer Mountain. You can see a little bit of a logging road there.

Once again, what's your impression of this landscape. Now we're basically looking towards New Portland, looking down across the town of Madrid, the New Vineyard hills, and remnants of the extensive farmland that was there when my grandmother was born there 100 years ago, 117 years ago. Little bit of a logging road down here. This is looking out over the valley of organized towns, several towns -- not Madrid, it's deorganized.

You're looking out over -- again, my home town. We're looking at communities here. That's Mt. Blue, and then we're looking over towards the Tumbledown Range. Once again, you're looking over a relatively heavily settled area, my hometown area, and what's your general impression of the view.

Here up in the far distance is the Presidential
Range. I don't think you can see it very well. You actually pick up Sunday River ski area right in the middle there, but it's not a big deal.

You're looking at Blueberry Mountain, Big Jackson, Little Jackson, Tumbledown, there's some State-owned land, and the lower slopes of Saddleback and the valley. Once again, areas that been heavily cut for timber again and again and

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again in the 56 years that I've been hiking this mountain and that's the visual impact.

There's the most recent cut that's visible and I apologize. Before I said we were looking at the Presidentials and I was premature. Madison, Adams, Mount Washington off in the distance. That would be the Sunday River ski area, and looking along the shoulder of the Saddleback Range. Once again, the forest.

Here's a view of Saddleback ski area and Saddleback Junior. You're having trouble seeing it, that's good because it's not visible. This is the summit of Saddleback, this is The Horn. This is a big shoulder that comes off The Horn.

You're looking out at Kennebago Lake, Kennebago Mountain.

Now you're picking up bits of the Bigelow Range. You can see a bit of that road there, and if you look carefully, you can see some greened-up cut areas up in there.

Now as we complete the panorama, here we are at the ridgeline of Black Nubble.

And finally, the cone of Black Nubble with the Bigelow Range in the background.

That 360 degrees looking out over towns that have been settled for 150, 200 years, looking over areas that have been cut for timber again and again and again for a hundred years, it is a relatively undisturbed landscape. I'll tell you
again to imagine this.
This issue is not about -- last slide, please. There
we go -- this issue is not about wind power in general, it's not about even wind power in Maine in general. A number of significant projects, as you've been told, are already well on their way to lightning completion in Maine.

This is about this specific project in this specific place, and whether the benefits of this project outweigh the costs of this project. I've enjoyed the views from this area
for more than half a century. I've stood at this spot 100, 150,200 times. I've stood there in storms, I've stood there in silence on very calm days -- they're actually pretty common in this area -- and I beg you to think about the legacy that your decision will leave for future generations such as are represented by this young man.

This is not an ordinary landscape. This is not an ordinary place. Its loss would be sorely felt. The applicant will probably tell you that a better legacy would be to ensure that visitors of this place will have a clear view with unpolluted air.

This specific project would accomplish very little towards that goal, but it would have a devastating effect on the great values that exist there now.

Thank you.
MR. PLOUFFE: So that concludes our panel,
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Mr. Chairman, and they are ready to accept questions.
THE CHAIR: Thank you. Gwen, Rebecca, do you have any questions now or would you like to hear some of the other questions?

We're going to concede our time, at least for the time being. We'll let the applicant go right ahead.
(There was a pause in the hearing.)
MR. MAHONEY: Excuse me, Mr. Chairman, can we get copies --

DR. FIELD: Those are in the prefiled testimony.
Every one of them.
MR. MAHONEY: Dr. Kimball's? The slides that Dr. Kimball used?

THE CHAIR: Do you have his prefiled testimony?
MR. MAHONEY: I don't have his slides.
THE CHAIR: The slides that he used for a summary presentation, they're not in your prefiled testimony?

DR. KIMBALL: Most of those pictures are or they're in the prefiled from Mr. Thaler. I think the one that is not would be the SERE property.

THE CHAIR: The what?
DR. KIMBALL: Of the SERE property, the Navy base just showing the juxtaposition. I'd be happy to provide the PowerPoint.

THE CHAIR: I guess we can provide the PowerPoint if
that's what you would want.
MR. MAHONEY: I would just like to take a look at some of the data that was cited that wasn't in the prefiled that he had from some of the Mt. Washington data, also climate change data as well.

DR. KIMBALL: I'd be happy to present that to you and answer questions on it.

MR. MAHONEY: I guess that's what I'm asking. I'd like to ask questions and I have to have the slides now so I can prepare some questions on them.

THE CHAIR: Okay, I guess I understand what you're doing.

MR. PLOUFFE: Mr. Chairman, I'm going to move Jean Vissering's slide show and Jody Jones' map into the record. THE CHAIR: Where's Marcia? They'll be in the record then. As soon as Marcia comes back, we'll give you the number.

MR. THALER: I'm going to start with Dr. Field. EXAMINATION OF DAVID FIELD

## BY MR. THALER:

Q. Dr. Field, you testified -- actually in your prefiled you say that what this all boils down to is aesthetics, which I assume you mean visual; correct?
A. From the perspective of the Appalachian Trail only.
Q. You've heard testimony last year and this that while I understand that you have a different view, that there are
people who may to wish to see turbines on mountain ridges and see it as a positive sign of progress in the 21st Century?
A. Yes, there are. There are true believers. You're right.
Q. Just as there are true believers saying there shouldn't be any wind power on the mountains; correct?
A. Honest difference of value judgment.
Q. They being a true believer is not a negative necessarily; true?
A. True.
Q. You when you showed your film from the plane, can you explain to the Commission why the camera didn't show the viewer things like the towns of Stratton and Carrabassett Valley, the ski resorts, the condos, the golf courses, and things like that?
A. Probability because they were irrelevant. As I mentioned a moment ago, why in the world all this fuss about the view from Bigelow? That's really not the issue with the Black Nubble development.

You can't see the condos and so forth and Sugarloaf from the Appalachian Trail between Route 4 and Route 27.
Q. Let me just --
A. You don't see the towns. You can take the side trail up to the summit and see -- there are side trails that go to Stratton, too. You look at the biomass plant and a
sawmill, so what.
Q. Maybe it's up to the Commission to decide about so what.

In this terms what's actually out there, you weren't attempting by that film to show only a partial view of what was in the area, were you?
A. The attempt was to show the landscape that's relevant to Black Nubble.
Q. I understand what you may think is relevant. But my question was, did you make an effort to accurately show what was in the general area of Black Nubble including any cultural modifications such as I described?
A. I did not put together the video, I did not take the pictures. In my prefiled, you will find -- are you listening?
Q. I'm absolutely listening.
A. You will find in my prefiled the still photos that I took directly down at the SERE camp, directly down at the big Plum Creek cuts on the -- must be northerly side of Black Nubble. I put that stuff in my prefiled.

MR. THALER: Let me ask you, Sarah, if you could put up DeWan 25.
Q. Would you agree that in the areas of Black Nubble wind farm, which is right here, we have all those different human-made structures and modifications to the environment?

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A. They exist. My testimony had to do with relevance to the Appalachian Trail. I just showed you a panoramic from Saddleback Junior in which most of those things are virtually invisible.
Q. Okay, well, I'm going to follow up on that in a minute because you mentioned Saddleback Junior, but there are other places from the trail where you can see, for example, the ski resorts; correct?
A. There are $2 / 10$ of a mile between Saddleback summit and the False summit where you can see down on the Saddleback.

Ms. Vissering showed you the picture from The Horn of the base lodge area of Saddleback and the very tiptop of the chair lift area, which disappear rather rapidly as you hike south down into the saddle.

MR. THALER: If you could, Sarah, go to the next slide of DeWan.
Q. Now, that's the SERE Navy facility that we've been hearing about is what's called the Dallas Road going to it; is that correct?
A. Hm-hmm (indicates yes.)
Q. Did you see that from the airplane when you were flying over doing your filming?
A. Yes, I told you my prefiled testimony shows a picture of it.
Q. And that is Black Nubble adjacent to the road?
A. That is Black Nubble.
Q. If you could then go to slide 30, DeWan 30. This is a view from the AT of the Saddleback Mountain ski area ski lift about a mile away?
A. Yeah, I think that's from the False summit, just east of the main summit.
Q. Let's go to the next slide, then.
A. That's one I mentioned a moment ago.
Q. Saddleback Mountain ski area seen from the AT, base lodge about a mile and a half away. Do you agree that that's the view you have from the Appalachian Trail?
A. Yes, that's what I described a moment ago.
Q. Okay. We didn't see that in your film when you were filming the area from the airplane; correct?
A. That's correct, we were on the other side of the mountain.
Q. All right. That's where you chose to film. Let's look at Slide 32 -- yeah, 32, did you oppose the Saddleback Mountain ski expansion that was pending before LURC that was recently approved?
A. Not the recent one, no. We went through the whole battle with Saddleback over a long period of time, we got every compromise we felt was possible, the Park Service bought what they could, and the latest development we looked at very carefully and appeared to have no unacceptable impact for the Appalachian Trail. There was a question of

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proximity, there was a question of angle of view.
Q. Would you agree that Mr. DeWan has shown what has been approved as the area of future expansion, and that would be visible -- however much of that would be developed -would be visible from the Appalachian Trail; correct?
A. Correct.
Q. Let me just move back for a moment. I know that you're very familiar with Maine and LURC standards. You heard this morning -- and I assume you would agree -- that the Appalachian Trail under LURC's Chapter 10 regulations is part of the P-RR recreation protection subdistrict; correct?
A. That's correct.
Q. Are you aware that there are many man-made changes that LURC allows and can approve in that district, subdistrict?
A. They have in the 500 -foot zone, to the best of my knowledge, except for reserved rights of way -- well, except for State-owned land, all of that district is inside National Park Service ownership.
Q. My point is that under LURC's jurisdiction, the only State regulatory or legal scope of protection for the AT is 250 feet on either side of the tread path; correct?
A. That's correct, in the original zoning; of course, we tried for more but that's where it ended up.
Q. Now, were you involved in developing the local plan for
the management of the AT in Maine from Grafton Notch to Katahdin?
A. As I told you last year, I wrote it.
Q. I'm sorry?
A. As I told you last year, I wrote it. You handed me a page, which I unfortunately didn't take time to read, and then you made a statement which actually mischaracterized that page an hour later.

I'll be careful not to get snookered again.
Q. Well, it was good of you learn from a snookering experience, apparently, but I certainty wouldn't try to do that again, I guess.

But it is true that in that guide, which you wrote -the draft plan -- that you talk about all mountain peaks along the near the trail are now in public ownership or protected by easement rights with respect to utility and communications facilities, correct, do you remember that?
A. Yeah, I've got the same page in front of me now.
Q. And I read it correctly?
A. I'm going to check this time. What paragraph are you on?
Q. It starts, outside public highway, it says in the middle that entrepreneurs --
A. Okay, all mountain peaks along?
Q. Yes, all mountain peaks along and near the trail, meaning the Appalachian Trail, now in public ownership or

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protected by easement rights.
Are Black Nubble or Redington Mountain in public ownership?
A. They are not.
Q. Are Black Nubble or Redington Mountain protected by easement rights?
A. They are not.
Q. Has the Maine Appalachian Trail Conference ever sought to acquire either the fee or conservation scenic easements or conservation easements on Redington or Black Nubble?
A. It's the Maine Appalachian Trail Club. The answer is no.

MR. THALER: Mr. Field, that's all I have for you at the moment. In the interest of time, I will go to Dr. Kimball. If you would pass the mic down.

EXAMINATION OF KENNETH KIMBALL
BY MR. THALER:
Q. Do you want to call me Ken or Mr. Kimball?
A. Take your pick.
Q. Ken is shorter. Ken, as I understand it, we've got an e-mail that Dave Publicover was going to be away for three weeks, so you're here in his place; correct?
A. That's correct; I'm also his boss.
Q. When he testified last summer, I think you were in the audience?
A. Yes, I was.
Q. Had you reviewed his prefiled testimony last summer before he filed it?
A. Yes, I did read through it.
Q. Have you reviewed in preparation for your testimony here both his prefiled and what he had said, you were familiar with what he said during the hearing; correct?
A. Yes, I went through those.
Q. Is there anything in his testimony, sworn testimony, to the Commission that AMC today is either retracting or correcting?
A. To my memory I can't think of anything outside of what he's retracted already.
Q. One of the things he retracted was saying that there was a contiguous roadless unfragmented block of forests that encompass both Redington and Black Nubble; correct?
A. Yes, I think there was a debate, if my memory is correct, last time about when you look more to the north as to there was a small road that cut through.
Q. In fact, Mr. Publicover, during the hearing when questioned -- by I believe Mr. Didisheim -- he testified that Black Nubble was not within the roadless contiguous unfragmented block of forest; do you recall that?
A. You may be correct; I don't recall either way.
Q. I'll -- the transcript was prepared of that hearing and -it was Mr. Didisheim he said, the question: A significant 568
portion of your testimony talks about the damaging fragmentation effects of the project on the Saddleback, Redington, Crocker roadless complex, and you state that Redington is in the middle of that.

Is Black Nubble within that roadless area?
Mr. Publicover said no.
Was that testimony accurate?
A. Yes, I believe it probably was. I want to point out the point that I was making today is the primary focus AMC had on the hearing last August was on Redington because that was the mountain with the most impact.

When we take a look at this project here, you've got to understand the roadless is built in part -- and I think this was the same term used by Mr. Pelletier -- sensitive with your desktop.

When we went out into the field and we at looked at some of the information as we prepared for Black Nubble and we looked at the juxtaposition relative to the Navy base land, there was still a lot of ecological integrity there.
Q. Mr. Publicover also testified in response to questions from Mr. Didisheim, and I believe Mr. Hinchman from Conservation Law Foundation, that global warming and acid rain are threats to the mountain ecosystems to which the trail runs, correct, would you agree with that?
A. Yes, I would; but I would want to clarify that currently I'm the project investigator of a program that's sponsored by NOAA, which we're doing jointly with Mt. Washington Observatory and the University of New Hampshire.

That project is funded to take a look at that climate change impact in alpine areas as well as air pollution. We started off with the original hypothesis, and this is what I was describing in the beginning here that climate change -- the spruce-fir forests at higher elevations would respond very similarly to the lower elevation. But as we look at the data that we have out there, it's bringing into question whether that's actually true.
Q. So you're testifying -- were you here for Dr. Wake yesterday?
A. Yes, I was.
Q. So you disagree with Dr. Wake's testimony and that of the 60 or so scientists who helped prepared the Union of Concerned Scientists report?
A. Well, that's a sweeping question the way that you answered it.
Q. I don't answer my own questions. I ask them.
A. Basically what Dr. Wake presented, I think the general concepts that he has out there are correct. Are all of the small that were presented possibly correct? Probably not. That's part of what we're pointing out here.

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Q. All right. Now --
A. And I would want to add on because I've actually talked to Dr. Iverson who put the model together, discuss with him some of the data that we have at the high elevation areas.

I think as Mrs. Jones pointed out here, is that model basically is looking at very large cell sizes when it's making its predictions. It really wasn't designed to look at higher elevations.
Q. In your testimony, in your prefiled written testimony, you go on at some length about comparing the Kibby Mountain proposal and its possible impacts with this project's possible impacts; do you recall that?
A. Yes. I think you know we support the Kibby project.
Q. I'm aware of that, which is why I'm going to ask you some of these following questions.

You assert in your testimony that at over 3000 feet elevation that the Maine Mountain Power project would have more land that has slopes over 33 percent, I believe, than Kibby; is that your testimony?
A. I believe that's what my testimony was, there was several amounts of area that were both above 3000 feet in elevation, a lot of that had steep slope.
Q. You picked 3000-foot elevation, but as we know with LURC and DEB, 2700 feet is the general standard.

Are you aware of that?
A. Yes. And the reasons why Dr. Publicover did some of these
analyses -- the reason why 3000 was picked -- that's typically about as high as most logging goes. Not to say that it doesn't go higher, but that's the reason why the 3000 was picked.
Q. Are you aware that logging has gone higher than that in the Black Nubble area here?
A. As I said, there are areas, but in general it does not go above 3000 feet.
Q. When you say that you if I picked -- or Dr. Publicover picked -- 3000 feet for that reason, did Dr. Publicover explain to you that if you take 2700 feet, the LURC standard, as your baseline, that Kibby actually has about triple the amount of steep slopes as the Maine Mountain Power site on Black Nubble?
A. We understand Kibby does have steep slopes, but I would also point out that on Black Nubble, slopes are at considerably higher elevations where you expect to see a lot more precipitation.
Q. Your prefiled that you gave the Comission didn't give them the complete picture because you said that Kibby had less steep slopes than Black Nubble; correct?
A. I'm not sure exactly how was that worded. I didn't commit it to memory.
Q. Did you ever look at 2700 feet elevation and up, the

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A. All the slopes -- yes, Dave did do that.
Q. Did you personally?
A. Did I, no.
Q. One more question, I think, Dr. Kimball. I assume you're generally familiar with the Appalachian Mountain Club Maine Mountains Hiking Book?
A. Yes, I am.
Q. In terms of the mountains of Black Nubble, Redington, and Kibby, isn't it true that the only one of those three mountains for which there is a passage with described heights up to it, Kibby mountain?
A. Yes, but Kibby Mountain is not the one with the project on it; and No. 2 is, I think, the way the question is characterized is a little misleading because a lot of the adjacent mountains look out on Black Nubble.
Q. I understand when you're talking about adjacent. I'm just talking about -- I mean, some of your fellow team members here are focusing just on Black Nubble or just on Kibby or just on Redington.

MR. THALER: Let me move on in the interest of time to Ms. Vissering, if you could pass the mic down please. Just give me a moment.

## BY MR. THALER:

Q. Good afternoon Ms. Vissering.
A. Good afternoon.
Q. Are you currently working for TransCanada with respect to the proposed Kibby Mountain wind farm?
A. I am doing a visual assessment for that project.
Q. Not only are you doing one, you have done one and you have prefiled testimony in that case?
10 A. Yes, that's correct.
Q. In that case you have testified in support of the proposed wind project there?
A. That's correct.
Q. You do talk about a little about Kibby in your testimony, but you testified in this proceeding last summer.

When were you contacted by TransCanada about possibly appearing as their expert in their proceeding? Was that before or --
A. It was after this and it was probably sometime in the fall. It was, I think, maybe September or October.
Q. Now, in your testimony, your prefiled testimony, you say that few, if any, structures can be seen from the open summits.

Isn't it true that on the summit of Saddleback you can see some of the base lodge, condos, things like that?

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MR. THALER: For example, Sarah, if we could look at Slide 31.
Q. Would you agree that you can see a fair amount of structures from the AT in that area?
A. Yes, you can see structures there.
Q. Let me also just clarify something. When you testified last summer, you said that you had gone up to a portion of this 34-mile circle that we're talking about, you had gone up on two days with J. T. Horn and Mr. Crews in June, and you had gone up, I think, a couple months earlier by yourself or with some others?
A. No, I went up with some other people in the wintertime. I think it was March.
Q. And since those two days in June 2006, have you been up hiking any of the Appalachian Trail in the 34-mile study area?
A. No, I have not.
Q. Is it true that the area -- strike that.

Looking at your scenic assessment, have you been to the north -- the summit of north and south Cracker?
A. No, I have not.
Q. Have you been to Poplar Ridge?
A. No, I have not.
Q. Have you been to Spaulding?
A. No.
Q. Have you been to the Bigelows?
A. No.
Q. So you personally don't know what the views would be from those summits; correct?
A. I have not personally been there; I have certainly, as I do for all of my work, refer to photographs taken by ATC staff, but that's -- so those are pretty commonly photographed views.
Q. Would you agree with the general proposition that the size of an object seen by a person will depend in large part on how far the person is from the object?
A. Yes.
Q. Would you agree with the general proposition that as you mover further and further away from a stationary object, it's going to be looking smaller and smaller and smaller; correct?
A. It will appear smaller.
Q. It will not become smaller, but it will appear smaller to the human eye; correct?
A. That's correct.
Q. I know you were here and you saw Mr. DeWan's -- strike that.

Were you here for Mr. DeWan's testimony yesterday?
A. I was.
Q. You're familiar with the concept of relative height and 576
A. As I said in my presentation, those concepts are not ones that are used in any -- I used to teach for 15 years at the University of Vermont, visual assessments, and I've looked at the many methodologies, and those are not considerations that I had ever seen in any methodology.
Q. We'll see. I'm not a scientist or a scenic expert, so I sort of comment from the seat of the pants, but wouldn't you agree that from a layperson's perspective, getting a sense as to how big something is as you move further and further away, is one tool used in assessing the impact of that object as you move around an area?
A. Well, clearly it is a factor in assessing, and as you move away from a project certainly it will appear -- an object will appear smaller. I think what we're talking about -we're certainly talking about the scale.

But -- it's important to understand that as you look at these issues, that is one tiny variable and probably certainly not one of the more important variables in determining what the impact would be.
Q. Let me ask you that, again as a non expert, it would strike me that how big something is to my eye would be a pretty significant question as to how I might react to it.

Am I totally from another planet isn't that the way people -- at least one available -- as to how people react
to something.
(Steve Nadeau joined the hearing at 2:02 p.m.)
A. Context is everything in a visual assessment. It's usually the most important variable.

Understanding the setting in which an object appears, for example, I might very much appreciate seeing a statute of David in Piazza, Italy, but seeing the statue of David up on top of a Camel's Hump, which is one of my favorite mountains in Vermont, it is not where I would want it to appear.

So the context of where you see an object, the scale is also relevant, and I think maybe that is what Mr. DeWan is trying to get at. Scale is the usual terminology.
Q. I'll correct my wording then and use the term scale if that's more comfortable for you.
A. Relative scale would be fine because it is in relationship to the context.
Q. So relative scale, looking at that Exhibit 22-B that we passed out yesterday, and you got, that does tell me, or you, or the Commission what the relative scale of a turbine would be on Black Nubble from certain distances as a matter of physics; correct?
A. Okay, so we're looking at this relative scale. Now, some factors that would be of concern to me would be we're showing this as a line. Now, those -- they are maps, of 578
course, they're not just in a line. They're also white.
The other question is, there are 18 of them, not just one of them. The other question is -- and the most important question, and I think this is my central point -- that those 18 turbines seen in another setting at that particular relative scale would be absolutely fine, I would have no problem. I've found many wind projects where I've seen them at 6 miles away, 4 miles away at these distances.

But if I were to examine every wind project in terms of this variable, how big does it look on a piece of paper, I don't think that I would have much of a professional reputation left.
Q. Ms. Vissering, just so I don't confuse you, I'm certainly not suggesting, nor do I believe Mr. DeWan was, that that's the only variable for a professional or a regulatory body to --
A. It's three variables that he was using.
Q. In fact in your visual impact assessment that is on file with LURC, how the turbines look at Kibby from various distances is something you spent a fair amount of time talking about; isn't that true?
A. From Kibby Mountain, absolutely.
Q. Right. So if it's relevant in the Kibby case, it would seem relevant in the Black Nubble case, correct, the
relative size of turbines from different distances?
A. I didn't talk -- in my testimony on Kibby, I never referred to the relative size of those turbines in the view.

The relative size is not the question there, it is the viewpoint. Kibby Mountain is a very different setting than this one that we're talking about here. The resources are different.
Q. I understand your testimony, the resources are different. We'll come back to you what you did say in your visual impact assessment about what you could see of the Kibby turbine and how that related directly to distance.

But you, in your testimony -- and I believe Ms. Jones as well, Ms. Jones attached it to her prefiled -referenced the National Academy of Science draft or prepublication report about environmental impacts and wind energy projects; correct?
A. Yes, and that's now -- the final version is out now.
Q. I think what Jody submitted and what I had was May 2007 draft. In terms of -- and you served on a committee for that report; correct?
A. Yes.
Q. Is it generally true -- strike that.

You reviewed, I assume, the visual impact part of that report, is that fair to say, as a committee member? 580
A. Yes.
Q. So when the report talks about the most significant impacts for a wind farm are likely to occur within 3 miles of the project, you signed off on that; correct?
A. You're taking that out of context. I happened to have written this report so I know what it says.
Q. Good. So the complete sentence is, the most significant impacts are likely to occur within 3 miles of the projects with impacts possible from sensitive viewing areas up to 8 miles of the project; is that true?
A. Yes, from sensitive viewing areas. That is the critical question, sensitive viewing areas. The most important part of a visual assessment is to understand both the nature of the resource and the sensitivity of the places from which the project is being viewed.
Q. Also in that report, which I gather you wrote, there was a discussion about simulations and visualizations; do you recall that?
A. Yes.
Q. In this case, both you and Mr. DeWan used photo simulation as a general technique?
A. Yes.
Q. Whereas, Mr. Crews, who was here this morning, did not do that; correct?
A. Actually -- I actually don't create photo simulations
myself because I don't have the technology. Mr. Crews did.

The people who do these simulations, some of them refer to those as a photo -- as a simulation, a true simulation, whereas, what I -- other techniques, such as what is in my report, are photo simulations.
Q. When Commissioner Harvey was questioning Mr. Crews this morning -- and I think it's pretty clear on the record -what Mr. Crew did was use a 3D visualization model, a computer model; do you agree with that?
A. Yes.
Q. Do you also agree that with 3D visualization models, such as what Mr. Crews used, they are "not as realistic in appearance and details as a photographic simulation"?
A. I would say that that is true, they have other advantages, but I would agree with that.
Q. So you would agree then that the approach that Mr. Crews used in this proceeding compared to the photo simulation approaches that you and Mr. DeWan used would not be as realistic in appearance and details as the photographic simulation approach; correct?
A. They're very accurate and they eliminate some variables that I think are useful to eliminate as when you're really trying to assess the relative scale of a project in a landscape.

As Mr. Crews said, they have the advantage of being able to model things that are very difficult to do in a photo.
Q. But they're not as realistic in appearance and details?
A. To most people they're hard to look at because -- or they can be hard to look at -- because you're not seeing -- if you're familiar with a particular view, you want to see the details of the landscape.
Q. Ms. Vissering, you wrote that they are, "not as realistic in appearance and details."

Was that an accurate statement?
A. Yes.
Q. You also wrote that some of the factors affecting the landscape context, the first one you write about is distance from the project; is that correct?
A. I would rather not comment -- I know I did write about distance.
Q. I'm not trying to trick you. You said you wrote it and I know it's in the record.

I'm showing you Page 257, Factors Affecting the Landscape Contents.

Is the first variable you list there distance from the project, right there?
A. Yeah, I want to point out that these are pages clipped out from the middle of my report; but, however, having said
that, the particular part that you have clipped out here, the beginning paragraph --
Q. I'm just asking you about --
A. I'm sorry, I'm just trying to remember what is written here. I need to look at it.
Q. Well, the first four words are, distance from the project; is that correct?
A. Factors affecting landscape content, yes, distance from the project.
Q. And the next variable is view duration; correct?
A. Yes; and footnotes on the distance --
Q. Sure. I'm not going into content right now. I'm just trying to identify what you believe are factors affecting the landscape context for the view assessment.
A. Yes. Clearly distance from a project is important, view duration, angle of view. These are sort of a list of many different factors. They're not necessarily listed in terms of importance, but they are the list of factors that need to be considered.
Q. You also in the report wrote about mitigation techniques; do you recall that?
A. Yes.
Q. Once again, I'm not -- I'll walk back over here.

Of the techniques that you wrote about, I understand they may not be in order of importance, appropriate siting 584 is one?
A. The first one.
Q. The next one is down-sizing; correct?
A. That's right.
Q. So on down-sizing you wrote, reducing the scale of the project (numbers of turbines or heights of turbines) could help the project fit more comfortably into its surroundings; is that correct?
A. That is correct.
Q. So that's a technique of mitigation, one technique?
A. Yes, I would say that it is.
Q. Lighting, another mitigation technique. You mentioned the revised FAA lighting guidelines reduce lighting impacts; correct?
A. Yes, I did.
Q. Do you agree with Mr. DeWan that the revised Black Nubble proposal has reduced the number of lights that would be placed on the turbines and potentially see by others?
A. Yeah, I actually would like to make a comment about the reduced lighting from 30 to 7 . It's a little bit of an exaggeration, because those FAA guidelines have been out for some time, and I think that what was used as a figure for the original lighting proposal was one which did not take into account the new FAA guidelines.

So the former guidelines were light every turbine.

In my mind, I would have expected that those FAA guidelines -- new FAA guidelines -- were taken into account at the time of the last hearing.
Q. Do you know what the effective date of those "new" FAA guidelines was?
A. I don't off the top of my head.
Q. Let me show you Page 129 from your portion of the report. Do you see they were effective February 1, 2007?
(Ms. Hilton excused herself from the hearing at 2:15 p.m.)
A. That's true, but those guidelines were being considered seriously at least the time since I had been writing that report and before that. They've been out for about five years.
Q. One other mitigation technique that you mentioned, and I'll move off this, is color.

You said a recent FAA study showed that daytime lighting could be eliminated provided the turbines are white, white often is regarded as more cheerful and less industrial than other colors, which may be part of the reason some people find wind turbines more visually appealing than, for example, cell towers."

Do you agree with that statement?
A. Absolutely.
Q. What color are the wind turbines proposed for

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Black Nubble?
A. White.
Q. Last, and I'll walk over here, at Page 266 of the National Academy of Science report, determination of acceptable or undue aesthetic impacts, you have a discussion about what kind of -- how decision makers should be guided in assessing visual impacts.

Is it true that Box B-2 on that page, which calls out a sample or a model approach, is the Maine Department of Environmental Protection's visual impact assessment criteria MDEP 2003?
A. Yes, I did use that as an example of a review summary, review criteria.
Q. Those were acceptable review criteria that the Maine DEP uses; correct?
A. I thought -- in putting those in the report, I thought they were an example. I didn't think they were necessarily the most perfect but I think they're reasonable -- a reasonable approach to take.
Q. Are you aware that that reasonable approach to take is Chapter 315 of the Maine rules and is what Mr. DeWan did in this case?
A. He said he did, yes. Those are not the variables that he discussed though in his testimony.
Q. You're saying he didn't apply -- he didn't follow

Chapter 315 standards?
A. Those three variables that are listed there received very little discussion in the testimony. I think it would have been a better report.
Q. I understand you disagree with his report and have criticisms of it, and we'll move forward for the moment.

You also -- you wrote a paper called Wind Energy in Vermont's Scenic Landscape: A Discussion Based on the Woodbury Stakeholder Workshops; do you recall that?
A. Yes, that was written in 2002. It was the first time I had been involved with the issue of wind energy, and it was a result of group discussions among many stakeholders in Vermont.
Q. And you wrote the following -- and I'll come over so you can follow me and tell the Commission whether I've read it accurately or not. It's the top of Page 5 of your report.
"The fact that we can actually see -- and the word "see" is underlined -- the wind being turned into power with the rotating blades gives wind turbines a visual appeal that is not true of stationary communication towers like cell towers."

Did I read that correctly?
A. Yes. I think I need to make a comment on that if I could.
Q. Do you disagree with what you said?
A. Absolutely not. I very much agree with it, and I think

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this is an important point.
These are, as I said, many people find these beautiful, I happen to be one of those people. I find wind turbines beautiful.

I do not think they should be everywhere. That's the question we're dealing with here, and I do think that one of the reasons that people find them to be beautiful is because they're white, that more cheerful color that was quoted. I think that there is sort of a visual connection with the wind that does give them a visual appeal; but the critical question is, if you look at other places in my document, the siting is really important and there are places with sensitive resources.
Q. Ms. Vissering --

MR. THALER: Sarah, if you could put up DeWan 4 --
Q. Would you agree -- do you agree, Ms. Vissering, with the numbers that Mr. DeWan put on that table?
A. I'm assuming that they are accurate, yes.

MR. THALER: If you could put up DeWan 42.
Q. Now, I understand that you haven't been to this point of the Appalachian Trail.

Would you agree that from this point of the Appalachian Trail that there are very significant man-made changes in the environment that you can see?
A. This is -- this is an important point here that needs to
be made about this. This does relate to distance.
The closer views of this project are what we're concerned about. This view -- it looks to me like it was taken with a wide-angle lens, so it distorts the prominence of Black Nubble; but aside from that issue, it is true that there are views from the Bigelow Range, they are at a distance of, I think, 9 , around 10 miles from some of the closest points in the Bigelow Range.

The concern here, if this project were just visible from the Bigelow Range, I don't know that I would have a problem because of the distance.
Q. So distance is a relative factor?
A. Yes. I think, though, that what is of concern with the Bigelow Range is not only do we have quite a few views over that 34 miles of what I call the inner circle, but you also have this extended and cumulative impact of views as you continue up into the Bigelow Range.

Even though -- I want to correct this -- Mr. Palmer said that the turbines are unlikely to be visible at beyond 8.5 miles. I have been up to the top of the fire tower at the very peak to look at the Searsburg project. You can see the turbines. That is 9.9 miles away.

I know the turbines are about half the size. So no, I do not consider it to be an impact; I did this for a project I'm working on. That is not an issue but it is

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important to understand that they can be seen.
I want to be careful about those kinds of blanket statements. They may be technically by someone's analytical approach true, but it's a similar problem to this.
Q. Ms. Vissering, I don't mean to cut you off, but I'm mindful of the Chair and the clock. I still have a lot of witnesses that I have to do, so I'm going to try to keep my questions focused and I would appreciate hopefully if you can do the same on your answers.

You said distance is a factor. So you agree that this revised one-mountain proposal has -- is both physically further from the Appalachian Trail than it was before and the closest views are further than the closest views were before; correct?
A. Look at some of the important views -- Saddleback, for example, The Horns --
Q. I asked you a specific question. Ms. Vissering, if you could listen to the question.

MR. THALER: First of all, go back, Sarah, to DeWan 4 so we can move on.
A. I think the answer is I would not agree. It is technically closer than some viewpoints, but overall it is --
Q. Ms. Vissering, you already testified a couple of minutes
ago -- I didn't think we had to go back over this -- but for Black Nubble the closest view from the AT is 3.2 miles versus what had been 1.1 miles before.

Is that a greater distance, 3.2 versus 1.1? Yes or no.
A. I think we're getting to the point where we're getting redundant. Yes, it is a greater distance.
Q. I don't like to be redundant, but I also want to make sure there's clarify.

The closest open view from AT on the Black Nubble project is further than what it had been before under the Redington proposal; correct?
A. The closest open view -- now, Saddleback Junior is 4.1 miles and remains 4.1 miles. Same with The Horn, same with Saddleback --
Q. Under the original application, wasn't the closest open view Sugarloaf Cirque?
A. Oh, Sugarloaf Cirque. Yes, that is the one view that we do not have anymore with this proposal. It is not an open summit view, though.
Q. But it was an open view from where you took the photograph that was used in your testimony?
A. Yes, trees in that location, because of the steep slopes tended to not grow to any great height there.

Even though you're into the forest, your head is
above the trees there.
Q. Ms. Vissering, before you filed your testimony, this summary, since you wrote in your prefile about -- and Jody Jones, as did Mr. Kimball -- comparing the Kibby and Black Nubble projects in terms of ecological or scenic impacts, did you actually compare, for example, scenic distances -- since distances is one of the variables -that you could so certain things between the Kibby project and the Black Nubble project, for example, view distance from the Maine Scenic Highway?
A. I guess I'm not -- I'm sorry.
Q. Sure, I'll ask it again. In the interest of time I'll show you an exhibit --

MR. THALER: Sarah, if you could give it to the intervenors.
Q. -- Ms. Vissering, this is a simple bar chart because I'm a simple guy. From your view impact assessment, Page 15, the view distance from the Maine Scenic Highway and byway for Kibby is 1.5 miles, and Black Nubble is 8 miles.

Were you aware of that before you filed your testimony?
A. Well, of course, in reviewing this project -- although I looked at views from the scenic highway generally, it was not a focus of my assessments in this particular case.

I certainly -- well, I certainly looked at the views
from the scenic highway, although the distance was -- it's an important thing to identify but it is not something that I made any comparative analysis on.
Q. Same thing with respect to view distance from the surface water body, Chain of Ponds, at Kibby is 1.9 miles away from the wind farm and that has some camps where people live, correct, on it?
A. Is blue Kibby --
Q. Blue is Kibby.
A. -- from a distance of the surface water body, so that would be Chain of Ponds, and distance from -- yes, and from -- so I presume --
Q. The red is Black Nubble and it's about three times further from -- 2.5 times further for Black Nubble.
A. And what water body is that?
Q. From Black Nubble?
A. Yes.
Q. Do you know what the nearest water body is?
A. I don't.
Q. You looked at a public rest area that people use frequently, it's on the scenic byway?
A. Right. The Sarampus Falls rest area, yes.
Q. Did you ever look at how close a public rest area would be that people would use on a scenic highway or byway to Black Nubble?
A. Oh, now here's a very good example of the problem with your analysis.

The Sarampus Falls rest area, when you look at that, is in close proximity of the project, but you can see probably at most four turbines behind trees.

The big difference between that and looking at the entire project of Black Nubble from Saddleback Junior, from all of those other peaks I've mentioned, this is the problem with the numerical approach.

It can work in very limited situations, but it's not meaningful as a form of visual assessment.
Q. In terms of people driving in cars, people don't drive in cars up to Saddleback or Saddleback Junior, do they?
A. No, but if you're driving by the Sarampus Falls rest area on Route 27, you're seeing behind the trees four turbines.

That's a very different setting and a very different context. Those are important parts of the analysis, how much of the project do you see from what kind of setting.

Of course, at Sarampus Falls you are in a car along a roadway as opposed to on a scenic trail. So I think these are the variables that need to be taken into account.

THE CHAIR: Mr. Thaler, just so I'm clear, this
chart -- is this something -- who made this up? Is this
from -- did I understand this is out of prefiled testimony or what?

MR. THALER: No, it is not because it is -- we didn't put in anything about comparisons of Kibby in this project in our prefiled; however, the opposing intervenors did, so we're entitled to --

THE CHAIR: No, no, I'm not arguing about -- I just want to know what the source of this -- where did this come from?

MR. THALER: The view -- we prepared it based on data in the LURC record of the Kibby project and we can provide -and Marcia can provide -- I can give you the page references.

THE CHAIR: That's fine. You prepared this chart. I thought you said it was prefiled testimony in the Kibby case.

MR. THALER: No, not the chart. The information in the blue, that's from the report that she prepared. We were just trying to compare, since both intervenors are comparing projects, we were --

THE CHAIR: Let's just make sure we keep both these projects as separate as we can, please.

MR. THALER: Mr. Chairman, I agree; however, we're going to move in a moment to Ms. Jones, who repeatedly talked about the projects.

THE CHAIR: I understand. I've read all the testimony -- at least I tried to. So I understand that and it's fair game.

MR. THALER: As you said, the door was open and I

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unfortunately have to go through it.
THE CHAIR: Don't confuse us any more than we already
are.
MR. THALER: I will try not to.
I'm going to move on to Ms. Jones.

## EXAMINATION OF JODY JONES

## BY MR. THALER:

Q. Jody, would you agree that the revised project has reduced ecological impacts compared to the two-mountain only project?
A. Yes.
Q. You had some testimony about bats and impacts on bats. Last summer when I was questioning you, you told me that you're not a bat biologist; is that correct?
A. That's correct, I don't think we really have a bat biologist in Maine.
Q. You haven't become one since last summer I take it?
A. No, I haven't.
Q. You also had testimony about -- and you have attached to your testimony, or certainly have seen it on the Audubon website, Turbine 9 at Mars Hill.

Is it your testimony that you provided that to LURC because it's your understanding that the amount of clearing that would be done in the Black Nubble project, turbine pads, is the same that was done at Turbine 9 on

Mars Hill?
A. No, I think my testimony articulated that there's a wide range of opinion about how much clearing would be required for various types of turbines and various types of settings.

The National Academy of Sciences report indicates there's sort of an unresolved issue with regard to estimates for clearing before a project is built and then after.

That was sort of a part of what it was included in.
Q. You also talk about, in your testimony, as did Mr. Kimball, about the issue of the contiguous unfragmented roadless area; do you recall that?
A. Yes.
Q. You recall that Dr. Publicover, last summer, said that Black Nubble was not part of that unfragmented roadless contiguous forest. Do you disagree with Dr. Publicover?
A. I would refer questions about that to Dr. Kimball.
Q. You have it in your testimony.
A. I think in discussing this with Dave and Ken, the issue about the survival school, the wilderness survival school, indicated that 12,000 acres that's adjacent to the Black Nubble project does have a road through it, but the road is gated and doesn't have high traffic volumes and functions much better as a wilderness area, so

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Dr. Kimball's figure on that adjacent to the Black Nubble project should be considered.
Q. This was Dr. Publicover's description last summer of his testimony where the unfragmented habitat was and he showed where Black Nubble is.

Would you agree that that shows Black Nubble outside of what AMC testified last summer?
A. Yes, it does.
Q. In terms of -- let's move to bird issues for a moment.

You described the National Academy of Sciences report as the most comprehensive evaluation on wind power impacts on various species and natural resources, generally; correct?
A. Right.
Q. Are you aware that in the National Academy of Sciences report, they use pretty much the same table as the GAO report, you and I talked about last summer, which shows that generally per turbine nationally bird mortality is approximately anywhere from zero to four or five birds per turbine per year with the exception of the one in West Virginia?
A. That's right. I think that the -- there's been highlighted also in this report an indication that the bird and bat issues are likely to be higher concern along the eastern parts than they had been on the western part.

Bird and bats, the migration patterns are essentially lower in western states. The primary concern is that migratory species out there are raptors, not that they're not a concern here as well.

Because there are so few turbines that rise into the level of the migratory pathway yet built here, that's why we're concerned about pre-construction study and post construction study for wind turbines.
Q. Jody, I'm going to show you some pages of your exhibit from the National Research Council, National Academy Sciences report, and directing your attention to Page 51. In your prefiled testimony you wrote that there was a great deal of uncertainty about the magnitude of bird impacts.

Isn't it true that the National Academy of Sciences report said that there are literally hundreds and hundreds of millions of birds killed each year through a variety of human structures and other means so that actually according to Erickson, the total accumulative bird mortality in the US may easily approach a billion birds per year?

So if we're talking five or six birds per turbine at Black Nubble per year, five times 18 is 90 , wouldn't you agree that that would be an absolutely minuscule amount with no impact on the viability of any of the bird

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populations?
A. Well, the page before that, Jeff, talks about putting those birds in context, it discusses the fact that 20 bald eagles are very different than 2000 or 200,000 -- actually I think they use 100,000 .

It depends on the species is basically what the page before talks about. It tells you that we should take those estimates with a great deal of caution because we need to have region-wide surveys and we need to have species-specific surveys, and we really need to take those into context.
Q. The next page is the table that you and I were just talking about, just for the record, which was also in the federal government's report and is now in the National Academy of Sciences report about regional and overall bird and raptor mortality; is that correct?
A. That's correct.
Q. In the interest of time, would you agree that climate change is having an extremely negative impact on many bird species?
A. Yes, I would, Jeff.
Q. Including Bicknell's thrush?
A. Yes, we're very concerned about that, which is why we want to keep the most critical habitat above -- at the highest elevations with documented occurrences protected.
Q. Maine Audubon, since I left, it has now become part of National Audubon Society; is that correct?
A. We are affiliated with National Audubon Society.
Q. Are you aware that National Audubon Society has stated that we need to have a great deal more wind power in this country because of the habitat concerns from climate change?
A. Yeah, I think Maine Audubon agrees with that, too. We supported 180 megawatts of power in the state of Maine.
Q. One of those areas is the Kibby project that you talk about in your testimony; is that right?
A. That's right.
Q. I guess I'll ask you the same question that I asked Ms. Vissering.

Before you prepared your testimony in this case, in the Black Nubble case, did you take a look at the different natural resource impacts, such as wetlands or rare species or things like that, putting aside scenic -I know you're not a scenic expert -- but did you compare some of the natural resource impacts of the two projects?
A. We've been working -- Maine Audubon's been working with TransCanada for months trying to make sure that they address all of the concerns that we have -- that we had -and recognizing that not all impacts are created equal.

We spent a lot of time with the folks at TransCanada,
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particularly on Bicknell's thrush issues and a variety of issues, to try to assure -- the decommissioning was another aspect of it -- to try to assure that they addressed all our concerns to the greatest extent and that's where --.

So, yes, I had a lot of contact with the TransCanada folks before I submitted this testimony.

MR. THALER: Let me just, Mr. Chairman, pass out two
Exhibits. These are again bar charts that we prepared in our prefiled, but they compare certain impacts between Kibby and Black Nubble wind farms.
Q. The first one, Jody, that I'm going to ask you about has three comparisons: Acres to serve without T line, acres of T lines, numbers wetlands crossed by T lines. Do you have that one?

Were you aware, Jody, before you filed your testimony in this proceeding that the Kibby project has approximately four times as much acres of disturbance with or without transmission lines?
A. Yeah, like I said, we were focused on the protected mountain area. We were trying to get the highest level of concerns because not all impacts are created equal, like I said.
Q. I understand. Were you aware --
A. I know --
Q. Were you aware that there were three S-2 imperiled plant
species within the project at Kibby, whereas there are zero at Black Nubble?
A. Yes.

MS. BROWNE: Mr. Chair --
THE CHAIR: Let Jeff finish. Your intervenors have already introduced all this stuff into evidence by their testimony, so I think it's fair game that we talk about it.

MS. BROWNE: It's just with respect to the exhibit.
MR. THALER: All of the figures on the exhibit for
Kibby are contained in their application and the data is in their application.
Q. Were you aware, Ms. Jones, that the amount of $150-\mathrm{kV}$ transmission line, miles of new roads were multiple times greater than Black Nubble?
A. I knew the transmission line was longer and was likely to have a greater number of acres. I don't think I was aware of the exact ratio.
Q. Were you also aware of the number of wetlands crossed by the transmission line to be permanently filled being substantially greater at Kibby than Black Nubble?
A. Yes.
Q. Let me just ask you quickly, again in the interest of time, you talked about Bicknell's thrush earlier and sort of the mating habits of young teenage Bicknell's thrush,
A. Good question. But -- so the way it works because the Bicknell's brush breed in a very cold harsh environment, the females have a much smaller territory and the males have a much larger territory.

The male participates in feeding the young, and multiple males actually help feed the young of a single nest. It's been hypothesized that that strategy is necessary in order to assure the young's survival.

So I think that Tom Hodgman's concern about aerial collision and what it might do to the population is valid
and that we don't really have a surplus of males expendable, because they are -- they participate not just in fertilization, but they also participate in feeding the young.

There's a question about how -- when this comes into frame, more or less, and when foraging is low there's not much provision for the young. It makes it more critical.
Q. Let me just ask again --

THE CHAIR: You've got one minute.
MR. THALER: Could I just ask, Mr. Chairman, because
Bill went 5 minutes over.
THE CHAIR: I think you need to -- since these
charts, just for the record, would you please state the
capacity of each one of these wind farms so that we have the right context for these?

MR. THALER: 54 megawatts for Black Nubble and Juliet, for Kibby, is 100-and --

MS. BROWNE: -32.
THE CHAIR: So there is a substantial difference in the size.

MR. THALER: There is, about 2.5 or so.
MS. BROWNE: Mr. Chairman, just for the record I object to these exhibits. They're information about the Kibby project and it's flat out incorrect.

And if the applicant here wants to introduce evidence

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about the Kibby project, they need to do it through a witness, not through a document that we don't even know who prepared it, it's presented by counsel.

So I am -- I object to this. I think it's
inappropriate and it's also wrong.
MR. THALER: Do you want me to respond now or wait until I get done?

THE CHAIR: You've got to wrap up here, Jeff.
MR. THALER: I agree.
THE CHAIR: Give me a couple of minutes just to sort all this out.

Please go ahead expeditiously.
EXAMINATION OF J. T. HORN

## BY MR. THALER:

Q. Mr. Horn, you, in your testimony, mentioned Burnt Jacket and used that as an example of how the Commission deals with the issue of adjacency or remoteness, things like that?
A. Yes, I did.
Q. Are you aware that Burnt Jacket was not a D-PD rezoning issue?
A. Yes, I am.
Q. Are you also aware that the CLUP defines fringe? Have you ever looked at the definition of fringe?
A. Yes, some time ago. I'm familiar with the way it's used
in the CLUP.
Q. And it's defined as being -- are you aware that LURC defines whether something is on the fringe as to whether it's in a township or part of the unorganized territory adjacent to a town?
A. Yes, I believe the Burnt Jacket decision talked about adjacency in other contexts as well.
Q. I'm just asking about fringe. Do you agree that the Black Nubble project is located adjacent to the Town of Carrabassett Valley?
A. Redington Township is adjacent to Carrabassett Valley, yes.
Q. You also talked about multiple federal resources -- the Appalachian Trail, the SERE facility, scenic byways -being in the area; do you recall that?
A. I do.
Q. Were you aware that US Fish \& Wildlife, the Army Corps, the FAA have reviewed this project?
A. I would assume that they have, yes.
Q. Were you here yesterday when the testimony provided that both the United States Army Corps and -- has issued a permit but then before was issued the application was reviewed by the US Fish \& Wildlife and EPA?
A. I'm familiar with that. I think you're taking my comment out of context. My comments were in relationship to best 608
available site.
MR. THALER: Mr. Chairman, I'm just going to ask one or two more questions to conclude -- one question.
Q. Mr. Horn, we talked about this briefly last summer, but I believe last night in public comment somebody talked about spending two days hiking up on the trail during beautiful weather and seeing a total of six hikers.

Is it true that over the course of the year the number of through hikers going through this area has been declining and that last year, 2006, for people who started and finished in the same year was under 400 people over the course of the year?
A. That sounds about right, but it's a very small percentage of the total visitation.

MR. THALER: That was my one question. We did not, in our prefiled, discuss the Kibby project at all, and had the opposing intervenors not brought it up and made explicit arguments about it, I would not have been bringing it up today.

As a matter of due process, we're entitled to respond to arguments that they made, and they asserted that Kibby had fewer impacts on this project, and we're entitled to challenge that using data in, for example, one of the consultants for TransCanada who's supporting that project and opposing us.

We can move from the Kibby file to the Maine Mountain Power file, the application or the relevant portions of that,
including the view impact assessment, but I think it's perfectly fair, and if TransCanada wants to, they have the opportunity after this hearing to file comments.

If we're so wrong, they can certainly show us where we're so wrong from their materials.

MS. BROWNE: Mr. Chair, he's certainly entitled to ask about that. My concern is that he has also attempted to introduce into the record a document that purports to characterize another project in another proceeding.

If he thinks -- if he wants to introduce evidence on the Kibby project, he needs to do it through a witness, who's subject to cross-examination.

My concern is this exhibit -- I'm particularly concerned, because among other things, the permanent wetland impacts are wrong.

There's no legal basis for this document to come in.
THE CHAIR: Upon advice we will allow the exhibit to be in the record, and it is not part of the -- any part of the Kibby proceeding and that obviously you have the right to -Juliet has the right to file her objections and note them for the record, which they already are, but I'm sure she wants to do it in writing and point out the error of the information that's in those exhibits.

MR. THALER: She probably does.
THE CHAIR: We certainly would welcome that
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correction, if there is one to be made.
MR. THALER: Thank you, Mr. Chairman. And I guess just again for the record I'll move the other exhibits that we were showing, the National Academy of Sciences report, and I think there were just one or two others. Thank you.

THE CHAIR: You're done.
MR. THALER: I am done, done. Thank you.
(There was a break in the hearing at 2:55 p.m. and the hearing resumed at $3: 10$ p.m.)

MR. DIDISHEIM: For the record, I'm Pete Didisheim, Natural Resources Council of Maine. My first questions will be to Maine Audubon, to Jody Jones.

## EXAMINATION OF JODY JONES

## BY MR. DIDISHEIM:

Q. Jody, in testimony last summer Dave Publicover cited Redington Pond Range 32 times as a significant natural resource that relies on recreational values, but he didn't mention Black Nubble except for one time.

On Page 1 of your testimony you say that, "the values associated with Redington are nearly identical to the values associated with Black Nubble."

How do you reconcile your statement with Dave Publicover's now?
A. I would say my opinion is relative value. I think the biggest difference has to do with the northern bog lemming
not being at the site. My testimony had to do -- the nearly identical qualifier there had to do with that.
Q. But David Publicover's comments, which are attached to my testimony, speak about wildlife issues, bird issues, and specific -- Bicknell's thrush specifically, S-3
population, forested, the type of forest, the roadless areas, unfragmented forests. He didn't just focus on bog lemmings.

Could you please elaborate further why a member of your consolidated intervenor group testified 32 times about Redington in particular and only once about Black Nubble?
A. Well, I guess my response to that is we looked at Black Nubble more closely this time around than we did the last time around because we had very limited time to present our case last year, and we focused on the area that had the highest impacts.
Q. So you believe that they have identical values?
A. No, I don't; I said nearly identical values.
Q. Which is 90 percent?
A. I don't know if I could estimate it as a percentage.
Q. During the cross-examination, you're aware of Dave Publicover's comments last year that he specifically said that he was talking about Redington Mountain in all 32 of those passages and was not considering Black Nubble as

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part of that; right?
A. That's correct, I'm aware that that's what he said.
Q. Your testimony states that there are 18 species of concern at the Black Nubble site. Yesterday Steve Pelletier testified under oath that only four such species have been observed in the D-PD zone.

Do you have evidence that contradicts that?
A. No; I think that Steve Pelletier's testimony -- which I really appreciated -- was that that's sort of a desk analysis of what's likely to occur based on the habitat type, and the surveys that they do pursuant to that are focused on the species most at risk for impacts.

And so that they don't evaluate for all the species because that would probably be too expensive, but he recognized that there was likely, based on the habitat qualities there, that they would exist somewhere in the project area.
Q. Do you have any evidence or can you substantiate that there are 18 species of concern, that there are risks to those 18 species?
A. My -- I don't have independent evidence of that. No, I am just depending on the Woodlot Alternatives' report that indicated they are likely to occur there.

In terms of the impact, I think the -- what I would like to point out is that commercial wind power facilities
with the roads and the blasting and the turbines and whatnot all have the impacts associated with development: Disturbance and invasive species, the ones that I outlined.

It's a degradation of habitat quality in general for wildlife.
Q. You have said that the applicant -- that this application was about blowing the top off of Black Nubble.

Do you have any substantiation of what you mean by that in terms of dramatic and fundamental change of the contour of the mountain?
A. Was that in a press release? Can you identify where I said it?
Q. It's in an Action Alert by Maine Audubon, it's in press statements.
A. Right, right. I guess what I would characterize it as is that --

THE CHAIR: Yeah, but is it in the testimony? Is it in her written testimony?

THE WITNESS: No, I don't believe it is.
THE CHAIR: I'm not sure -- I don't think we should be asking questions about press releases.

MR. DIDISHEIM: It's in a media story, but I don't have copies of it.

THE CHAIR: Then don't ask the question, I guess.
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BY MR. DIDISHEIM:
Q. Your panel -- someone on your panel, I think it may have been AMC's testimony, said that there's only 5 percent of Maine's forest late successional stand.

What your definition of late successional?
A. My definition?
Q. Yeah, I know that Maine Audubon --
A. I don't believe I'm prepared to answer that. I would probably depend on my forester, Rob Ray. We worked collaboratively with AMC on that.
Q. You're aware that LURC has issued a substantial number of permits for timber harvesting in P-MA zones; correct?
A. Yes, I am.
Q. And that timber harvesting involves at least 321 acres of forestland above 2700 feet; correct?
A. I would trust you on that, Pete.
Q. Among that is based on the data that's in the record, 4550 acres of Redington Township alone. I'd like to ask, has Audubon taken any position to intervene in any of those permits, including the one that involved 1900 acres cut on Black Nubble with mature stands of 80-plus-year-old trees?
A. When we decide to take a stand on any particular issue, we have to go through sort of an assessment of statewide significance and impacts and precedent setting issues.

At this point that hasn't reached that level. No, we
haven't taken a stand on that.
A. No.
A. No.
A. Probably would, yes.
A. I do. species? that. Fish \& Wildlife? been fully evaluated. the collision risk. correct? cleared habitat? yes.
Q. Do you know whether those 1900 acres that were cut involved harvesting any of the S-3 community type?
A. I don't know. Actually, when I went up there, it's likely that some of it might have, yeah.
Q. Do you have an estimate of the number of acres --
Q. -- that may have occurred in the timber harvest?
A. But, I would point out that forest activities, that is a renewable resource, it's not a permanent change in the landscape the way a wind farm is.
Q. Would cutting down 80-plus-year-old trees cause significant wildlife impacts potentially?
Q. Probably would. But you didn't take any action to express concerns about that timber harvesting?
A. Not for that renewable type of activity, no.
Q. We heard from the agency representative from IF \& W this morning about their position in terms of threats to the Bicknell's thrush, specifically on Black Nubble, as a result of this project, and I'd like -- and we were told that in their opinion it is not an undue adverse impact.

Do you disagree with IF \& W on this?
Q. You mentioned that there are invasive species that pose threats to Bicknell's thrush. What are those invasive
A. I don't have those off the top of my head. I can get
Q. Is that one of the reasons why you disagree with Inland
A. My testimony is that I think that the degradation of the habitat due to some of these types of activities have not

So, yes, that's part of the reason. Another part is
Q. You're aware that there's 336,373 acres of Bicknell's thrush habitat as estimated in the scientific literature;
A. For the north -- that's a predicted model of -- yes, I am. For the entire northeast, for the endemic species, that occurs nowhere else in the world but here.
Q. You're also aware that the total potential loss of habitat on Black Nubble as a result of this project is 84 acres of
A. Something like that. Is that true? Something like that,
Q. So that would be .02 percent of US modelled estimated

## Bicknell's thrush habitat?

1 impact associated with siting projects. Audubon.

I would to ask Ken Kimball -you.

BY MR. DIDISHEIM: resource recreational ecological values? way that you're putting it forward. on Black Nubble. high. misrepresentation.
A. Yes. And in the National Academy of Sciences report, they indicated that species limited ranges and high mountaintop ridges that they would have a disproportionate -- that activities in this area would have a disproportionate impact on populations, and there's also the cumulative

One of my concerns about this project is it would set the bar too low and allow other projects to be sited inappropriately in Bicknell's thrush habitat.

MR. DIDISHEIM: Okay, that's my questions for

THE CHAIR: Peter, please put the mic -- we're losing

## EXAMINATION OF KENNETH KIMBALL

Q. Ken, I'm going to ask a similar question of you.

You're aware that Dave Publicover's testimony included 32 passages specifically referring to Redington Pond Range in his testimony last summer about the natural

Do you believe that testimony is accurate?
A. As stated it's accurate, but it's also misrepresented the

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I would like to point out that I think AMC, like NRCM or any other group that takes on an issue, has to pick and choose how your resources are going to go.

We recognized that Redington was the highest of the two mountains there, highest value resources, and we did a site visit there. We did not do a site visit at that time

It's also true that on Black Nubble at that time -and it was in the summer -- it wasn't clear that the Maine Natural Areas -- actually, when we did the site visit this year, we took a look at that forest and we recognized it really had the potential to be classified as old growth.

The Maine Natural Areas program has classified it as such. There was a bunch of new data that came out in the course of the summer. As we took a look at that and look in the juxtaposition of SERE property, and so forth, we recognized that the resource values here are extremely

But to simply cite those numbers -- because we did not spend a lot of time on Black Nubble and we did spend a lot of time on Redington -- in my testimony, that we took Black Nubble to be irrelevant is just simply a
Q. In cross-examination Dave Publicover, when asked whether the Black Nubble-only project would have significantly
reduced environmental impacts, he said, yes, it would have significantly reduced environmental impacts.

Do you believe that that was an accurate statement?
A. At that time Dave was missing two pieces of information which we have right now, which is what I just repeated.

It's interesting that you could send a biologist out to find Bicknell's thrush quickly, whereas the applicant took years and couldn't find it, and the applicant didn't recognize or put forward the potential for the summit to be actually recognized as a Maine Natural Areas area also caught us by surprise.

MR. DIDISHEIM: I think I have no more questions for AMC. Moving down the line to Jean Vissering.

## EXAMINATION OF JEAN VISSERING

BY MR. DIDISHEIM:
Q. Jean, I just want to be clear that I understand which portions of the AT you have been to between Route 4 and 27.

I know you gave a little bit of information in response to a question earlier on the record, but it wasn't quite clear how much of the AT you have visited?
A. I visited twice, once in the winter when I went up to Saddleback Junior and up to Mount Abraham, and I spent a May 2nd visit, in which I went back to Saddleback Junior but also up to -- from the Carrabassett Valley up to

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Sugarloaf Cirque and then up to the summit of Sugarloaf Mountain.
Q. You've said for the record that you've received photos from the ATC or MATC for the basis of your analysis for those areas that you didn't personally visit?
A. Yes. I visited most of the areas that have the extensive alpine areas, which are considered to be some of the most critical viewpoints; I did not visit -- I did not visit The Horn, for example, but I had people take photographs at the correct focal length, and so I was able to use those photographs to get a pretty good sense of what the landscape is like and how the mountains appear from that perspective.
Q. Now, a visual impact analysis is attempting to understand the expectation of the visitor; is that correct?
A. It does -- well, a couple -- that is one aspect of it. The expectation of the visitor, I actually rely, as I said, on documented evidence of some concern about a resource and some evidence, for example, of what that particular concern is.

So that viewer expectation came to me as both some of the documentation of the trail generally but also specifically identified in State and federal documents.

The critical part of a visual impact assessment is to understand what are the characteristics of this landscape.

Within the characteristic landscape, what are the things that really contribute to the scenic quality, assuming there is scenic quality, which in some landscapes it can be fairly moderate and in some cases it's very highly scenic.

There are particular aspects of those that contribute. But there are variables, which I described in my presentation, that contribute to the scenic quality and aspects that detract from the scenic quality.

So understanding and then understanding how a particular project's site will be seen from identified scenic viewpoints.

So my role is to go to the most scenic viewpoint that are of the most highest and most sensitive viewpoints and determine how the project would appear.
Q. One of those very scenic viewpoints is Sugarloaf Cirque where you're looking straight across the valley at Redington.

What's the current visual impact of the project from the long stretch there at Sugarloaf Cirque?
A. Right now the project would not be visible from Sugarloaf Cirque.
Q. Before the reconfigured project, is it not correct that probably all 18 turbines, the majority of them, would have been visible from this stretch?
A. Yes, that's correct.
Q. Is there any portion along the Appalachian Trail that you're aware of where the hiker is this close for an extended period to turbines as would have been the case with the original project?
A. For an extended period?
Q. This is --
A. If we're looking at just that particular -- that probably was one of the closest viewpoints for an extended period, yeah, it was no longer than, for example, up on Saddleback Junior, some of the other summits.
Q. But closer?
A. It certainly was closer.
Q. And the project has disappeared from this site?
A. It has.
Q. Were you here this morning when Erik Crews was testifying?
A. I was.
Q. It was clear in his testimony, was it not, that the visualization he did from the top of Sugarloaf Mountain eliminated all structures, cell towers.

What do you think about that?
A. I thought his representation was quite good. I had a photograph that I included in my last presentation from Sugarloaf Mountain. I was up there, and as I pointed out, it is probably the -- in terms of foreground views,
certainly one -- the viewpoint when you come up to the summit, you have entered another world, clearly.

The views are really quite undisturbed except for that very little bit of foreground.

Of course we do have a different expectation going up to the top of a ski area than you do hiking along the Appalachian Trail.

I thought it was absolutely appropriate to do a simulation. I don't think that he could have in the -- A, he couldn't have put all those variables. Those variables are not part of that view. You're standing there, you're looking across the valley.

There is nothing in the foreground except that if you look over this way, where you see the ski lift, you look over that way -- I'm assuming you're at Black Nubble right now -- if you look over that way, there's the shelter. You turn around a little further, and there's huge radio towers. And then there's really not a whole lot else in terms of development up there.

Those shots were a little misrepresentative this morning.
Q. You're aware that there's a humming building up there?
A. I don't remember it humming that much. It was not part -there is noise -- I don't deny that there are things up there, but you have to understand, you've got a sweeping

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view up there.
Few people, you certainly -- the buildings are probably what I would describe to be as unfortunate for the summit but they're there, they're part of that context, but they are certainly -- you're also seeing this fabulous landscape around there.
Q. Are you aware of any data in the literature that suggests that the number of people that have hiked up to the top of Sugarloaf Mountain, the second highest mountain in Maine, has been reduced because they're surrounded by cell towers, buildings, chair lifts, picnic tables?
A. That's interesting. In other words, they don't want to go up there because of all that --
Q. Right --
A. Well, if I were to choose a mountain to hike to, I would certainly not choose to go up to a mountain that had development; I would choose a mountain with an undeveloped alpine summit.
Q. That's you personally but we don't know --
A. Yeah, I think -- well, I think that a lot of people go up to -- in fact, I went to the west side of the Saddleback ski area. Just -- the views on the Saddleback ski area website from the top of Saddleback ski area show this absolutely gorgeous summit. That's the experience that people have when they go up there.

I think that -- I mean, as I said, I think people would choose -- I think that certainly people would choose to go to an undeveloped summit where you'll have a natural experience and beautiful views, which is part of our concern with this project here.

MR. DIDISHEIM: Now I'm going to ask a few questions of David Field.

## EXAMINATION OF DAVID FIELD

## BY MR. DIDISHEIM:

Q. David, your testimony has made quite clear -- both in your written and oral -- that "the central issue in this case is aesthetics, beauty."

I would like to show you an exhibit that includes specific quotes in the record from individuals at the public hearing last summer, and this is just seven or eight quotes of individuals who all believe that wind power is beautiful, wind turbines are beautiful, and that they would not object to them in these mountains.

Is your testimony asking LURC to choose one person's sense of beauty over another's?
A. As I responded, clearly there are differences in value judgments of folks out there. My belief based on talking to a lot of folks, reading letters to the editor Appalachian Journey, certainly testimony last year from everybody -- not just this cherry picked crew -- is that

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the majority of those -- the great majority of those who hike the Appalachian Trail do not think windmills are beautiful.

Certainly you can find folks who believe that they are. There's almost a religious zeal for wind power. It's interesting that many of the folks who have expressed this apparently have never set foot on the viewpoints that I've shown you. This is motherhood and apple pie. Global warming is a disaster, we're convinced of that, anything we can deal with it is fine.

A page of folks -- no. What's the point? Sure, you can get a page full of folks who think windmills are beautiful, so what.
Q. Your testimony said that this is about beauty?
A. Exactly.
Q. And you are representing --
A. Clearly I am talking about scenic beauty of an undisturbed landscape.
Q. And I'm just making the obvious point that it's difficult to adjudicate beauty?
A. As you say, it's an obvious point.
Q. As you know from prefiled testimony, there's public opinion surveys that show that 85 percent of Maine's citizens strongly support wind power development.

Do you believe that your arguments in support of --
in opposition of this project trump the 85 percent majority?
A. I'm among the 85 percent. I support wind power development. Not on this site for this project in this area.
Q. Is it correct that you've been maintaining this stretch of the AT for 50 years between The Horn and Orbeton Stream?
A. Between Saddleback summit and Orbeton Stream for most of those years. Between The Horn and Orbeton Stream now.
Q. So you have a very personal attachment to this stretch? You've been up here a lot?
A. Sure. It's my home area also. I first climbed the mountain in '51.
Q. And you're aware that there are many days on Black Nubble across the whole Appalachian Trail that are quite hazy; is that correct?
A. Well, there are the turkeys exuded by the conifers in the area, there's the air pollution from the automobiles down in Boston, New York, Philadelphia that drifts up this way. Yep.
Q. This is a --
A. And it's varied a great deal over the 50 years.
Q. Has it gotten worse in the 50 years?
A. Not on average in my experience. It's changed.
Q. Were you here for the testimony yesterday from Cameron

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Wake?
A. I was not.
Q. His testimony -- I'll just -- others on your team were there.

I'll just explain that he described global warming on the current emissions rate is probably going to quadruple the number of poor air quality days in Maine, and he clarified for the record that that probably means the pollution that you've described as being the source of the haze, in part, could result in a quadrupling of the haze mix.
A. My point is that this particular project would have an insignificant impact on regional air quality, and even if a miracle occurred and it did, why would I want a clearer view of what I'm looking at as a mountain ridge with windmills?
Q. Are you aware of any project that will have a -- in and of itself, that will have a significant impact on air quality?
A. Any single project?
Q. Any single project.
A. No. There is a whole collection of projects, as I testified, that are proposed for Maine. Once again, it's the benefit and cost of the individual project. To me the costs far outweigh the benefit of this specific one. I
would feel differently about others.
Q. And might those people at those other sites feel very differently about this site, people that live near those other sites think very differently about the one near them, as opposed to --
A. So you're characterizing this as a "not in my backyard" issue. I think that's a gross oversimplification.

The boundary mountain, the Kibby project is not in my backyard, but I've fished and hunted and travelled in that area for many, many years and I'm not opposing that.
Q. I've got one more exhibit to distribute. This is a document sent out recently by the Appalachian Trail Club, its members.

In the middle of this document, to all MATC members, friends, there's a sentence that says, If we prevail now and are able to stop what is called the Black Nubble-only portion of the original wind power development, then it is doubtful that subsequent developers will propose wind power developments so close to the AT in Maine.

Would it be inaccurate to interpret this as a position by MATC that you oppose wind power developers coming within four miles of the Appalachian Trail?
A. I have no idea. I would have to see a proposal specific to the landscape.
Q. But saying our goal is to establish a precedent that it

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would send a signal to developers not to develop this close to the Appalachian Trail, certainly communicates a position of the organization?
A. Yeah, I didn't write this.
Q. You're representing the MATC here today; correct?
A. I am, that's correct, and I think your interpretation probably is probably.

MR. DIDISHEIM: I think that is --
THE CHAIR: Are you close to getting wrapped up here,
Peter?
MR. DIDISHEIM: Yes, I think I will wrap up right there.

THE CHAIR: Thank you. You guys can't go away yet.
I think we've got one more intervenor that wants to work you over, is that true?

MR. MAHONEY: Good afternoon. My name is Sean Mahoney. I'm with the Conservation Law Foundation.

I can start by saying, Ms. Vissering and luckily Mr. Field, I don't have any questions for you. If you wanted to sit down, I'll limit my questions to Dr. Kimball, Ms. Jones, and Mr. Horn.

I'll start with Dr. Kimball.
EXAMINATION OF KENNETH KIMBALL
BY MR. MAHONEY:
Q. Dr. Kimball, you're not a climate scientist; correct?
A. Am I climate scientist, no; am I an ecologist, yes. We've
been studying alpine areas and the effects of climate on them for the last 20 years, yes.
Q. So you have a doctorate in botany, you've been looking at the effects on plants and ecology for the last 20 years on mountain habitat; correct?
A. That's correct. We've mapped out the alpine vegetation on Mount Katahdin, Franconia, the Presidential Range, and we've been trying to understand the dynamics behind them.
Q. Thank you. So unlike Dr. Wake, who has a doctorate in geochemical systems and studies regional climate and environment change as part of the New Hampshire Climate Change -- University of New Hampshire Climate Change Project; correct?
A. Yes, that's correct.
Q. Your testimony, your direct testimony, or your prefiled testimony, has no testimony concerning climate change; correct?
A. That's correct.
Q. So your testimony today about climate change was rebuttal testimony; is that correct?
A. That is correct.
Q. And rebuttal to what?
A. There was testimony both yesterday and today and actually by Dr. Wake that went through and was presenting the
Q. So the rebuttal testimony was to Dr. Wake's testimony. Was it to any other testimony that was presented yesterday?
A. No, I think that NRCM's expert witness presented that, and I believe Mr. Pelletier did as well.
Q. NRCM's testimony hasn't come forward yet.
A. No, but I mean the stuff that was prefiled.
Q. But primarily is it with Dr. Wake that your testimony was rebutting?
A. The only part that --
Q. That's a yes or no.
A. I would like to answer the question so that there's clarity as to what is being said as opposed to --
Q. Sure, let me ask the question again. Was it Dr. Wake's testimony that you were primarily responding to in your testimony today concerning climate change?
A. I very tiny portion of it as I clarified earlier.
Q. That portion was what?
A. It was the potential impacts to the high elevation areas.
Q. Did Dr. Wake actually testify about that yesterday?
A. I believe that he went through and he discussed losing the upper elevation spruce/fir.
Q. And your testimony today -- where in your testimony today did you rebut the testimony about losing upper elevation spruce/fir?
A. I think what I said a little bit earlier, and I'll give you the full history of this --
Q. I have a very limited time -- actually, I have a lot of time but I would like to keep it very short. If you would just answer the questions that I ask.
A. Could you repeat that.
Q. Sure. Where in your testimony today did you rebut Dr. Wake's testimony concerning spruce/fir forest impacts?
A. Let's clarify the term rebut first, because what I did say -- and I think you have a copy of the stuff that I put up there and there was a question mark behind it -- is there's two hypotheses about what will happen on the upper elevation.

One is that they will disappear, and the other hypothesis is that they've actually shown the ability to pass through these kinds of filters before post ecoglaciation and they may be able to repeat that again. That is what I think I said.
Q. Could you pull up your slides on the projector there so we could use them? I do have them.

I think Slide 12 is where we started, if you could start there. Slide 12 through 15 is where you address

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climate issues.
Let me just ask about Slide 12 specifically.
The AMC website on the topic of wind power has the following statement, and I quote, "AMC is committed to promoting clean alternative energy sources to reduce air pollution and to stop the demise of the region's alpine ecosystems from climate change." That's the end of the quote.
A. That is correct and this is the clarity that I wanted to get to.

We started our project last year, and one of the things we did was to go back through and mine the existing data.

As we started to look at the data as we moved through into this summer, and we're just finishing some of analyses, we realized that some of the original hypotheses that we had out there, which was the original hypothesis we passed to NOAA, which was the one that Cameron Wake presented yesterday, which was upper elevation spruce/fir forests' response to lower elevation, as we looked at our data, as we start coming out to the summer, we recognize that there is a lot of stuff that's contradicting there.

We don't know the final answer. There's a lot of evidence to suggest there's contradictions.

As I pointed here, when we look at the botanical
data, we realize that these have not responded the same way to temperature as they did at lower elevations.
Q. We'll go through the slides. Let's talk about the Maine goal of 10 percent; correct? Would you agree with me that the goal of 10 percent is not the ceiling?
A. I would agree with you 100 percent.
Q. To be a 40-percent increase in renewable energy, that would be a good thing and would help with addressing the threat to alpine species and our habitat from global warming; correct?
A. That's correct.
Q. Are you aware of any present proposals for renewable projects other than wind in Maine?
A. I would have to say, because I'm not an expert in this area but I do read it and do follow it and I would emphasize that the AMC does support other renewables.

I think we also take the position that there is no energy source that's entirely benign, but I would point out -- I think you can just look at the Kibby project or wind in general -- that the technology has changed dramatically in a very short time frame.

A lot of emphasis on a lot of these other sources out there, and it's not to say in the near distant future that they may not come into play, and I think it's also true that when you ask what you're going to sacrifice.

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Q. I really don't mean to cut you off. You have the opportunity to testify. I really do just want you to answer the questions as I ask. There is a chance for rebuttal after this. If you feel I'm cutting you short, that can be taken care of then. It's limited time.

If you turn to Slide 13, this islands in the sky theory or proposition --
A. Hypothesis.
Q. Hypothesis. What ongoing research suggests this possibility of islands in the sky?
A. Well, I first point out that the alpine areas in the eastern United States are extremely low, it's hard to understand why.

No. 2, is when we mapped out where the tree line --
Q. I'm sorry. Can you just tell me what the ongoing research is that supports the islands in the sky theory? It's a simple question.

THE CHAIR: Mr. Mahoney, I'm not sure what
Mr. Plouffe is going to say, but I suspect that -- you're getting into an incredible amount of stuff here that is not particularly relevant to probably the decision we've got to make.

I appreciate what you're trying to do here, you're trying to present to us a picture of global warming and its impacts, but I'm not lost in this discussion. It's gotten so
technical that I think you've lost me and you've probably lost the rest of the members of the Commission.

You've got to be -- I'm not sure you're getting anywhere with us. That's all I'm trying to tell you.

I don't know if that's what Mr. Plouffe's objection was but he may state it as well.

MR. PLOUFFE: Mr. Chairman, there's that, and I would also -- this isn't the show Law and Order. This is an administrative hearing, and we're trying to get information from people.

To be cutting off the witness who is trying to answer a question seems to me to be not in the spirit of what we're trying to do here.

I would appreciate it if Dr. Kimball would be allowed to, within reason, respond to the question that's asked.

THE CHAIR: I think I understand that as well.
MR. MAHONEY: That's fine. I really was trying to be efficient.

THE CHAIR: I appreciate, but, you know, please understand you're going in a direction that I'm not sure is helping your case or our deliberations in this.

You've presented us an incredible amount of information on global warming, all of which is good information, but how it impacts on this decision is another matter that this Commission a going to have to decide on.

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So just be guided by that, please.
MR. MAHONEY: Thank you. I'll ask the question again
and answer it as you wish.
BY MR. MAHONEY:
Q. Could you tell me the ongoing research that supports this islands in the sky theory? Hypothesis, excuse me.
A. As I mentioned before, we looked at the climate data, we realized what's happening in the climate at the planetary boundary layer and above and below.

When we look at the historic data as to what's happened, we see that actually the high elevation areas that we looked through the scope before, we take a look at our own research on what elevations tree line alpine eco zone is. It varies by 2000 feet on this mountain and on Mount Katahdin as well as the Presidentials.

You need an explanation other than temperature to explain all those differences. That's what we're researching right now.
Q. So this is research by AMC?
A. This is AMC, Mount Washington Observatory, and the University of New Hampshire, which is funded by NOAA.
Q. That's the report that's mentioned in your prefiled testimony?
A. No, because I --
Q. The NOAA report in your prefiled testimony.
A. Yes; I don't remember a NOAA report in my prefiled.

Refresh my memory, please.
Q. You referenced you're a principal investigator for a NOAA report?
A. Yes, I am the principal investigator, that's correct.
Q. That is the research you're talking about?
A. That is correct.
Q. Thank you. If you go to the next line, this is data from Mount Washington.

Are you aware that this data was considered by Dr. Wake in the study that he did that was discussed here yesterday?
A. We have an issue coming out in our magazine to our members this month, and the draft manuscript, which does contain alpine climate and some of the stuff that I just discussed here -- at least draft version, I haven't seen the final version -- quotes Cameron Wake, he does understand what may be happening with the upper elevations is different than the lower elevations.
Q. On the final slide, which I think is Slide 15, the third bullet point you have here, high elevation balsam fir communities, less sensitive to climate change than lower spruce/fir forest.

Are you suggesting then that the islands in the sky are a refuge for both balsam fir and spruce/fir, or just
A. It would be just balsam fir. I think I also want to point out here just to be clear and trying to be a true scientist, I put question marks because these are hypotheses right now.
Q. As a working hypothesis, has it been peer reviewed or any of the normal --
A. As I told you, we are about seven or eight months into it, and we started out with this grant with the same hypothesis that the lower elevation spruce/fir and the upper would behave the same, but we're having difficulty making the data support that.

MR. MAHONEY: Thank you. Mr. Horn, a few questions for you.

## EXAMINATION OF J. T. HORN

BY MR. MAHONEY:
Q. It really just gets to your discussion of the work by Mr. Crews.

The first part is that in your testimony you discuss the Scenery Management System.
A. Correct.
Q. Mr. Crews didn't use the Scenery Management System; correct?
A. I believe he used the Visual Management System.
Q. What is your understanding of the difference between the

Visual Management System and the Scenery Management System?
A. The Visual Management System is an earlier version. It's still used on many national forests. It does a better job assessing impacts of development projects.

The Scenery Management System is used to map national forests to determine which zones are sensitive when they're planning the kinds of development that they're going to be doing, timber harvest, recreational development, things like that.

Both are considered, you know, legitimate contemporary science. One does not replace the other. They essentially serve slightly different purposes.
Q. Do they both take into account expectations of the viewers?
A. They do.
Q. In either the VMS or your review of this, were there any actual expectations of viewers taken into account of your evaluation of the project?
A. In the Scenery Management System handbook and the Visual

Management System handbook, there are certain classifications that are very explicit, like National Scenic Byways, National Scenic Trails, which are given a sensitivity level, which is the highest sensitivity level.

So it's built into the way the system is structured.
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Q. But no specific expectation of viewers, individual viewers, was taken into account for this project?
A. The -- well -- the National Park Service and the US Forest Service used this system, and they have essentially, by the national designation, determined that these scenic byways and National Scenic Trails are of national importance and therefore more sensitive. I think that that's an operating assumption that's built into the program.

The other thing that I'll say is that the sense of remoteness that is -- that Eric Crews talked about -- is something that is also kind of structurally built into the system where opportunities to observe undeveloped landscapes are assumed to be more sensitive by destruction, you know, from a viewer or recreational facility.

And so the sensitivity ratings -- I guess the simple answer is sensitivity ratings are built into the system itself.

MR. MAHONEY: Okay.
EXAMINATION OF JODY JONES

## BY MR. MAHONEY:

Q. Ms. Jones, with respect to your statement today that the highest elevation areas are the last to change from, I guess, the impacts of global warming, is that statement
based on the working hypothesis of Dr. Kimball?
A. That's right.
Q. Any other basis for that?
A. They already are basically islands in the sky. That term wasn't something we made up. They're already very limited in scope. But, yes.
Q. Am I correct in understanding from your prefiled testimony and your testimony today that Maine Audubon's opposition to this project is based on the natural resource impacts?
A. The multiple values, yes.
Q. That does not include the visual impacts, does it?
A. We are consolidated as a team and their testimony is part of ours as well.
Q. So Maine Audubon --
A. By LURC. That's where we are, yep.
Q. So Maine Audubon does object to the project based on visual impacts?
A. We're a consolidated team, and I would answer that yes.
Q. My last question is with respect to the last portion of your testimony concerning loss and degradation of habitat for multiple species, and the question, I hope, is fairly simple.

For any project that is going to be developed in an area that is presently undeveloped, there will be loss and degradation of habitat species; correct?
A. That's correct.
Q. So for every wind power project or any new project in an undeveloped area, there will be loss of habitat and degradation of habitat?
A. That's correct. And if I could -- I could add that that has to be weighed on the site-specific basis with all the other impacts associated with it.

MR. MAHONEY: Thank you, that's all I have.
THE CHAIR: It's 4 o'clock, and I think our next -hopefully with a little effort.

I'm sorry, Rebecca, did you have a question of this group before we let you go?

MS. KURTZ: I do.
EXAMINATION OF KENNETH KIMBALL
BY MS. KURTZ:
Q. I've been trying to figure out how to ask, actually. I guess this would be a question for Dr. Kimball and I think -- I think you said the roadless to date was done on the desktop, but on the ground I have written something that it's a different matter.

Can you explain to me sort of the significance of an unfragmented roadless -- why unfragmented and roadless is being brought into this protection?
A. It wasn't our question, but I think when you look at any area and try to understand its value, its ecological
value, the ecological literature is very rich in the fact that when you introduce roads into a system, they do start to reduce species diversity and so forth.

If you put in an interstate, impacts, particularly on amphibians and stuff that want to move.

The other part of that question, I think, as has been presented by the applicant here and many of the supporters, they put it down as though for every acre that's lost, that's all that's lost.

I think the ecological literature is extremely rich in the fact that once you open these up, you do allow corridors for other species to come in. Just using birds as a quick example. Species that exist deep in the woods typically cannot survive on the fringe, because species like blue jays and so forth, which can be extremely good predators and that type of thing. That's part of the reason why introducing roads dead center into the old growth that now exists, the old that now exist on the summit, represents not only risks to something like Bicknell's thrush from the turbines, but it also represents a lot of risks from introduction.

If you're going to have Ski-Doos going up, you allow stuff like coyotes and so forth to be able to move up into that area.

So just simply looking at it and looking at its
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acres, and the National Academy of Sciences points this out as well in the report as well.
Q. When a distinction is made that Black Nubble is outside of the unfragmented area, how do that -- how do you --
A. Essentially what we did in this analysis is essentially used satellite image, and the purpose of our roadless study was to -- because it would be extremely sensitive to go out and do a site-specific road analysis across northern New Hampshire, Vermont, and Maine -- which is what the purpose of the study was in the beginning -- we used satellite imaginary and then we used stuff like DeLorme and so forth, and we tried to reconstruct as best as possible where are the areas that were least fragmented by roads. Then we went back and repeated that a number of years later to see how much more was roadless, because we were trying to understand the rate of change that was out there.

So when this analysis is done, there's a scale issue. We're not looking at these things at high resolution. When we end up looking at a project like this -- and this is something that I mentioned a few minutes ago -- then you move from that sort of analysis down to what's actually on the ground.

What really impressed us when we were up there this summer was the high degree of ecological integrity of that
high elevation area.
And then you actually -- just a little thing that's out there isolated by itself or does it have some connectivity to other areas that the have high ecological value.

When you look down into the Navy base -- and yes there is a road through there, we're not even going to pretend there isn't -- but the fact is that the Navy base area has not been harvested for a long time because of the use, and it also has a lot of restricted uses in through there, again, because of the use.

I think -- you know, we looked at the Fish \& Wildlife Service's analysis and the fact that that area -- has it been harvested before? Yes. Has it been harvested a long time? No.

And there's not a lot of that kind of habitat left, so what you have on Black Nubble is essentially an area that has very high quality old growth on the summit and comes down. It's not exactly contiguous but it is very, very close.

The land between, there is a fairly decent corridor there that has not been monitored intensively or at all because of the steepness, which I think you can see from the video.
Q. I guess what I'm trying to get at is even though it's on

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the "long" side of the road or inside the road, is the habitat similar on both sides of this --
A. No --
Q. -- road?
A. -- and I think a lot of the testimony provided by the applicant, and so forth, they kind of focus north of Black Nubble for good reason, because that's where a lot of harvesting went on.

The emphasis in focusing in on the SERE property into the south and the types of corridors you have between that and Mount Abraham, essentially the State of Maine has an excellent opportunity here with its second -- probably its second highest mountain area outside of Katahdin -- to actually construct something that has recreational/ecological value, and that's part of what is the question here today, is what is going to be the fate of this area in the future.

The building blocks are there.
Q. Right; I don't know if I'm asking this question right, but the road going through there, has that diminished --
A. Through the SERE? Is that what you're talking about?
Q. We've got too many roads going on here. Has -- with Black Nubble being outside this roadless unfragmented area, has whatever road that creates that fragment, has that made it such that it's ecological values are that
much different than what's on the inside? Do you know what I mean?
A. If I understand what you're asking here is because it didn't show up on our map exactly, does that mean it has a lower value, the answer is no.

MS. JONES: I'd like to add to briefly in that the type of road really matters when it comes to fragmentation and logging roads probably have less impact than permanent roads with public access in terms of, you know, a major route from one location, recreational location, to another, let's say.

The type of road really matters in terms of its impact on wildlife access, permeability, travel corridors, et cetera. We're actually putting together some information that would be helpful with regard to the Comprehensive Land Use Plan.

So the type of road really matters. In this situation the type of roads are not providing a permanent fragmented feature between these two areas because of the type of road, the logging roads, that will grow up again.

MS. KURTZ: I think that's where I was going.
MS. JONES: There are multiple logging roads to the north, and there's the SERE road.

MS. KURTZ: Is the SERE road the one that breaks it off and makes it --

MR. JONES: No, no, it's not.

MS. KURTZ: I guess that roads that are making this outside the unfragmented roadless area -- I'm just not sure what road it is or roads putting outside this unfragmented area and the significance of what that road is.

DR. KIMBALL: I may not get this 100 percent accurate because Dr. Publicover is the one that actually did this analysis.

A lot of the stuff that I think was discussed earlier was eroding up in this sector up here from the heavy logging operation; whereas, the Navy base land is here.

In the aerial photo satellite images that were shown, basically that road comes through this area right here.

## EXAMINATION OF KENNETH KIMBALL

BY MS. KURTZ:
Q. Would you say that that road serves to fragment --
A. The one to the Navy base?
Q. Yes. Through the habitat such that the habitat values are --
A. The answer, is it helpful to the habitat? The answer is no.

You've got to remember that this is a 12,000 -acre block of land. Maine ecological reserves, if my memory is correct, is typically about 5,000 acres in size. The desire for a fully intact ecosystem is typically around 25,000 acres; but this is a pretty big parcel which simply
has one road through it.
As Jody pointed out -- and I think I was mentioning in the beginning -- you've got to ask yourself about the traffic volume and the timing and that sort of stuff on the road. I'm not going to pretend that there isn't traffic or that going through here, but the thing that makes this area so valuable is it's basically grown into a late succession stage.
Q. That road hasn't diminished the value, then?
A. No, as I said a few minutes ago, I don't want to sit here and pretend that it has no diminishing factor; it's just simply that when you look at the context of that whole landscape, you've got very few places in the state of Maine that are this size with late succession.

MS. SPENCER-FAMOUS: This is to get some clarification on comments that Dr. Kimball made on Natural Areas Program's comments because it's in the file we'll have to characterize it.

## EXAMINATION OF KENNETH KIMBALL

 BY MS. SPENCER-FAMOUS:Q. I was listening to you talk, Dr. Kimball, about a Natural Areas Program comment, and what you said sounded different from what I was reading in front of me, so I wanted to reconcile that if I could.
A. Go ahead.
Q. You had said that they characterize the area, I think you said it's an excellent example, and in here it says good to fair and they very clearly explained why they said that.

They said it was in good condition. I actually called Don Cameron to make sure I understood what he was saying. He said it had been cut in the past but just not too recently, but then because it's a small area they gave it the good to fair rating. I believe I heard you say it was in excellent condition, and that's not consistent with what's right here.
A. I think if I'm correct, in the bottom of what they filed they used the term pristine, do they not?
Q. They did call it pristine. That's another thing I called about to make sure I understood what he meant. He said pristine and it hasn't been cut that much.

I said, well, what did you -- they went out there, and I said, well, what did you mean to imply by that, and he said it was just the cutting hadn't happened in as long, and he did clarify in here 75 to 100 years, which I would have thought that to be old growth. It isn't anywhere else.
A. I would respectfully disagree with your last characterization. Fir forests and balsam fir in general is not a long-lived species. The turnover of that species
is somewhere in the 80 to 90 to 100 year. I think if you asked any forester, he'd said the same thing.

The second point I would make is that when we were up there, we dug around a few places in the soil and looked for evidence of fire and other stuff up in there, and there was no evidence of that.

The third point I would make is I don't think there's any question that there was some logging on the edges of this. This was a bigger habitat than currently exists right now. But between our field observation and the fact that it's in the record and labelled as pristine, you don't have a lot of examples of this quality.

I think if you go down and look at the size distribution, which I was pointing out in my testimony, the next largest one that you've got in the state of Maine that's documented is over 72 acres.
Q. They didn't label it as pristine, they talked about it. It's labeled as good to fair.
A. Yeah, and I think -- I want -- if I understand correctly the terminology the way it's actually been entered into the record here, the $S-1,-2,-3$ is a viability of that community, it is not simply a ranking of which is the best to worse. Obviously the larger and more intact you have ecologically, it has more value. There's no question on that.
Q. I'm just talking about what they put in their comments, that's all.

THE CHAIR: I think with that I'm not going to ask any questions. I think I've said enough. You can take your leave, I guess, and go enjoy the rest of the day somewhere. It's about 10 after 4 or thereabouts. I think
Mr. Trafton is the next person to testify.
Will you try to get -- if everybody sticks to the schedule as close or even moves it up a little bit, we may be able to get out of here by 5 o'clock and have completed what we had planned for today. If we could do that, that would be helpful; if not, we'll talk about that at 5 o'clock what we do.

MR. TRAFTON: I'll do my part, Bart.
Mr. Chairman, commissioners, my name is Dain Trafton.
I'm from Phillips. I'm here to represent Friends of the Western Mountains.

The theme of my prefiled testimony was that the applicant has failed to provide convincing evidence to support the following major claims about the benefits of their project.

Here are the four headings under which I would like to call your attention to those claims.

That the applicant's claims about electrical output are unsupported by wind data, and although we have no doubt that the data would indicate that Maine Mountain Power will be able to make a handsome profit from their project, we have
serious doubts about whether the data would support the claimed emissions benefits or the claim that the operations of the plant would reduce the cost of electricity to Maine consumers.

Second, we find that reference to general statements about wind power cannot substitute for specific studies to support the specific claims made by the applicant. This is true even if the general statements are made by authorities, such as the Maine Public Utilities Commission, the Maine Department of Environmental Protection, or the Maine Office of Energy Independence and Security.

Third, that the applicant's economic benefits' claims are unsupported by a proper economic impact study. Moreover, Friends of the Western Mountains submitted testimony in August 2006 suggesting strong reasons for doubting the economic benefits that the applicant claim the project will have for the local area.

And fourth, that the applicant's claims of public support are countered -- notice the word, I'm not saying refuted -- but they're countered by the 1864 signers of the petition circulated by Friends of the Western Mountains prior to the August hearing.

Also countered by public testimony of many people, mostly local, who came to the hearings in 2006 and again last night to express their strong opposition to this project.

I would like to point out that all of these -- all of 656
these points are in fact re-presentations of principle points that we made in our prefiled and rebuttal testimony in 2006; however, these are points that we feel have never been refuted and we wish to remind the Commission that they are in the record and should play proper role in the next decision.

I'll conclude by just reminding the commissioners -I don't need to, but I will -- that the burden of proof lies on the applicants. This is a serious business, it's about a rezoning that could do serious harm to one of Maine's wild and most beautiful places.

That's my statement. Is that brief enough?
THE CHAIR: Yes, very good. Thank you.
Rebecca or Jim, Marcia, questions?

## EXAMINATION OF DAIN TRAFTON

## BY MR. HARVEY:

Q. Let me just ask you, Mr. Trafton, on the question of specific studies, is it your position that the applicant is required as part of this application to provide those studies, the kind of studies you're talking about, or your assertion that he should have done it?
A. I'm not aware that there's any statute that requires specifically these studies, but I would refer to the burden of proof that lies on the applicant to show that the benefits that are alleged are actually going to happen.

If these benefits were not such an important part of the application, I think it would be much less important.
Q. The other one, on public support, how important do you think that is in our decision making one way or the other?
A. It's not for me to prescribe that, but I understood that because you've set aside ample time for the public to come in and testify, I assume you take it seriously, and I believe it is -- at least referred to under the category of ascertaining need -- that a public sense of that need ought to be present.

If I could just add one other point that we -- most of our support, that is, Friends of the Western Mountains' support, is from Franklin County, the vast majority of it. These are people who live here permanently or own property here or are frequent visitors. We circulated our petition here basically.

THE CHAIR: I think I understood that. Rebecca?
MS. KURTZ: Where are we in the agenda?
THE CHAIR: We're going to allow the applicant and the other intervenes to cross-examine Mr. Trafton if they wish.

So I think that -- yes, the applicant, do you have some questions, Mr. Thaler?

MR. THALER: We do, and Sarah Tracy will be asking them.

THE CHAIR: What was that again, please?
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MR. THALER: We do have some questions, and --
THE CHAIR: Oh, Sarah. Thank you.
MR. THALER: Admission, Mr. Chairman.
MS. TRACY: Good afternoon.
MR. TRAFTON: Good afternoon.

## EXAMINATION OF DAIN TRAFTON

## BY MS. TRACY:

Q. Mr. Trafton, you stated that the general statements by the State authorities on wind power were not helpful for the Commission's decision in this proceeding, but isn't it true that this morning the PUC stated specifically that the addition of renewable wind energy, direct generation, if that's added, the Black Nubble wind farm would have the effect of lowering energy prices, electricity prices?
A. Well, there's no doubt that the MPUC wants to encourage the development of wind power in Maine; however, I believe -- and I think I asked Mitch this question myself -- that they have declined to take a position on this particular project.

Now, projects such as this, it's not quite the same thing as saying we're in favor of this particular project.

And I also asked Mitch whether he had done the studies that would show that this project -- and mind you, focusing on this project -- and asked him if they had done studies that would actually show that the addition of
electricity from a Black Nubble plant would have the effect of knocking off the top bid in the bid stack. He didn't say that it wouldn't have the effect, but he said he hadn't done the studies so he couldn't know.

In other words, his statements are statements that could be taken as true or as actual possibilities of wind power, but I don't believe he ever committed himself to an assertion that this plant would have that effect.
Q. Does the lack of a study by the MPUC in this particular case signal to you that the -- strike that.

Isn't it true that it is not the PUC's role to be doing particular studies on what particular power plant is bumped off in certain situation?
A. That might be right. I don't claim to understand entirely the new deregulated world what the role of the PUC is.

However, I was simply saying that no one has done it. Since we have many references in testimony by the applicant and others, too, to the effect that the MPUC supports wind power and so on, I thought I would call attention to the fact that those statements can't be properly extended to an endorsement of a particular plan.

The only way you could do it, in my opinion, is by having done the studies that would show that these benefits, alleged benefits, are actually going to occur.
Q. There are several wind power projects in the pipeline
right now. To your knowledge have any of these wind power projects done specific modelling such as you requested?
A. I don't know if they have or not. I haven't actually looked closely at all the applications.
Q. Did you hear the testimony of Mitch Tannenbaum this morning where he said that the methodology by which Maine Mountain Power calculated the emissions avoided figure was an appropriate and reasonable methodology?
A. Well, you mean using marginally emission rates?
Q. I do.
A. This is the ready and easy way to do it and it saves a lot of money for the applicant, it's often done that way. Yet we had testimony last year from a bona fide expert, namely Tom Hewson, that without doing these studies you really don't know. You're in a sense buying a pig in a poke.

You can accept them on the grounds that it's too much trouble to ask for them, but when there's a lot -- and maybe in some cases that doesn't matter -- but when there's a lot at stake -- namely, this beautiful area to which so many people have testified warmly -- when that's what is at stake, perhaps one should ask for a high standard.

That would be my response.
Q. You said -- and correct me if I'm wrong -- something to the effect that calculations for marginal emissions --
what is sort of done or normally done and you implied that there's a different standard in this case.

Wouldn't it be fair to say, Mr. Trafton, that there are always a body of people that feel warmly about their particular area and that no particular project is held to a higher standard just because there's opposition.
A. Well, I'm not sure that that would be fair to say.

There are a number -- a number of wind projects throughout the country, indeed throughout the world, where there's very little opposition, that is, nobody seems to think that they have serious environmental or human/social problems associated with them.

But there are some, like Mars Hill, for example, where, you know, problems have arisen and it might have been better to hold PUC to a higher standard with regard to noise.

I would just say that I -- and by the way, I don't think I did say that the marginal emissions rate was the normal way in connection with wind power projects. It might be, I don't know that. I cling to my point that a higher standard is called for in some cases.
Q. Were you at the public hearing testimony last night, Mr. Trafton?
A. I was.
Q. Did you hear the public testimony of Fred Hardy and Gary 662 McGrane of the Franklin County commissioners?
A. I did.
Q. Would you agree that the Franklin County commissioners are a government body that has a vested interest in a strong economy in this area?
A. I would.
Q. Would you agree that tourism is one component of this particular economy and this particular --
A. I would. May I make a comment and an explanation, a brief one.

The County commissioners were approached by Friends of the Western Mountains with requests to consider our testimony before they made a decision on this project.

They refused to see us and don't ask me why. Something else was going on and I don't know what, but they made up their minds behind closed doors. In fact, they're not aware of some of the arguments that we've made on the potential effects on tourism and so on.

I would just like to point that out, in my opinion the County commissioners -- and I'm not the only one, including some political figures -- have asked why did they move so quickly, why weren't they willing to talk to you.
Q. However, a year ago the County commissioners expressly declined to support this particular project; isn't that
true?
A. That is true.
Q. So they've only changed their opinion as a result of the fact that the project was down-sized?
A. I don't know that that's the only reason, but it might be.
Q. I would like to show you the letter that the County commissioners sent out.

I would like to draw your attention to the first paragraph. Correct me if I'm reading this wrong. It says, This project is in line with our environmental and economic policies for Franklin County and is consistent and compatible with existing forestry and recreation operations in the surrounding region. We believe that it is a benefit development that will give much needed economic growth while not interfering with our region's important tourism and recreation industry.

Is that a fair characterization of that paragraph?
A. It's a word-for-word reading of it.
Q. Thank you. Did you hear the testimony of Alison Hagerstrom --
A. Yes.
Q. -- of the Franklin County Development Corporation?
A. Yes.
Q. Would you agree that one of the missions of this organization is to protect and enhance the economic

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viability of this region?
A. I would.
Q. Would you agree that tourism plays a pretty big part of the economic viability of this region?
A. I would. May I make a comment on something that Ms. Hagerstrom said, which was that she was unaware of any study which showed that wind plants had had a negative influence or an impact on real estate values or tourism.

She said that same thing last year in August of 2006, and I cross-examined her and called her attention to the fact that there are such studies.

Apparently, I don't know why, she might have said I hear there are some studies, I'm aware there are some studies, but they don't impress me, I don't think they're very good arguments.
Q. May I pose a question?
A. Yes, go ahead.
Q. Thank you. I assume you're getting to the point of the Cape wind study?
A. Yes, I am. That was one of the ones I referred.
Q. Your argument is that the Cape wind study establishes that real estate values would go down as a result of the presence of wind farms?
A. Establishes it as a forward looking study, so, yeah.
Q. Didn't you commit -- criticize the applicant in your
pretrial testimony for using the Oregon study because it wasn't applicable to this particular region?
A. Yes, it's a very different region.
Q. Isn't it true that the Cape wind study that you're referring to is an offshore wind power development with 130 turbines?
A. It is.
Q. How is that so similar to a mountainous region? Isn't it true that that is not the same as a wind power facility in a mountainous region with only -- less than half -- excuse me math?
A. Maybe fewer than that. You call attention to the differences. I called attention to the similarities, which are an economy heavily based on tourism and real estate development.

Mind you, I don't say that that study is the definitive study; I just say to Ms. Hagerstrom, here's a study you ought to know about, and to come back 12 months later and say exactly word-for-word what she said last summer, I am not aware of any studies. That I find hard to understand, just about as hard to understand as I do the refusal of the County commissioners to talk to us.
Q. Wouldn't it be fair to say, however, Mr. Trafton, that Ms. Hagerstrom, who you admitted is part of a body that is in charge of protecting the economic viability of this

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region, believes, and her board believes, that this project will be beneficial to the recreation and tourism industry in this area?
A. I guess they do.

MS. TRACY: Thank you very much.
THE CHAIR: Thank you.
Mr. Plouffe, does your group have any questions?
MR. PLOUFFE: No, Mr. Chairman.
THE CHAIR: NRCM?
MR. VOORHEES: We waive our rights to that.
THE CHAIR: How about the CLF?
MR. MAHONEY: No questions.
THE CHAIR: Well, David.
MR. WILBY: We had reserved time. We yield our time
back as well.
THE CHAIR: Jim, or -- I know Rebecca's not going to let you off.

MS. KURTZ: I have a question on the petition, you got 1864 signatures.

What was the question that was actually asked in your petition?

MR. TRAFTON: It wasn't a question, it was a statement and I don't have one in front of me. It was very simple. It said, We, the undersigned, urge the LURC commissioners to deny rezoning application of -- it was Maine

Mountain Power then -- Maine Mountain Power to rezone. It was before last August.

So to rezone the peaks of Redington and Black Nubble in order to build a wind plant there.

Now, so you might well ask, well, have people been flocking around to get their names taken off the petition now that it's only Black Nubble? And I have to admit that we are entirely a volunteer organization, 1864 people, it's hard to be guaranteed that you got in touch with all of them.

This has been well publicized. I think we've had three people tell us that they wanted their names taken off, and I guess it's 1861 now.

So perhaps we didn't do our duty to go around and call everybody and say, here's the new situation.

Have I answered your question? I may have gone way beyond what you wanted.

MS. KURTZ: That's fine. I guess that's probably it.
THE CHAIR: All right. Well, thank you, Mr. Trafton. I guess you're off the hook.

MR. TRAFTON: Thank you.
THE CHAIR: Well, it's only quarter to 5 . We've ended 5 minutes ahead of schedule, which is good.

Now, I think all of you realize tonight we have another public session, but I'm going to suggest some things for you to think about.

I don't have any idea how many people are going to come and want to testify tonight, but if we only end up with three or four, I guess the question is, do any of you want to utilize a little bit of time tonight to get started instead of starting tomorrow?

Do you want, for example, NRCM to provide testimony and do some of that cross-examination, or would you prefer just to do the public testimony and if it only takes ten minutes, we're all out of here.

MR. THALER: Mr. Chairman, for the applicant I guess it sort of depends on NRCM because they're the ones who are supposed to be presenting.

THE CHAIR: I think I'm seeing Peter tell me no, he doesn't like that idea. I guess his witnesses or whatever aren't here.

MR. THALER: For a number of reasons we would prefer to go tomorrow.

THE CHAIR: All right. I guess we were probably going to be here anyway, so I guess it doesn't make a whole lot of difference other than getting out of here earlier than noontime.

As I said, we're here for however long it takes you to get your stuff on the table.

We'll see you tonight at 6 o'clock.
(The hearing was suspended on September 19, 2007 at

1 4:43 p.m. and the hearing resumed at 6:08 p.m.)

THE CHAIR: Just for the record, I'll state that this is a continuation of a public hearing on Zoning Petition ZP 702, and that I will introduce members of the LURC Commission that are present this evening and the LURC staff.

Rebecca Kurtz; Steve Schaeffer; Amy Mills, the AG's office; I'm Bart Harvey, Chairman of the Commission and the presiding officer for the hearing; Catherine Carroll, to my left, who is the director of LURC; Jim Nadeau, a commissioner; Marcia Spencer-Famous, LURC staff; and Lisa, who is our faithful court report.

So all of you people planning to speak tonight will come up and speak in the microphone so she can capture what you have to say; and Melissa on our staff out here, she's the lady with the sign-up sheets. If you plan to testify tonight, we would appreciate if you would sign the sheet that was out there. I'm going to call you up to speak in the order which you signed up, and we'll go from there.

Briefly what we'll do tonight is I'm going to ask the Applicant to make a brief presentation about the project so that we kind of all start with some level of knowledge about what the project is, and then we will go right to the public comment.

I'm going to ask if you speak you have to come down front to the microphone and make your statement. If you have a

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written statement that you want to leave with us, that's fine, and give it to Marcia and we'll have it in the record. I'll also remind you that -- ask you to keep your remarks to about 5 minutes so we can get everybody in. I'll remind you that long statements aren't necessarily more effective than really short ones that get right to the point.

That will be appreciated by members of the LURC Commission that you make the statements succinct.

With that I'm going to ask Mr. Lee to make his presentation. Thank you.

MR. LEE: Thank you Chairman Harvey. My name is Harley Lee, and I'm the president of Endless Energy Corporation. I'm going to give a brief overview of the Black Nubble wind farm.

This is a photo taken from across the valley from the Bigelows, it shows this region, and we're here, it shows Sugarloaf, the base, the Crockers are here, Redington Mountain is there where we no longer are promoting turbines. Black Nubble is over here.

What we proposed is a 54-megawatt wind generation facility composed of 18 wind turbines, about $\$ 110$ million dollar project located on Black Nubble, and there will be about 6 miles of new road and 9 miles of upgraded road, and also 8 miles of transmission line.

There's a big transmission line, it goes right
through the valley here, and ends right about there. It serves Sugarloaf and also there's a biomass plant that plugs into it. That's one of the major reasons why we're at this location because it's near existing development, it's near a power line, and our site is right there.

We've put together what we think is a good team for this project. Endless Energy brought this project to a certain point where we thought it was viable, and we formed a joint venture with Edison Mission Group, which is a California firm, with a lot of experience in developing wind projects.

We're using Vestas wind turbines -- Vestas is the largest turbine manufacturer in the world -- and Sargent, which is a Maine-based company, to do our civil work. They're the same company that did the roads up at Mars Hill.

This is the picture of the Vestas V90 in a mountain setting. It's a real babe, it's a nice looking turbine. It's the one we're planning on using in our project. Wind energy is one of the most cost effective renewable energy sources, and I think it's second only to natural gas nationwide in terms of new installations. So it's really grown quite a lot in the last several years, and it's a great way to harvest one of Maine's most valuable untapped resources.

How will our project benefit Maine? We're generating a lot of clean renewable energy. It's about 140 million kilowatt hours and that's enough for 21,000 Maine homes.

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It will plug right into the grid here in Maine like other power plants are used in Maine; it will reduce our overdependence on fossil fuels.

After Maine Yankee shut down, it got replaced twice over with natural gas-fired plants, and right there's a very, very high dependence on gas and oil in New England general and Maine specific, and that's what causing generally an increase in very volatile prices and actually has some significant reliability issues, as well, but wind mitigate the price increase, diversify the mix, and enhance reliability.

It will also reduce air pollution by 400,000 pounds a day, and air pollution will be prevented through the output of this project, which is like taking 12,000 cars off the road.

Last January the commissioners deliberated on our two-mountain project and voted 6:1 to have a denial written up, and clearly the two-mountain project was not well accepted, so we went back and changed the project from two to one. What that does is it moves the closest turbine one mile from the Appalachian Trail network to three miles, so we tripled our distance from the AT and 12 fewer turbines. Even at that size, there's still pretty significant benefits. As the NRCM display out front shows, it still produces more power than 95 out of Maine's hundred dams.

Some of the basic comparisons, we've gone from about 300 acres of impact to 233 , and an interesting statistic is


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at, the power line alone would have been like 500 acres.
So it's near existing power lines. We can make use of existing logging roads. The logging roads go part way up Black Nubble, and we're just extending those, which is a big help, and there's a lot of existing develop.

There's this wonderful ski resort here. Saddleback is on the other side of us. Boralex plant, the Navy survival school, where they land cruise missiles and shoot off machine guns and eat rabbits, I understand. I heard they had to actually bring rabbits to teach the guys to kill them so they can survive. Anyway, it's a good place we think for a wind farm.

It's located on the fringe of LURC jurisdiction. One of the key drivers of LURC is to try to put new development near existing development, and that helps preserve the core of the jurisdiction, and we're on the very fringe, which makes us near existing service areas, towns, two large ski areas have been mentioned, biomass, Navy. 1800 acres of cleared area between these two resorts, so we're a tiny fraction of the existing mountain development.

As I mentioned, we're close to the transmission. There's 330 miles of road and 1000 miles of logging roads within our 15 -mile siting radius. There's quite a bit of roads already in development here.

We've worked hard to minimize the impacts in all
cases. We're using a larger capacity turbine. We looked at the 1.5 megawatt machine, which has been used in some other projects, but with the machine we would have used a third more turbines and gotten a third less good energy. For us, the bigger machines, is good for us and it's good for the state.

Carefully designed the roads for erosion control, we've got this appetizing road design called a rock sandwich, and we've minimized visibility and avoided wetlands. As I mentioned before, we gone from 20 acres to $3 / 100$. Avoided sensitive habitat and we'll revegetate whenever we can, and we've already received permits, NRPA, and site permits from the DEP, from the US Army Corps, and Carrabassett Value for a portion of the power line that goes through town.

We believe that there are no undue adverse impacts. We worked very hard to design roads to minimize those impacts. Very little wetland impact. We've done a phenomenal amount of wildlife studies, which is an interesting -- and we've only clearing 42 acres after revegetation. Importantly, we're restricting development on our other mountain, 500 acres.

Visual impact -- what's interesting about this project is it's pretty well hidden in a 15 -mile radius. We actually can't see it 95 percent of the area. Most locations you're seeing it, it's a pretty big distance, 4 miles or more.

For example, the AT, there's about 34 miles of AT within the 15 -mile study area, and you can only see it in

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9 percent, or 3 miles, of that section. Also I should point out that we did a survey of locals and hikers and other and stuff, and the hikers are every bit as supportive as the other groups.

Closest open view is about 4 miles, and hikers also see other man-made development, including the ski areas and others, from up on the trail.

We have strong economic benefits as well provided by 80 construction jobs, five to ten operating jobs. This is an area where there are a lot of skilled people. You can go to the garage next door. There's a lot of skilled people who work with mechanical equipment and electrical equipment up here, so I think we'll be able to get a lot of our windsmiths from the area and train them.

New property taxes, about half a million dollars a year. Land lease payments, purchase of local goods and services, and once again, 90 percent of Black Nubble will remain untouched, and 100 percent of Redington; so we're leaving 90 percent or more of total acreage untouched.

We'll provide recreation and education opportunities.
Larry Warren, who's here tonight, described how he insisted on putting the hut and trail system not around our mountain but right up through the middle of it, including the turbines, because he thought that would be of interest to the users of this trail. That's not inconsistent. The Mars Hill project is
right along the International Appalachian Trail. Interesting, the Pacific Crest Trail is the same thing. It trail goes right through the middle of a wind farm. So we think it's consistent with local recreation, and we'll obviously provide tours for schools and other groups that are interested.

We did a poll about our project a year ago and for every opponent of the project, there's nine supporters. We were very encouraged by it. We have over 2000 people signed our support petition, and we've got 20 of Maine's leading environmental groups and other organizations, and we've also have very strong editorial support, NRCM mentioned those, which is very encouraging.

In summary, we think the western mountains have a very strong wind regime. It's a good place for developing wind power, and we think Black Nubble is an ideal location to harvest those wind resources. It's near the fringe, close to transmission lines, and will provide a lot of clean energy, reduce dependence on fossil fuels, reduce air pollution, and lots of economic benefits and recreational.

So it's a well designed project with minimal impacts, and we have a good team to make it happen. Thank you very much.

THE CHAIR: Thank you. Before we start the public piece I do need -- there's one more thing we need to do, and that is that all of you who wish to testify need to be sworn in

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so I guess I need to ask all of us to stand one more time.
(Witnesses were sworn en masse.)
THE CHAIR: We can begin. As I said, I'm going to follow this sheet, and the first person is Nancy O'Toole and she will be followed by Hellmut Bitterhuf. I hope I pronounced that correctly.

Nancy, go ahead. Speak right into the microphone. Make it clear so we can hear you.

MS. O'TOOLE: Good evening. My name is Nancy O'Toole, and I'm an environmental engineer living in Phillips.

I have years of on-the-ground experience with road construction in environmentally sensitive locations in mountainous country. I oppose the proposed zone change in the high elevations of Maine mountains.

These are -- these areas are presently protected from all development. Your predecessors did their research and decided that it was in Maine's and New England's best interest to place these fragile places off limits and preserve them as they are.

With respect to this project, the burden of proof is on the applicant to prove that their project is indeed in compliance with the LURC requirements and standards for development in the sensitive area. I don't believe they have met the requirements, and thus far they are unwilling or unable to provide satisfactory information proving to me that they
have.
As an example, stated in the application is a saving of 400,000 pounds of emissions per day. Where's the proof?

High among my concerns are the following. Pictures of existing wind generators show slim towers rising clearly from the landscape or hovering faintly in the distant haze with soft clouds behind them.

In the real world, especially at the top of our mountains, are 400-foot towers supporting turbine housing the size of a bus and three 150 -foot rotor blades requires a solid foundation. A 1.5-megawatt generator assembly, including the tower, 163 tons, the turbine itself, 56 tons, the blade assembly, 36 tons, is huge, heavy, and by definition must deal with enormous constant wind pressure.

At Buffalo Mountain, Tennessee, each foundation is 30 feet deep, contains up to 3500 cubic yards of concrete, the production of which is a major source of $\mathrm{CO}_{2}$, and approximately 2600 pounds of reinforced steel. I would like proof that they don't need to blast off the mountaintop to support such load. I want proof.

Existing roads and all new roads will need to have -and this is conservative -- 50- to 70-ton capacity to accommodate the construction machinery, concrete trucks, and flatbed trucks carrying raw materials and necessary parts and components. These roads must be built into and on slopes of up
to -- we don't know. At this point there is no final design for professional inspection.

Since there is no complete design, there's no way impartial engineers can give experienced-based opinions as to whether it will work or is it a disaster waiting to happen. We just don't and can't know if trapped rocked sandwich layers, cross grain, filter cloth, geotextile fabrics, reinforced, turf, erosion control mesh, and geogrid will e sufficient to contain the steep slopes, seeps, and erosion during rain storms.

Each item sounds very usable; each solution to a given situation sounds convincing. However, in the real world, a box of parts does not equal a completed solution. They must present the final design for professional scrutiny. They must not be allowed to build by the toolbox method. This could, and almost certainly will, be disastrous.

The placement of underground utilities between turbines and out to the collection station increases the disturbance to the soil and slopes.

Where will they be buried? How deep will they be buried? How much extra excavation will be required above and beyond that for the pads and the roads?

Yesterday in testimony it was stated that approximately 250,000 cubic yards of rock and soil would have to be disturbed or removed. Since there is no complete plan, I
find this figure to be meaningless. Given that roads will be built, the number of pass through sites and the amount of land required as construction support space, I believe the amount will triple.

The claim has been made that the 32 -foot wide construction road is to be reduced and revegetated to 12 feet once construction is completed. There will never be a need for a wider road?

What about when significant parts for the project need to be replaced on dismantled? Who is going to pay to widen the roads to disassemble the wind turbine structures and bring them off the mountain? It makes no sense to rip the mountainside apart, make efforts to heal them, and then tear them open again. In either case, it is the burden and requirement to set aside money for demolition and removal now, not later.

This brings me to why they came up with the toolbox approach on such a large-scale project. The developers have gotten a deal that promises them a subsidy of between 50 and 75 percent of the cost of electricity production over a ten-year period. This amount amounts to 1.9 cents per kilowatt hour. Add to that the market price for free wind power. Typical energy production costs are around 2 to 4 cents per kilowatt hour, so this means you have yourself a money maker.

Now all the developer needs to do is to find a way 682
around the minor details of convincing the Commission and the public that they really can build and utilize this project safely and effectively. This type of incentive results in some truly creative engineering proposal, hence, toolbox design scheme. If you paid me enough money, I'll do a triple bypass on your heart, figure out solutions to problems as they arise. Makes good sense to me, how about to you?

In all of the environmentally sensitive projects I have worked out there, have always been approved, always have had approved designs any permits were granted, waivers were given, or licenses were issued.

The project inspectors were very familiar with the design. Even before they went out on the site, everyone was prepared for foreseeable contingencies. There will always be surprises in a project. That's where the toolbox comes in handy, not as the basis for the whole project plan.

Setting aside all these questions, with enough money a road to the top of Black Nubble can be built but at what cost to the mountain and to the people who live and hike in that area.

The ability for our transmission system to handle the heavy flows that occur only a few times a year is decreasing. The nation's transmission network is a primary cause of power outages. Now the utilities maintain the electrical power grid must meet a new requirement that the wires to the customers be
available for delivering power produced by others who won't maintain the delivery networks. The costs of those requirements is placed on the transmission owner, not the wind generator. This means the transmission network upgrade costs are our burden.

This brings me to my final statement of global warming. Let's fix what's already running. Give the wind subsidies to the coal-fired plants and install scrubbers and filters on the stacks. Set higher standards for all cars and SUVs, give subsidies to homeowners for going green.

I have a solar hot water heater that is entirely sufficient 90 percent of the time. My car get 35 miles to the gallon. There are many ways to curtail global warming before we start destroying our mountains. Let's give it a try first, and in the meantime, consider carefully our options and locations for wind power.

As a gentleman said yesterday, we need to act big and bold to curb global warming. Yes, we do. But we need to not be reckless and reactive. If a pollster called me and asked me if I support wind power, I would say yes. If they asked me if I supported the Black Nubble proposal, I would have to say no. Thank you.

THE CHAIR: Thank you, Nancy.
I repeat my admonition of last night that clapping doesn't help bolster Nancy's statement any. She made it a well 684
organized statement to us and it should stand on its own merit. I would appreciate it if we don't applaud. Thank you.

Are you Hellmut?
MR. BITTERHUF: Yes.
THE CHAIR: Okay, Hellmut. After you is Fred Huntress.

MR. BITTERHUF: Dear LURC commissioners and staff. My name is Hellmut Bitterhuf, and I live in New Sharon. We moved to Farmington in 1978 and raised four children with the help of these mountains. We hiked, skied, and camped. We enjoy the beauty of this mountain. A tragic accident reminds us how dangerous this beautiful area can be.

I will omit the next part of my statement because it was said all much better by Nancy just right now, so we'll just have my conclusion.

We're all concerned about climate change, so if 18 wind turbines built in pristine mountain areas can stem the trend, would it not be more beneficial to build hundreds or thousands of windmills on developed land along the coast or northern Maine, as is it done in other states or countries.

This 18-windmill band-aid solution reminds me of a story about a fat man with an ever increasing appetite who's told to make a pill made from some rare plant. He should not worry about the fate of plant because it grows in a different part of the state. The pill might only add a minuscule amount
to his intake, but it make him feel so good that he will have an extra serving of bacon.

Windmills on the top of high mountains are not the solution. Thank you.

THE CHAIR: Thank you Hellmut. You can leave your statement with Marcia.

Fred. Following Fred is Sharon Tisher.
MR. HUNTRESS: Good evening commissioners. My name
is Fred Huntress, I live in Poland Spring, Maine. I've been a
forester, land surveyor for a little over 50 years, pretty well retired now. I own land in several Maine towns, which is certified tree farms, and I also own half of a 1000 -foot mountain down in Casco. It's called Rattle Snake Mountain, so I'm a little bit familiar with mountains.

You wonder why a guy from Poland Spring is interested in Black Nubble, but I got started in the mountains back when I was 19 years old. In college I worked for a lumber company in Colorado and we went logging in the mountains, which were very steep and somewhat similar to here, so I -- and I've done a few timber sales up in the mountains.

I'm very much opposed to this project. In spite --
I'll read because I can't remember everything I want to say, so I'll just read it.

In spite of all the discussion about using wind power to save the planet, this hearing is about protecting the tops

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of fragile mountains from commercial development. The reason these mountains were zoned mountain protection P-MA is due to the very fragile nature of these areas. It's taken over 10,000 years since the last glacier to produce enough soil to grow a tree. This project would destroy the mountains of hundreds of years.

I've seen pictures of the Mars Hill project up there, and it's anything but light industry; it's heavy industry. As the previous speaker said, it's going to basically have to blow the top off that mountain just to do what they want to do. They're going to have to blast tremendous holes in there and fill them with iron and concrete. So it's not your little light project. It's got nothing -- like timber harvesting, you do allow some timber harvesting in these high peaks. When timber harvesting is done properly, it leaves almost no lasting effects on the mountain.

But this thing, I've been down to the coast -- maybe you have -- some of the old gun placements and forts they had back in the Civil War, first World War, they're still there. They don't go away. This thing, once you put it there, it's there forever.

I hope you realize the magnitude of this proposed wind power project. Just building a road up the mountain, which is suitable for transporting the towers and blades, require a massive road with earth moving in steep cuts and many
culverts. Rainfall and snow melt, which is now absorbed and slowed by the forest, will rush down the valleys causing siltation. The tops of the mountains will have to be cleared of vegetation and huge holes be blasted. Transmission lines will need to be carved out of the forest for several miles, leaving the barren landscape, which will not produce any timber or provide habitat for wildlife.

No, this is not just another small factory in an industrial park; it is a gross invasion of a wild and fragile area far from any existing infrastructure.

What we really need, if we need some electricity, is the continuation of the biomass boilers, which we started in Maine. Probably you know, we had a lot of them on line and all the companies and oil went up and the power companies bought out their contracts. But those that are in business now, I understand, are doing well.

There's a big demand for electricity, but that would provide a market to people like myself who own timber. The paper companies are on kind of shaky footing right now. If we lose our pulp markets, we won't have any market for our timber.

Timber is renewable. As you know, we can produce a tremendous amount of electricity through judicious forest management without destroying the tops of the mountains. We shouldn't be logging up there. There's plenty of timber to be logged at other places.

I'm not here to argue the merits of wind power and save the planet. I think this hearing is about saving our mountains, and they're zoned for protection, and I think that's really what we should be discussing, whether or not we're going to save the mountains or we're going to destroy them.

I get a kick out of comparing the two projects, the big project and a little project. The way I look at it, if a whole cup of poison is lethal, is half a cup going to be any less lethal? So we're not going to solve anything by cutting the project in half. So I'll ask you to vote no on this project. Thank you.

THE CHAIR: Thank you. Sharon. And then following Sharon is Iver, if he's here.

MS. TISHER: Good afternoon. My name is Sharon Tisher from Orono, and I'm here to strongly support the Black Nubble project because I'm concerned about the big picture and about the future of snow at Sugarloaf and Maine and the rest of New England.

A little personal story, I'm an avid skate skier at Sugarloaf's ski touring center. It's the best place in the world, I know, to do that. For many years my husband and I have had a nice affordable deal on a condo on the mountainside, and we have reserved that for five or six weekends every winter.

A few weeks we sat around the kitchen table and
decided this year it wasn't going to happen. We weren't going to spend a lot of time up here without the snow we needed to ski at the ski touring center. It was pretty miserable the last two winters.

Now, a good sign, the Farmer's Almanac says there's supposed to be lots of snow this winter and I hope they're right, but I know as well as you do that all credible science says that if we keep using and producing electricity and energy as we are now, snow as we know it in Maine a going to vanish, and winter as we know it is going to vanish.

Now, on one of those snowless ski-less days last winter, my husband and I took some telemark gear and climbed up most of the mountain. We didn't make it to the very top, but we went up to the ridge there, and we looked across over at Redington. I asked my husband, well, what would you feel about some big turbines, wind turbines, over there, and he said, that would be fine, that would be great, and I agree.

We've seen huge wind turbines towering over a wildlife migratory bird sanctuary in the Netherlands. They were really big and we thought they were really beautiful.

The birds, there were hundreds of migratory birds flocking beneath them, they seems very happy to be there, very undisturbed by the turbines, and we thought that they were a beautiful thing.

Now, I teach environmental law at the University of
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Maine, and I thought a lot about the problem of climate change as I'm sure all of you have. I think that if humanity is successful in getting together from community-to-community from nation-to-nation across the globe to tackle all of the complicated pieces of this very big problem and to roll back the clock on global warming, it will be the most impressive and important thing that the human race has ever accomplished.

I also believe that we can do this, but whether we will do it, whether we collectively have the will to do it, I don't know and I'm sure you don't know either.

The one thing I want to say is that if you approve the Black Nubble project, you will bring us a little bit closer from the "can" to the "will" in this big picture, and I think that's terribly important. Thank you.

THE CHAIR: Thank you Sharon.
Iver. And following Iver is Larry Warren.
MR. LOFVING: Hi, my name is Iver Lofving from the Central Maine Peak Oil Group.

The reason I'm here today to talk in favor of the Black Nubble wind farm, the Maine utility grid is very reliance on natural gas right now, which is a resource which is in steep decline in North America.

Natural gas, we have built a lot of natural gas-fired turbines right around here, and they were getting a lot of gas from the Sable Island Gas gas wells up in Nova Scotia. Well,
that is now in decline, and there's much than it had been. You notice that Calpine had a big natural gas plant in Rumford, Maine and that has gone under.

You'll notice in the back of the newspapers they talk about they're not going to put natural gas lines up to Vassalborough, a lot of other places in central Maine because we just don't have the natural gas to do it.

The price is going to go up and the natural gas is going to come from LNG or lines that come all the way from Boston, and, of course, further on down the Gulf Coast. So prices could very well spike for natural gas very, very soon.

We need to diversify our supply. Clean renewable like wind will help us out. The greatest most stress in Maine is in the coldest part of the winter, which is also when wind is screaming out of the northeast. If we have wind in your mix, we'll be much less vulnerable to power outages and loads during cold snaps.

Our state has a history of making a living from natural resources, and wind is never going to stop blowing. Natural gas could be cut off by any number of unfortunate events very, very far away, and I just wonder, do we want to put ourselves in that position.

Black Nubble could help out the environment, put lots of people to work, and keep the lights on. It's a win/win situation for Maine and Mainers. With our can-do attitude, we
can make this state work for us and for our children. Thank you.

THE CHAIR: Thank you Iver. Larry; and following Larry is, I think it's Lauri. I'm having trouble reading the name.

MR. WARREN: Mr. Chairman, my name is Larry Warren.
I live in New Portland, Maine, and I'm president of a local nonprofit organization named the Western Mountains Foundation.

Our foundation is not an advocacy organization, we're not in a position where we support or oppose development projects throughout the state, but I'm here tonight basically to indicate that our project involves the construction of a number of -- 200 miles, approximately, of trails that are projected to run from the Newry area to Moosehead Lake.

Approximately every 12 miles we're proposing a lodge for people who use these facilities. The trail will be people powered only, anticipating providing opportunities for hikers, cross country skiers -- in certain areas mountain bikers -section of our corridor will be available for paddling, rafting, mountain biking.

Over the course of the last year we've had a number of discussions with Harley Lee, Endless Energy, and Maine Mountain Power regarding acquiring easements and access to pass through their property, and we're very appreciative of the fact that Mr. Lee, Maine Mountain Power, and Endless Energy have
granted easements for our trail to connect from Carrabassett Valley to the Rangeley area.

Now, we recognize that the issues that confront the Commission regarding permitting wind power are highly contentious. We feel that there are an equal number of supporters and opposers to these projects, and that if wind power is going to become a part of the landscape in the state of Maine, hiking institutions and organizations and people that use the mountains are going to have to acclimate to their presence.

From a realistic point of view, we feel that exposure of these facilities and the ability of people to be upfront and personal and close to these will be informative, and we recognize that there will be a certain curiosity level and educational level regarding the benefits and the drawbacks for these particular projects.

With that said, we appreciate this company's cooperation in providing access, and we wish the Land Use Regulation Commission the best in making the appropriate decision. Thank you.

THE CHAIR: Thank you, Larry. Following this speaker -- since I haven't got his name straight yet -- is Penelope.

MR. SPAULDING [phonetic]: I'm Lauri Spaulding from Phillips. I oppose a change in zoning of highlands above 2700

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feet in western Maine. Please do not give the wind power generation projects, plural, any variances that allow them to mess around with the mountains.

I oppose this in similar located wind farms for the following reasons: In the '70s the State of Maine's legislature and LURC and other interested parties determined that the highlands should not be open to develop for many, many reasons. All of these reasons are as valid today as they were 30 years ago. I'm going to touch on just a couple points.

There is no reason to inflict irreversible damage to the summits and ridgelines of our high ranges, and I keep using the plural because there's a second project. I'm scared to death that if you find it in your hearts to approve this one, it's going to be a lot harder to not approve another, much bigger. So I'll use pleural.

There are many venues where wind can be used to generate electrical energy that are not among the most fragile, the most inaccessible, and the most inhospitable to man-made machinery.

One of the leading executives in the wind generation efforts admitted that that particular project has an approximately 50 -year lifespan. I can't understand why anyone would want to build a wind farm that's going to permanently scar up these mountains and leave nothing but rutted tracks, rusted metal, and cracked concrete in my lifetime. I have some
long lived genes in my family, and I might see 50 years from now.

If wind farms are so ecologically friendly and such good neighbors to the communities they're placed in, why aren't they being located in such utterly and hospitable places? Why aren't the promoters of these installations building them in locations that are close to large capacity transmission lines that aren't almost full, with easy access to construction and maintenance, and that will be of minimal impact on the environment.

If these turbines are truly as non intrusive as their promoters claim, I would rather have two turbines on the top of my hill in Phillips -- assuming I had the wind -- than one up here on one of these mountains. My hill is just a few thousand yards from power lines. There's already a road to within a quarter of a mile to the summit of the hill, and it's not very steep compared to this. Piece of cake to get up there.

As I understand it, the former potato country in Aroostook County has dependable wind, as so does the coast. Just to put a little piece here on this global warming issue -so does the coast of Rhode Island and Massachusetts and Connecticut and Long Island -- all of the coast of the United States has very good wind.

Put these power plants where they're accessible and with good wind, not on the top of our mountains.

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I really can't see why it would make -- I'll skip
that.
I want my mountains for Maine whole and stable, as able as possible to face the climatic changes that are coming whether we farm Maine's wind or not. I'm not opposed to wind power, I'm opposed to irresponsibly located wind farms.

It is not the job of the State of Maine or your Commission to make allowances because a developer wants to use the absolute highest wind flows in the state. If they must make due with lower wind speeds, therefore, installing two lesser turbines in the place of one, that's their problem.

If the truth is that a wind farm really is a nasty neighbor -- loud, strobe flashing blades, vibrating, and stress inducing, as I heard the Mars Hill operation is to the close neighbors -- then the developer must engineer the system to be more community friendly.

If the profit margin is too thin to allow for these adjustments, then Maine does not need wind power, especially if wind farms will result in kicking aside hydro that already exists, a biomass plant that already exists, and the like.

It's not our responsibility to give the developer the location they want. Let them figure out how to fit into the state of Maine, not us figure out how to fit Maine into their schemes, et cetera, et cetera. Thank you.

THE CHAIR: Thank you. Penelope, are you here? And
following Penelope is Louise Tesseo.
MS. DIBOLD: I'm Penelope Dibold and I'm from
Phillips. One stands in silence as we behold the panoramic views of Black Nubble. For me, and for the many visitors who travel long distances, to experience this miracle of Black Nubble views, there is a rare moment of being touched without electrical wires crisscrossing between ourselves and the other wilderness areas.

There is a moment of unbreakable silence, a moment where the chaos of the world has not been imprinted by the world of technology.

This is not the right site for this project. Thank
you.
THE CHAIR: Thank you Penelope. Louise. And following that is Terry.

MS. TESSEO: Good evening. My name is Louise Tesseo and I live in Copland Plantation.

I strongly oppose this industrial wind farm. These are just a few of my thoughts that pop into my head when I look at Black Nubble out my window. Our beautiful mountain will be gone forever. The flawless night sky will be covered by lines of light across the ridgeline. The constant rumble of truck traffic 24 hours a day, seven days a week, on top of Poland Spring trucks that never go away, not to mention the day they start blasting 18 huge holes on top of Black Nubble.

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Life as I know it will forever change and my heart sinks with that thought. Our mountains are special places that should be left alone for the health of our children and planet earth. We should tramp lightly.

Politics and money should not dictate what happens to Black Nubble or any other protected mountain range. It's protected about 2700 feet, it's as simple as that.

LURC was formed to protect what is dear to the state of Maine and it would be a crime to allow a project such as this to happen.

The global warming hysteria has clouded some minds and has lined the projects of others. Get the facts before we destroy this entire state. Maine is under assault. Make history. Shut down this project to save Maine's mountains. Please feel free to come and gaze at the stars, as I do, and then make your decision. Thank you for letting me speak.

THE CHAIR: Thank you Louise. Terry. And following Terry is Adrienne.

MR. TESSEO: My name is Terry Tesseo, I live in Copland Plantation, as well. My wife and I have lived in this area for over 30 years, and I oppose the zoning change to Black Nubble. Twenty-seven hundred feet above this state is protected. That, and that alone, should be enough to deny the zoning change.

Also, let me say, I've read everything I can get my
hands on in the few years about wind power, and it really vexes me when I hear over and over again how much global warming gasses are going to be saved because of this thing.

Let me tell you, no place anywhere on the planet has a fossil fuel power plant ever been shut down because they installed a wind plant, nowhere in the world.

Having said that, Holland and Denmark and Germany where they have thousands of these things installed, there has been little or no change to any carbon emissions, and no power plants have been shut down.

So that 400,000 pounds daily being saved by this little minuscule wind plant at Black Nubble is a false claim. You know what that means is wind plants will not stop any greenhouse gases or slow global warming. Nowhere in the world has this happened, nowhere in the world.

You have to have back-up power all the time that the wind turbines spinning because they're unreliable and uncontrollable. You cannot have wind power spinning and not have back-up power for those. That's why the greenhouse gases will not go away. It's a false claim.

Oh, yeah, the tourism thing. I don't know anybody, but how many people are going to say, let's go up to Maine and check out the windmills? This is not what people come to Maine for, and people that live in this area, that's not why we live here. That's not why tourists come here. We come here for the
beauty of the area, and the beauty of the area is pen stroke away from being destroyed. To me it's a shame.

Another thing that really tickled me -- and I heard it three or four times last year, I heard it a couple time this year -- where if you hold out your hand, it's only a half an inch tall. Well, what they fail to understand is, the whole mountain is only 2 inches.

So you have a 400 -foot tall windmill on top of this mountain where trees, I don't think, say they're 30 feet tall, and when you ride up the ski lift the trees get shorter and shorter and shorter; so we have this thing up there that is a quarter as high of the mountains with flashing red lights at night, flickering blades in the daytime, and that's going to fit harmoniously into the natural environment?

Well, thanks for letting me speak.
THE CHAIR: Thank you, Terry. Adrienne. And following her is Ray.

MS. ROLLO: My name is Adrienne Rollo, and I am highly opposed to the Black Nubble wind farm.

I have been a permanent resident of New Vineyard since 2000 and a camp owner in Phillips since 1987. I have been visiting the Rangeley lakes region of Maine since I was a child. It's been that lifelong love of the mountains that has brought me here tonight.

I grew up in Massachusetts, and if that wasn't bad
enough, I moved to nearby Rhode Island and made my living there for the next 30 years. My family and I witnessed uncontrolled development year after year from developers who made promises to residents that their projects would have little impact on their day-to-day lives.

What they delivered were shopping mall after shopping mall for miles and miles. They delivered 300- and 400-home subdivisions in every town, it never ended. They delivered unspeakable traffic congestion. They delivered a quality of life that was so stressful, the only saving grace that we could periodically escape to Maine to enjoy its beauty. It has recently been predicted that Rhode Island will be the first completely deforested state in the United States by the year 2050.

Rhode Island is symbolic of all heavily populated areas, whether it be Massachusetts, New York, or Connecticut where day-to-day life is pressure packed. For the last 40 years, my family travelled to Maine at least five or six times a year to swim in her crystal clear lakes, hike her mountains, and drink in her majestic scenery.

We called it recharging our batteries from living in a very stressful world, and Black Nubble has been a part of that history. The incredible beauty of this region is what beckons tourists, just as it beckoned to us. Once it's gone, it's gone forever.

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Tourists will continue to seek out the quiet places.
They won't be coming to this area to look at a blighted landscape. They'll go someplace else.

I support wind power but not in an environmentally sensitive region. I do support offshore wind farms where the wind is constant, and if I may add -- it's not in my paper -but let them go to Rhode Island, the whole state is ruined anyway.

I would like to, at this time, quote Maine's very distinguished senator, George J. Mitchell, who once wrote, and quote, "We have an obligation to leave for future generations the very basics of human life on earth: Clean air, pure water, unpoisoned land."

Thank you.
THE CHAIR: Thank you. Ray. And following Ray is Emerson Dyer.

MR. CRAEMER: Good evening. My name is Raymond
Craemer. I am a resident of Eustis, Maine, and I am speaking to you in opposition to the Black Nubble project.

You made what I feel was the correct decision on the Redington project. The reasons for that denial are every bit as valid for this proposal, and it should have the same thing. To approve this would require that you violate the principles that you were created to protect. There is no significant economic benefit to the local area, and that is one of the
criteria, not any perceived benefit to some other place in the state or the country. Jobs will be few, if any, and only for the duration of construction. There will be very few permanent jobs.

The proponents of the project do not state how many jobs will be created. The track record on other projects reveals that only a very few, mostly low paying jobs, will be created locally. The bulk of the work will be done by specialists from away.

A project of this size will, based on other bigger projects, create only five or six full-time jobs, and most of them will be at the home office.

We stand to gain one permanent worker, almost certainly a technician from away.

The State of Pennsylvania has wrestled with the same problem and sees a reduction in visitors and property values in the areas of windmills. The Eustis/Stratton area needs a permanent tax base created by more vacation homes. People will not build an expensive vacation home to look at wind turbines.

I live on Eustis Ridge, 13 miles from where we are today. I have no problems seeing Stratton, Crocker, Redington, Black Nubble, and the Saddlebacks from my deck. There are two developments in process in front of me, two more planned. These are 400,000-plus vacation homes.

Since this came up, none of them have been started,
no land has been sold. People will not build an expensive vacation home to look at wind turbines.

The Mars Hill project is causing lots of local distress. I don't know how much power is being produced and the local residents feel it is worth it. They are learning the hard way, that low frequency noise travels a lot farther than a decibel. The US Navy talks to its submarines under water thousands of miles from the transmitter with low frequency radio waves. I suspect Stratton will be able to hear the turbine blades.

The proponents of this project continue to say that they will build a 54-megawatt operation. As we all know, windmill farms only produce 30 percent of the rated output as a national average. A little over 30 percent in the Midwest, a little less in the east. They should be straight with us on this. Everything that they do, we should divide by three.

No wind farms have yet been built in subarctic areas, so we don't know if they will work. The State of Vermont has studied this, as they are dealing with wind issues, too. They determined that any wind project above 3400 feet would not be feasible due to high winter winds and icing.

As a note, the radio tower on the top of Sugarloaf is 126 feet tall. It is rated to withstand 100-plus-mile power wind and a foot of ice. These slender turbines will be 400 feet tall with no ice protection.

When Lake Region Air, the Rangeley based aviation company, was in business, I flew many of the summer fire patrols. Our last leg of the patrol was from Bingham up over the very area we are talking about. You would be astonished to see the number of trees that are blown over by winter winds. As a result, I doubt this operation will be near 30 percent productive.

NIMBYs. The people from away call us NIMBYs because we do not want a wind farm in our backyard, but they are the NIMBYs, not us; we don't want them period. Too costly for too little return. Funny, they don't seem to think that the coastline would be suitable or the Eastern Promenade.

In closing, I feel that the State of Maine needs to change a lot of the things we deal with. I am all for cleaning the environment and reducing our dependence on oil, but I want to take a little time to chart our course. It's far better to avoid problems than fix them. If wind farms are really the best things since sliced bread, they will still be a good deal in five years. If they are not, we will be holding a large smelly bag.

All that aside, your charge is to study just this proposal and decide on its merits or lack thereof. Thank you.

THE CHAIR: Thank you Ray. Emerson. And following Emerson is Harry Tiffany.

MR. DYER: Good evening. I'm Emerson Dyer, I live in

Eustis, Maine. I've only lived there permanently about three years now, but the first time I visited was in 1949 when I was less than a year old, and I have three generations of my family buried in the cemetery across the street from where I live.

As you already know, the real issue of this hearing is not about global warming, the generally presumed benefits of wind power, nor the reduction of carbon emitted into the atmosphere. It concerns whether or not it is best for Black Nubble and the surrounding areas of Black Nubble to remain a protected mountain zone above 2700 feet or to be rezoned to industrial to allow the construction of a wind power project.

After much discussion and careful analysis, this fragile and unique land was wisely protected by law over 30 years ago, and it is now in your charge to determine its fate.

Your decision on this matter has the potential to not only alter the character of this particular mountain but all of the mountains in western Maine.

I've heard it said that because of global warming,
wind power should trump all other environmental, social, and political issues; but after listening to the conflicting testimony these past two days and doing some reading, I have come to some conclusions.

Due to different claims in the literature by Maine Mountain Power and TransCanada about the total pounds or tons
of carbon that their perspective project would prevent each year, I can't give you an exact figure, but the amount of carbon this project might reduce compared to the total for all energy sources of carbon that produce carbon would be somewhere the range of only several hundredths to possibly $1 / 10$ of 1 percent and significant when weighed against the damage that would be done to the Black Nubble ecosystem.

Some of the things that wind power will not do, it will not stop or slow down coal mining in Texas or Tennessee.
In fact, the very idea of destroying the tops of the mountains and ridges in Maine to save the tops of the mountains in other states seems a fairly faulty logic to me.

It will not shut down any specific carbon producing plants. In fact, they will at times sit idling. They will still be producing some carbon but no electricity, while awaiting to ramp up. Also, the plants most likely, by the testimony that we heard, most likely to idle would be the cleaner burning gas plants rather than the dirty coal-fired plants.

Mr. Harvey, you asked an excellent question this morning. You asked if Kibby and Black Nubble were both running and offering their power at zero percent and there was a congestion at the substation, which one would get the priority on the power, and they said they could not answer your question.

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I can answer it for you. The source that would be bumped off of that would be the Stratton biomass station or the Wyman dam because both of those are offering their power at a cost, so it would not be either of the wind power plants.

Also, in all likelihood it will not produce permanent local jobs. In fact, less than two months ago a Mars Hill city official said that only two people have been hired there for permanent power, wind power jobs: One from California and one from Boston, Massachusetts.

It will not supply power to local homes. In fact, it was stated in testimony yesterday, most of the power now passing through the tie-in station now is sent out of the area except a small amount that serves this local area.

Wind power does, however, have the largest footprint per megawatt hour of any power producing plant, which is why this project will take up so many acres of land. Wind power will leave a permanent mark. For the applicant to compare a 34-foot wide road built to accommodate machinery weighing hundreds of thousands of pounds on the steeper and more fragile slopes, to compare them to temporary logging roads, is not an accurate comparison. The trees will grow back in areas logged and you won't even be able to find the roads.

I'm sure the people of Mars Hill were assured that the project there would have a minimum disturbance on their ridgeline; but you've seen a slide of what was done there. I
heard sworn testimony yesterday that Maine Mountain Power would "not blow -- be blowing the top off the mountain." Then they went on to say that they would be using explosives to flatten some areas for towers.

If that is not lying, it is at least quibbling about the permanent destruction that will occur during this project. Once you flatten the ridgeline and put a road and huge concrete pads on top of it, you can't put any of it back.

Wind power will have a large visual impact on the area. Maine Mountain Power, in their testimony, should have just said, if you let us put up these towers, they will be the most prominent features seen for miles, and this is one of the costs of clean energy, instead of trying to convince us how nice the King's clothes look.

These large bright white lighted towers with 400 feet of rotating blades -- and I emphasis rotating because motion is what catches our attention -- that will reflect sunlight at times, will be impossible to not notice.

If I owned the camera that Maine Mountain Power used to take their hazy, grainy, washed-out, monochromatic photos that they used, I'd throw the camera out and get a new one.

Who do they think they're fooling with this?
What they also failed to mention -- Terry, you kind of took the wind out of my sails here -- their little relative height diagram, he said exactly what I did. That little

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half-inch wind tower is sitting on a mountain which is perceived anywhere from 2.5 to 1.5 inches. The ridgelines would be about an inch and a half. It would be somewhere between $1 / 5$ and $1 / 3$ of the height of the mountains that you can see, and you have to admit that that is going to be noticeable, even from 20 or 30 miles away.

When this Commission did the tour on Kibby Mountain recently, I noticed that we could see Sugarloaf, and you can discern that there are towers on top of Sugarloaf even from that distance. They're only a hundred feet, you can't make them out clearly, but you can see that they're there. If it had 400 -foot towers on top, you would be able to see them clearly, especially if the light was reflecting off of the -the sun reflecting off of the blades.

I'd also like to address their comments about the lighting and how they tried to downplay the brightness of the lighting.

I was a pilot in the Air Force, and the reason for those lights are to prevent pilots from flying into them at night, so they have to be seen at a great distance so a high speed aircraft can see them. If they're as dim as they claim, the FAA will make them replace them and put bright lights on it.

The next thing I want to convey to you is something that disturbed me at the January meeting, at your hearing.

Now, I hope to express this without appearing how to tell you how to do your jobs or -- I don't mean to insult the
Commission, it's just something it was the first hearing I went to, and it rather took me aback, so I'm going to bring it up now.

THE CHAIR: You won't be the first person to tell us how to do our jobs.

MR. DYER: I'm hoping I'm not telling you how to do your jobs.

THE CHAIR: You kind of do need to wrap up.
MR. DYER: First I would like to commend you for the vote in spite of what seemed to me a very stacked deck working against you.

I was surprised to observe that commissioners apparently do not control the format that the staff uses to prepare your recommendations, nor the directions of their contents.

Specifically, the manner in which the information from all those in opposition to the project was relegated to an addendum in the back of the report and the fact that a large section of your own rules related to ridgeline development, specifically slope and soil depths, were not even addressed.

I think I have a clear understanding of what caused this to happen, but I do sincerely hope that the process for preparing your recommendations will include more input from 712
you, commissioners, itself and will result in a more balanced and objective product from the staff.

Finally, your fiduciary duty is to be the stewards of the lands in Maine that are under your jurisdiction. I don't pretend to know all of the ins and outs of the laws and rules that you are working with, but I hope that when you evaluate this rezoning request, you will find that it does not meet the criteria for approval.

Your decision could potentially open the door that would change the entire character of Maine's western mountains, which are among the last mountains on the entire east coast not industrialized or heavily developed.

Thank you.
THE CHAIR: Okay. Thank you Emerson. Harry. Following him would be Eleanor Kinney I believe it is.

MR. TIFFANY: Harry Tiffany, I live in Freeman
Township. We've been coming to this area for winter sports since the middle '70s. We bought a home in '94 in Freeman and have lived there year-round since then.

We have a small footprint on the land of Maine and use as little energy as we very possibly can.

We pay the taxes in the State of Maine, of which we, being in an unorganized territory, actually receive nothing for our taxes with the exception of keeping our road open during the summer and the winter.

We don't quibble over this expense. We enjoy Maine, and the reason we've been coming to Maine is the fact of this grand area that we have here.

I was an employee for 37 years with Philadelphia Electric \& Gas Company. The elephant that should be in this room is the federal government. I've been with commissions -State, federal commissions -- all their grandioso programs that the federal government has given to the electrical industry over all these years, and where are the federal government programs today? They've all bowed out of them.

We went through a Clean Air Act in 1972. They grandfathered coal-powered plants in the Midwest. They said they were going to be old and would be out of service within ten years. We still have those same coal-fired plants in the Midwest emitting pollution, which is coming over our area.

We had -- pollution credits were given for things that you would do in different areas, of which the company sold to other companies or traded to other companies in order for them to continue using their dirty fuel.

This wind power situation we're going through today it's just another one of the federal government's boondoggles. It's another one of those things that, hey, financially you can't get anybody to build any generation today because it's not financially feasible to do so, so the government says we're going to give you something for it. We're going to give you 714
accelerated depreciation so your investors will get their money back within a short period of time. We'll also give you green credits, of which, hey, why do you think big power people are here tonight?

It's all money, it's all money we're talking about.
They want these credits. That's where the economics is. This project was turned down and at that time before it was turned down was -- a proposal was to break the project down into one mountain instead of two.

They said it was uneconomical to do it. Now they come back and they're giving you another proposal with maybe it's not quite half of what it was before; but where is the economics? Why would you invest in a company that you're only going to get 35 to 40 percent out of? There's got to be something underlying here.

Sure there is. The money is beneficial to the bottom line, these credits. Do you think they talk about global warming, it's going to help. These credits are going to go to keep those fossil fuel dirty plants to continue to operate or to build newer coal-fired or oil plants.

That's where these credits are; that's where the money is. This is an industrial site being put in an area that should never even be considered.

Now, you talk about the other day there was a person who came here and said about the economic growth of Franklin

County. The economic growth of Franklin County is going to be in retired people, people who have been coming to this area for years for vacation. The baby boomers, it's the biggest group of people who are going to retire. They're looking for places to move to to get away from where they've been for the rest of their life.

Who is the best ambassadors to bring these people? It's people who live here, people who enjoy this area, people who can related to these people to tell them, we have an area that's different than anyplace else. There's your economical thing and it's going to grow in this area and it's going to grow over a long period of time. It's not going to be the five jobs that's going to be here for 50 years because you've got some wind turbines here.

Now, I have a little thing to say about this grandioso photography we've got over here. I'm not a photographer, but I have two eyes. I walk around these mountains -- maybe not as much as I used to, maybe I drive around them more -- I come up from Freeman up 27 yesterday and also tonight. We've got these great blue skies, the sun is shining, the trees are green. I don't see a green tree. I don't see any sun. I don't see any blue sky.

At night, people will come to our house, we have a large family, come and visit us, we have friends that come to visit us, they're amazed at how quiet and the stars and the

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darkness the skies are.
We're going to have these strobe lights on top of these windmills that are going to flash at night, and you talk about pollution? That's going to be light pollution for this area.

Not only that, but who benefits by those big bright lights? Why are those big bright lights there? Do we have a lot of Maine recreational fliers flying around at night that would bump into these towers? I don't think so. I don't think we do.

They have to put lights on these big structures because we have another thing that's being pressed in the State of Maine, and that is the Massachusetts National Guard. They want to fly low flying maneuvers over our mountains, and is it going to be only in the daytime? I don't think so. They don't go to war only in the daytime. They have to have maneuvers at night, too.

Those lights are sure -- just like the previous speaker said -- they are going to be bright, and when you see a blue sky, green trees, white towers, and those rotating blades that don't spin like an airplane propeller, which blurs them out, they're slowly spinning, you're going to see light reflections off of those, so I say this is an industrial site that is going to be detrimental to Franklin County and should not be built. Thank you.

THE CHAIR: Thank you Harry. I guess we certainly understand your position. Eleanor.

MS. KINNEY: Good evening. My name is Eleanor Kinney, and I live in Freeman, Maine. I have three small children and theoretically a stay-at-home mom. I spend a lot of time working on environmental and land use issues.

I'm testifying tonight in support of the Black Nubble wind farm. This project has a long history and has generated its share of controversy.

But the option on the table, the Black Nubble-only development, represents a solution, a compromise that balances the competing values of clean energy production and the protection of fragile and scenic landscapes.

In the country the discussion around climate change has finally shifted from a debate about the science to a realization that we need to act. On the action front, it is states like Maine, not the federal government, that have been making the way. Maine's climate action plan and our participation in the Regional Greenhouse Gas Initiative are national models demonstrating our commitment to reducing greenhouse gas emissions.

If Maine is going to be the regional leader in wind power development, we have to encourage and support appropriately sited projects. Maine Mountain Power's scaled-back proposal addresses many of the siting concerns by 718
protecting Redington Mountain, while remaining economically viable and producing a significant amount of clean energy.

If permitted and built, Black Nubble will be the largest wind power project in New England, and there are more wind projects in the pipeline. The development of clean renewable energy in Maine integrates key environmental priorities with emerging economic opportunity.

As we've seen from the pulp and paper industry, Maine's traditional natural resource industries are in decline. We need to use our natural resources in new innovative ways if we're to succeed in a 21 st Century global.

Investment in energy efficiency, renewable energy, and other green technologies is essential for Maine to be economically competitive, environmentally responsible, and ultimately prosperous.

Approval of the Black Nubble wind farm is needed to demonstrate the State's commitment to wind power and to move us forward in increasing our energy independence while reducing our carbon footprint.

On a final note, I just want to say that I'm a hiker and a skier, and I certainly value mountain views that are undiminished by development; but the threat of climate change and our overreliance on fossil fuels are so compelling and require that we be creative, we find solutions, and we modify our own behavior.

We're going to have to make a lot of choices, big and small, if we're going to make a difference. I hope that on this project that you will choose to approve the Black Nubble wind farm. Thank you.

THE CHAIR: Thank you Eleanor. Next is Basil Powers. Is Basil here tonight? He stayed tonight. Good. And following Basil is Nick Whittemore.

MR. POWERS: I brought my sign because I would like you to tell me if what I have stated here is true or not.
Otherwise, I'm going to destroy this sign. I carried it on the streets in Farmington and I've carried here several times. I don't know if you people have read it, some have. Is it true or is it not?

THE CHAIR: Basil, can you speak into the microphone so we make sure that Lisa can hear you, although I don't think that's a problem.

You want us to answer that question is what you're saying?

MR. POWERS: I am Basil Powers, I live in Coplin Plantation.

THE CHAIR: Thank you.
MR. POWERS: 55 years now on the South Branch of the Dead River. Yes, answer my question, please.

THE CHAIR: Basil, I have an attorney over here that said I'm not supposed to answer that question. We'll answer it 720
on the record.
MR. POWERS: I just wanted to know. I don't want to be carrying around something that's a false statement. I've always been quite truthful and quite frank with everything I say and do. What I do say comes usually from the heart.

Why I came forward, my wife could not be here tonight because she's the chief cook and bottle washer and she just could not be here, but she did have a statement, and it's with your permission I would like to read it to you.

THE CHAIR: You can read it on her behalf?
MR. POWERS: Yes.
THE CHAIR: Yes, go ahead.
MR. POWERS: I'll read. My name is Harriet Powers, I live in Copland Plantation with a beautiful view of Black Nubble from my picture window.

I have testified before at a hearing for this project for Maine Mountain Power on Black Nubble, and I would like to ask the LURC committee what has changed.

The law protecting our mountains from development of any kind above the 2700 -foot mark is still in effect and should certainly stay there.

In my August Central Maine Power company bill, which most of you must also received, Central Maine delivery prices have gone down and are steadily dropping. Enclosed with my testimony is a copy for LURC members to view.

If this project on Black Nubble was to be approved by LURC, they would be breaking their own law and our mountain majesty would be forever gone.

I recently watched a video of the Mars Hill wind farm development with a group of people, and when we saw the way the hilltop was blasted away and destroyed, and then they did not anchor a windmill there but just moved on and left the mess, grown men and women in the audience watching that video cried and wiped tears from their eyes, it was sad.

Do we really need to allow Maine Mountain Power to blast off the top of Black Nubble to a few kilowatts of electricity, which our tax dollars will have to go to pay that tax incentive to enrich the company's pockets. Thank you.

THE CHAIR: Thank you, Basil.
MR. POWERS: This is my wife's statement. I would like to make a couple of my own.

I heard you last night telling the great benefits to Franklin County from this project. Well, I travel around a little bit, not much, but I don't come in contact with anybody that's willing to work that don't already have a job. So where the hell are they talking about people that are in so bad need of a job that we've got to blow a mountain apart to put them to work.

Everybody that wants to work and will work has got a job, so that's foolish.

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I also heard them say here last night how terribly our air is polluted. Well, let me ask you something, you step right out that door and anybody here step out that door and you take two or three real deep breaths, and then you tell me that that's not the cleanest and the purist air that you ever sucked into your lungs.

We don't have air pollution here. Sure they do in some places, but it's their fault, and I don't know why we need to sacrifice our beautiful mountains or any of our beautiful landscape for those poor people that can't help themselves.

I do know that there is projects in the making in the pipeline that's going to make these windmills obsolete. In California where they have a lot of problems with power, they've gone out onto the desert, they've had huge glass tubes laying on the sand, and they're producing electricity from the ultraviolet light, somehow -- don't ask me how, I'm not a scientist -- but I'll tell you, I saw it on the national news, so I don't believe it was a misstatement.

They already have in place a plant producing electricity from the sun that will produce enough for 140,000 dwellings. If that be true, we've got deserts enough in the world to generate all the electricity for the world. There's no trees there that have got to be cut, no roadways, no blasting that's going to tear up the ground.

I know that you people have heard enough of this, I'm
not going to believe you anymore. You've heard it over and over and over. But I caution you, if you give them a variance to put these towers on Black Nubble Mountain, it will haunt you the rest of your days I'm sure.

I'm going to quit because people are waiting to speak and I know you heard this over many times.

But please do not give them a go ahead for
Black Nubble. I get up sometimes in the morning before the sun does, not always. When the sun comes up behind Black Nubble, because it's right near my front yard, we live right in the shadow of that mountain, I have got some of the most spectacular sunrises coming up behind that mountain, and I wish I could have brought them to prove it to you.

I'm also up sometime during the night when the moon comes up behind Black Nubble, and I grab my camera and I go outside. That moon coming up behind there, that huge golden globe, and I wait until it gets right to the very top of that mountain. It's like a big Christmas ball. I have it.

Please do not destroy something that is so breathtaking and so beautiful, I beg of you.

Thank you very much.
THE CHAIR: Thank you Basil. Nick Whittemore, please, if he's still here. Following him is Guy Griscom.

MR. WHITTEMORE: Hi, I'm Nick Whittemore and I live down in New Sharon where I have lived since 1972. I'm here to

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support the application to rezone Black Nubble.
I'm one of the investors in Redington Mountain wind power, which is the entity that owns the land that the Black Nubble project is proposed to be sited on. My father and I were two of the original investors back in 1991, and actually I have been interested in wind power before that, the possibility being the proposed on a cross country ski trip up the Caribou Valley Road.

So I've -- aside from Harley here, I've been with this project as long as just about anybody. I've seen it grow to what it is today, mostly from Maine residents who have contributed their support financially and volunteer labor.

I've been up on Redington -- I don't know how many times all seasons of the year, Black Nubble also -- and I can appreciate the beauty. But I also feel we need to do something besides talk about how bad the coal plants are and the dependence on OPEC oil. I don't like paying the wrong price for oil, as a matter of fact, I use very little of it.

The two considerations which I think are most important to this rezoning are the view from the Appalachian Trail and the effects to the environment. What I would say is that back six or seven years ago in the Maine Times newspaper there was a -- they did an interview of H. C. Haynes, logging contractor up in Wynn, Maine, and they quoted him as saying that the time to buy land is when it's available.

Now, I know a little bit of the history of what we went through, and we bought Redington twice in the '90s and Black Nubble once. The first time we got an option on Redington was because we saw a notice in the newspaper, and -so we had an option on it for a few years, but we ran into trouble with our big institutional investor and the partnership unraveled.

After that paper company land up there, Georgia-Pacific, divested itself and the Dallas Company, the Brochu people up in Stratton bought it, we were very lucky to get that mountain back about 1998 after a lot of persistent negotiations, and soon after we got Black Nubble.

So what I'm getting at is that we've heard a lot of whining and crying tonight about the possible effects, but back when those mountains were available, nobody but us stepped up and put their money down to do anything about them. So I don't feel too bad. As a matter of fact, I like the look of windmills.

Back in the year 2000 I took a snowmobile trip around the Gaspê peninsula, and one of the things that I was most anxious to see was the wind farm up on -- it's on the south shore of the St. Laurence, and the snowmobile trail actually went right through it. I was able to see what it looked like, and the blades were turning, there was a little grinding but it was no great noise, and I was thrilled to see clean renewable
energy being produced.
It's too bad it was up in Canada. I'd like to see it
here. I think that we need to do something, and I moved here
in 1972 as part of what they call the "back to the land"
movement, and I grow a big garden, cut my own firewood, done some farming down there, was in the chainsaw business. Anybody who cut wood back in the late '70s/early '80s probably came into my shop. I was a Husky dealer down in Farmington.

But as a farmer I've seen what's happened, and it got progressively harder and harder to grow crops. My land was down on the Sandy River, and it would flood unexpectedly, it got hot, it got cold, got rainy, there were bugs, there were weeds; and now I don't do much farming, but I do have a big garden. This year for the first time, 35 years, the garden was a total bust. After a lot of work finally it looked like there was going to be a crop, and we got hailstorm that flattened everything that was above ground.

Now, I'm a little bit tired of this global warming, and I know that we can't do anything about what goes on in China and we can't do anything about what goes on down in the coal country, but we can do something right here at home, and that is start taking charge of our own affairs and start generating our own electricity. When we were up in the Gaspê we stayed in motels, and every single one of them except one was heated by electricity. The other one had an outside
boiler.
I know people here in Franklin County that live in trailers out of necessity, and you can't have a wood stove in a trailer because the trailer park personnel prohibit it and it's dangerous. And I really feel for these people who are dependent upon imported energy or gas or whatnot. I really hope that we can put together an alternative to this situation.

I would like to see home-grown locally grown electricity owned by a Maine company, that's our company here, of which most of the people are Maine residents, and made locally available.

Now, that's what the plan calls for right now.
Electricity generated by this project is -- the contract is with Constellation New Energy, and their plan is to make it available first to Maine businesses. Whether they buy it or not remains up in the air. But the aim is try and generate this stuff here in Franklin County and use it right here in Maine.

Now, how it works, I don't know, but we've got to make an effort to get this going. I don't know what more I can say. I like the looks of -- they don't bother me a bit.

As far as the scare tactics about strobe lights and all of that nonsense, when I asked that question at one of our meetings, the answer I got was that these lights will be slow pulsing red lights, the same as you see on the cell towers.

Now, I had a cell tower go up where I live, and my first reaction was not favorable, but I've lived with it for a few years now and I don't find that that red pulsing light to be too offensive, I can live with it.

I don't know how to summarize this, but I think this is an excellent project. Harley is thorough, he does a thorough job on anything he does, and I think that -- well, let me just go back a little bit.

When I was up in Caribou Valley back around 1990, it had been flattened. There were skidder ruts all over the place and the trees were gone. A few years ago when I was up there, everything had healed up, and the crews had been through with thinning saws to thin out the fir.

I think that that area up there is way more resilient than people give it credit for.

THE CHAIR: Are you kind of winding down?
MR. WHITTEMORE: I guess now is a good time to break it off because I lost my train of thought. I urge you to approve this application. Thank you.

THE CHAIR: Thank you. Guy. And following Guy is Pam Prodan.

MR. Griscom: Good evening. My name is Guy Griscom, I live in Avon, Maine, and I have a whole number of things I was going to say until I realized looking at this pamphlet about what your actual charge is that you are not responsible

1 for global warming or solving many of the other problems that we have discussed.

It really comes down to, does the Black Nubble project, as it is proposed, how it has been revised, does it meet with the environmental standard that you believe as members of the Commission that this project will not have an adverse effect on the environment.

Whether you're in favor of wind power -- which I am -- or not, the real question and the question before you, as far as I understand it looking at this pamphlet, is that it has to do with, is the project as it is presented to you, looking at the facts, knowing what you know, hearing all of the expert testimony, then I believe that you will decide in favor, at least I hope so, but I know that it will be done based on the facts, the facts of the environmental impacts of this project.

I think the other items, like global and how we can solve the world's problems we'll leave for another day. Thank you very much.

THE CHAIR: Thank you, Guy. Pamela, is she here? And after Pam is John Hellie.

MS. PRODAN: Good evening. I'm Pamela Prodan, and I'm speaking solely for myself this evening as an individual. And I hope you don't mind if I speak, but I want to go on record as being in opposition to this project.

I am fortunate to have been able to move to Franklin
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County over 35 years ago, and I live in the midst of the mountains and the intervale of Wilton, Maine, so I have been deeply influenced over the past 35 years by the mountain.

I started working a little over 20 years ago to try to protect the western mountains from energy developments when I represented a group called No Thank You, Hydro Quebec before the Maine Public Utilities Commission, and we successfully stopped a massive power line from being built through western Maine to serve markets in southern New England and southern Maine.

Over ten years ago I successfully represented
National Audubon Society, and Western Maine Audubon Society, and some other groups and individuals who were opposing the Kenetech project, which I view in the same light as being an attempt to use the western mountains to create energy -electricity for export from the region.

I will continue to do that work, as you know, because I feel very strongly about the mountains and their values, and I hope that you will uphold the standards that apply to you in judging this project. Thank you.

THE CHAIR: Thank you Pam. John, are you here? Okay. Then Linda after you. Somebody you know I take it.

MR. HELLIE: My name is John Hellie. I am from the township of Lang, which is kind of nestled between Copland Plantation and Dallas Plantation.

Commission and chairman, thank you for letting me speak, and if I talk too long you're welcome to throw a pen at me or something.

Here we are again. Boy, I'm starting to get to know you folks. It's kind of ironic that we are discussing the same thing that was voted down once, and at one point in time I think that LURC was even trying to entertain a down-sizing of the project.

At that point in time the investors were saying no, it's not cost efficient, I'll take my toys and go home. Well, it was voted down. Now, all of is sudden, it's become cost efficient again.

I really have a hard time with something that has been voted down in entirety and then an investor and group of investors -- of course every one of them listed up there in support, is going to make a lot of money off of it -- comes back and says, well, we'll just do a little bit.

Well, no, it was all voted down. A mountain is a mountain, a hill is a hill. We voted down the mountains. We have the law, we have LURC in place establish that this is abided by because it is something that needs to be protected.

Global warming. Can anybody say ethenol? See the price of corn, yeah. Government throws money at it, government throws funds and grants at it, let's just all hop on it, but corn isn't even the best way to get ethenol.

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Okay, if Maine wants to start establishing something, maybe we should all take a step back and take a real good look at how we use our resources. Maybe we should take a good look at how we're going to mutilate our mountain.

It's really important to really go back and look -and I really wish I could go back and say please look at what I said on transcript No. 634 out of probably 10,000 -- it was voted down.

The mountains were to be protected and all I ask is, look back at what you said and why you said no before, because it is the same mountain, it's just only one as opposed to two. Thank you.

THE CHAIR: Thank you, John.
(There was a break in the hearing at 7:56 p.m. and the hearing resumed at 8:15 p.m.)

MS. HELLIE: My name is Linda Hellie, and I live in Lang Township. About the same time last night I took a break, I went over there and I looked at the displays that they had, and I was really dumb founded when I saw this particular one.

This one here shows the wind power calculation and this was provided by Harley Lee or his organization.

The darker areas are the best areas for wind power and the lighter areas are poor. So I was looking at this, and Black Nubble wind farm has an arrow, and I was looking and I decided to bring the magnifying glass because you can hardly
see any dark areas. But you look down here along the coast, and you see all these really dark areas. I'm sure you can probably see them from where you're sitting.

So the question I ask is, why are we putting windmills on top of Black Nubble when there are better locations than on top of a mountain that's going to be destroyed.

From what I've heard in the last two nights -- I heard it last year -- how that mountain is unstable, why we are doing this. I just don't understand it. It cost $\$ 110$ million I don't know about you guys, but that's a lot of money to be. Why don't we put our money where it can be best used. Down here you can see, look how wide these gaps are, for the best wind power.

Please don't put those wind turbines on Black Nubble. Thank you.

THE CHAIR: Thank you Linda. Neil Iverson, please, and then Bruce Bell will follow.

MR. IVERSON: My name is Neil Iverson, I live in Eustis, and I come to speak against the proposed windmill project on Black Nubble Mountain.

Actually, I'm surprised that we are here at all. We heard all these arguments before, and you, the members of LURC, after careful weighing of the evidence, made your decision and you made the right decision.

Black Nubble is not an appropriate site for the placing of windmills. The costs far outweigh the benefits to the people of Maine and especially to the people of Franklin County.

Maine is blessed with beauty and treasures for our use. We have a beautiful coastline, and the state has worked vigorously to protect it from pollution and callous overdevelopment.

Maine has beautiful lakes like Rangeley and Sebago, and again the State conducts an intensive program to protect them against milfoil and other threats that will destroy them or diminish their value.

Then we have our beautiful mountains, like Black Nubble. Who in the state of Maine is going to project those? What part of our State government is going to have the courage and the wisdom to protect these treasures from overzealous development by those seeking profit for themselves?

You, as LURC members, are the last defense against the utter destruction of those very peaks that you have chosen to protect decades ago.

One of the difficulties of your decision is not knowing exactly the future consequences of your actions. I'd like to take a minute to tell you a story. I grew up in Scarborough just outside of Portland. One of the landmarks in our state at that time was built in Portland in 1888. It was a
huge granite and marble railroad station, Union Station in Portland, and it was visited by thousands of people every week.

If you were going to Boston or New York by train, you went to Union Station. Some of you here may be too young to remember, so I brought a picture of it to show you.

This is Union Station. It was built in 1888. Then in 1961 a developer bought the land and levelled Union Station, that landmark, to make a parking lot for a strip mall. That strip mall was to be anchored by Arlin's Department Store. Arlin's no longer exists, it went out of business.

Now 50 years later people still regret the decision to destroy that landmark but there is no going back. It's gone forever. And the people of Maine are poorer because of its loss.

I fear the same thing will happen to our mountain if windmills are put on the top of it. Years from now people are going to say, how did that happen? Why did that happen? It's never coming back.

I urge you to consider the future -- $20,30,50$ years from now. Consider the value of these mountains and the treasure they present to all who visit and all who live here. You have already made the decision once. Nothing has changed to alter that decision.

I urge you to vote this down and to keep the protection in the zoning the way it is. Thank you.

THE CHAIR: Thank you, Neil. Bruce. And then after Bruce is Marcia. Marcia White, sorry.

MR. BELL: Chairman Harvey, members of the Commission, my name is Bruce Bell and I'm a farmer from Leeds, Maine. I'm here to speak in favor of this project.

I don't think I can tell you anything you haven't heard before, so I won't waste your time any further except to throw in one kicker.

I think you should -- I would urge you to vote in favor of the original application, the two-mountain application. I believe it's still before you. Thank you for your time.

THE CHAIR: Thank you, Bruce. Marcia, is she still here? There we go. And after Marcia a Steve Barr.

MS. WHITE: My name is Marcia. I was born and raised in Augusta but home has been in Wyman Township with my husband for a little over 30 years.

Our two children are very proud to say they were raised in unorganized territory, and a home built by their dad high on a ridge a half a mile in the woods. We're proud to support them in their current pursuits at the University of Maine at Orono and Bates College. All four of us support the Black Nubble wind farm, which would be built in what we consider our backyard.

We're members of the Natural Resources Council of

Maine, Maine Appalachian Trail Club, we're also advocates for many environmental and conservation organizations. We're avid skiers, golfers, hikers, and cyclists. I've ridden in the last nine treks across Maine as Captain of the Sugarloaf Community team, the past eight, alongside my son on five raising money for the American Lung Association of Maine, whose missions and causes I thoroughly support.

It's a shame we have neglected the quality of our air, but it's been easy to do because we couldn't see the damage being done. We had to begin to address the land and water pollution issues, as the seeping landfills and foamy rivers floating with dead fish were impossible to ignore. I grew up by the Kennebec back in the '60s.

But the air, out of sight, out of mind and taken for granted.

For the most part the actual damage we've done to our atmosphere is still out of sight, but the wake-up call has come and the scientific data grows more overwhelming with each day. We can now see the repercussions as global warming leaves its mark on our weather patterns, our melting icecaps, disappear corral reefs and coastlines, changing plants and animal habitats, and a declining population of polar bears.

It was polar bears we were talking about one day this summer at Outdoor Adventure Camp, which is our Carrabassett Valley-based day camp that I manage as part of my job here at

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Sugarloaf as children services director.
On any given day we have between 70 and 100 campers ages 4 to 13 taking part in our program. It was just after a report had come out predicting that polar bears would be extinct in the wild by 2050 because their natural habitat would be gone.

Kids were upset. Kids were mad. Kids wanted answers. 10-year-old Ryan guaranteed, his hand was up, if you grown-ups know that burning fossil fuels is causing global warming and killing the polar bears, why don't you stop?

At that moment with my eyes locked with this articulate boy asking an obvious question, expecting a black and white answer, I felt personally responsible for all global warming.

Here was a 10-year-old calling it like it is and recognizing us grown-ups as being the ones to hold accountable for the damage. I couldn't answer his question. I couldn't think of one valid reason or even a weak excuse to justify our generation's feeble attempts to turn things around against the weight of this impending doom.

A comment was made last night about the companies involved in this project making a profit from its operation.
I'm thankful there is a profit perspective for private companies to be working on clean energy proposals. If not, few people would be doing anything. Are we waiting for our
government to take more action in favor of renewable clean energy? If so, first we have to stop from subsidizing one of the biggest parts of the problem: $\$ 17$ billion in federal tax subsidies for oil and gas companies last year alone.

Couldn't it be better spent supporting clean energy development than prolonging our dependency on petroleum products? It's our money, we're grown-ups, and our children's and grandchildren's future. We may be the most powerful nation in the world, but we are definitely the most power hungry and we're not doing enough to change that.

In the 2005 Environmental Sustainability Impacts Report done by Yale and Columbia Universities in collaboration with the World Economics Forum and the joint research done by the European Commission, the United States ranks 45 out of 146 nations rated. We should be ashamed of this rating and at the same time called to action.

Conservation was mentioned by many people who have spoken against this project as a solution, and it is part of a solution, but I don't think it will ever become mainstream until it's mandated or made more economically feasible.

Incentives and tax breaks for green building and environmentally friendly cars aren't enough to sway the multitudes. We need to start charging more for the gas guzzlers or mandating green elements in new construction.

I'm sure many of you have seen the "what if" Irving
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commercials on TV. My "what if" for an Irving station is three lanes: Pull into Lane 3 with your Suburban and fill up your tank for $\$ 7$ a gallon; Lane 2 for the Subarus, $\$ 4$ a gallon; Lane 1 for your hybrid where we'll pump it for you for a buck and a quarter. It's time to think outside of our conventional boxes.

Black Nubble wind farm is a start, and I believe that after all these years of planning and revising, that their proposal must have crossed every T and dotted every I at least a dozen times over. This project will fall under more scrutiny by the public and all who oversee it than any other project yet undertaken in any Maine unorganized territory.

In the end I believe it will cause less permanent site damage than many of our local logging operations, which have left acres of permanently scarred land in their yard areas and easy access to many delicate back country terrain areas for other motorized traffic on hundreds of miles of abandoned roads.

I've also heard from both loggers and suppliers that thousands of gallons of diesel fuel and hydraulic fluid are spilled and left in our woods every year. But that's a different problem. Also out of site and probably out of mind until it shows up in the Poland Spring water.

Another argument has been the views that some say will be ruined by the turbines. We won't see the turbines from our house in Wyman Township, instead, we look in one direction, and to point out to campers the wind turbines on Black Nubble,

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and finally be able to answer Ryan's question. We did stop and over there is one of the places where that stopping started.

I don't envy you for the decision you have been in charge to make and what you've got in front of you, but I hope you make the decision that's best for the big picture, for the kids, for all of us, and for the polar bears, thank you.

THE CHAIR: Okay, thank you Marcia. Steve Barr, are you here? Did I get that name wrong.

DR. SAYER: My name is Dr. Suzanne Sayer, and I'm here to speak for a physician by the name of Stephen Barr, who is in practice in Portland. But I feel sorry for you guys so I'm just going to say it.

He didn't say anything more other than his grandmother or somebody else lived here and he lived here, so I'm just going to give it to Marcia to put in the record.

THE CHAIR: Okay, thank you.
DR. SAYER: He's one of the nine people to the one against for the wind farm, and I just wanted to tell you that it's very hard to get people here when they've got a full-time job helping people being physicians. It's very hard to get them here when they've got something that they feel is very important, but they want you to know that they want to support it.

THE CHAIR: John Diller, are you here somewhere? I guess if he's not here.

MS. LIBITZ: I'm speaking on his behalf. I'm from Caribou, Maine, and I'm speaking on behalf of John Diller, who's president of Sugarloaf who could not be here tonight. I'm reading a letter.

Dear commissioners: Over the past several months I've had the opportunity to speak with many in the Sugarloaf community about the Black Nubble wind project. In those conversations I'm most often asked why are we doing this and do we need it.

These are both excellent questions that require what I call "big picture" answers. We all know there's an energy crisis in the world, and in this long time to explore alternative energy resources.

The present high price for all types of fuel is a reflection of supply and demand economics and prices are being stretched further as China and India advance their economic system.

Conventional electric generation in the northeast is more and more dependent on natural gas. Natural gas has drastically increased in price and it's forecasted to impact both commercial and residential power rates by as much as 30 percent in the coming year alone.

Fossil fuel continues to be the major energy sources in the Midwest and the major contributor to acid rain here in the east. The bottom line is, we need more efficient and

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cleaner energy generation. So I ask the question: Is wind power clean? Yes. Does it have a visual impact? Yes. However, having seen the economic program in southern Vermont 15 years ago, I think it is minimal.

I would also add that this is perhaps relegated to the eye of the beholder. I have spent most of my adult life at Sugarloaf looking at man-made equipment, chair lifts and towers, that have blended into the landscape. Our collective need for energy requires us all to make concessions and embrace change.

The Black Nubble offers the necessary geography and proximity to existing infrastructure that allows us to add wind to our energy mix. Change may be unwelcome, as evidenced by the popular, not in my backyard, but current geopolitical and environmental challenges implore us to look at our collective backyard in a quest for energy self sufficiency. We will all be the beneficiaries.

I encourage you to support entrepreneurial initiatives to bring wind and other clean sources of energy to fruition for Maine's future. Thank you for your consideration. John Diller, president, Sugarloaf USA.

THE CHAIR: Thank you. Tony Barrett.
MR. BARRETT: My name is Tony Barrett, I live in
Harpswell, Maine, and I'm here to speak in opposition to Black Nubble.

First I want to say thanks to the commissioners for being here. I appreciate that you're spending yet another full day of your time on this application.

I've been interested in wind power projects for a long time. I visited Altima in California back in the '70s, and I have visited projects in North America and in Europe. I stood underneath the wind tower in Hull, Massachusetts and driven by the one in Dorchester. It seems like these projects are sited in a variety of places, both rural and urban and on the coast and inland.

However, I don't understand why Maine Mountain Power's project needs to be sited on the relatively undeveloped mountains of western Maine.

There are many places in the United States where wind resources can be harnessed without the consummate loss to the landscape without losing the quality of place that this site holds. Are we going to industrialize all of Maine over 2700 feet in elevation in the name of global warming? Should Black Nubble be approved no matter what the subsequent cost?

I understand that wind resource is an important economic criteria; however, Katahdin probably has a greater wind source than Black Nubble. Cadillac Mountain probably has a greater wind source than Black Nubble as well.

Would we place wind towers on top of those mountains? The answer is no, because the quality of place is too valued.

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The tradeoff of the perceived benefits of wind power versus the land costs is just not appropriate.

I've walked on many of the high ridgelines in
New England and it's not uncommon that you see cell towers and ski lift towers and you see development. It's not bothered -it doesn't bother me because down in the valleys there's towns and highways and villages since the 1700s.

However, the Black Nubble area is one of the few large areas in our part of the woods where a person can walk and not see development.

Is this a wilderness? No, far from it. But this working forest provides the perception of a remote untouched landscape surrounded by 4000 -foot peaks. It has a high quality place. I value this quality of place and I ask you not to approve the application that would ruin the quality of this place. Thank you.

THE CHAIR: Thank you, Tony. Peter Arnold, are you here somewhere?

MR. ARNOLD: Yes. Thank you for all staying so late. I know it's part of your job but I appreciate it a lot.

I would like to do two things, speak for myself and then also read a letter from Dana Conors. I think Dana is the next one on the list, if I remember correctly.

Peter Arnold, and I'm the sustainability coordinator for the Chewonki Foundation down in Wiscasset and I'm speaking
in favor of the Black Nubble project.
This morning we started working with our students to think about their future in relation to the environmental changes that are anticipated over the next while, and we looked at two projects. This was one and then we also -- because we come from Wiscasset -- we were thinking about the juxtaposition of the proposed coal gasification plant there, and two environmental issues came up for us.

The first is the effect of putting a wind farm on to this ridgeline, and the comparison was what would happen with a coal gasification plant that captured and sequestered carbon and then we needed to find a place to sequester that carbon if we were going to build that plant.

We and the students decided that we wanted to recommend this project as something that was an acceptable use of this land and was a sound use that would come under your jurisdiction. And when we thought about the alternative, where to store however many tons of carbon dioxide in another location that might come up for you in the future, we decided that this is what we wanted to recommend.

This is what Dana had to say. Dear LURC Commissioners: The Maine State Chamber of Commerce strongly supports the Black Nubble wind project and urge the Maine Land Use Regulation Commission to approve the zoning change that will allow this critical development to move forward.

There is no question that in the coming years Maine and the region will need to generate more electricity in order to ensure continued economic growth. ISO New England has forecast the regional need at additional nearly 5,000 megawatts of additional electric power by 2015. Due to the potential effect of global warming, that power must come from clean renewable sources of energy, such as the Black Nubble wind power project.

For a whole host of reasons -- economic, environmental, geopolitical -- we must as a nation wean ourselves from our dependency on fossil fuels. This will require bold action and a willingness to compromise.

Maine Mountain Power's revised proposal from two mountains with 30 turbines to one mountain with 18 turbines exemplifies both. The company has considered views and consensus of the opponents and proposed a reasonable and but still vital wind power generating project that has far fewer impacts than originally conceived.

The potential effects of global warming will have a devastating impact on many of our most cherished industries: Tourism, recreation, fishing, and farming. Air pollution is ruining people's health, which in turn is leading to higher health care costs for individuals and businesses.

We simply don't have the luxury to wait for a new energy breakthrough, a magic bullet that will save our energy
needs -- that will solve our energy needs and pollution problems. The time to act is now.

The Black Nubble wind power project is a small but necessary step toward our new energy future. Your approval of this project will send an important message that Maine intends to be a leader in the development of clean renewable forms of energy while at the same time respecting our natural environment.

There are tradeoffs to be sure, but the choice is not simply between seeing wind turbines on the horizon or not seeing them. The choice is between winds turbines or a greater dependency on fossil fuels, more air pollution, and higher energy costs.

The Black Nubble project will move us closer to the energy future that we know awaits us. We have to get there, and you can start right there by approving this important project. Thank you very much.

THE CHAIR: Thank you Peter. The next person on my list is Senator Strimling. Is he here?

DR. SAYER: My name is Suzanne Sayer, I'm a friend of
Ethan Strimling. I'm going to make this brief. I hate to do this to the Senator because he put a lot of time into this.

He's a supporter of the wind power plant, and he said, as you have probably already come to realize, while some see these turbines as a visual intrusion on the area's natural

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beauty, others see them as an extension of the natural environment blending into the landscape while utilizing a natural resource, the wind, to everyone's benefit.

I don't believe for a minute that the Black Nubble project alone will address all of these many problems, but it's a start. Approving the project will demonstrate and resolve in our State's resolve to confront the crisis and become a leader in the quest of clean renewable sources of energy.

I understand and respect the views of those who vigorously oppose the Black Nubble project; however, I looked at this project as a very temporarily inconvenience. We need to take the long view. We often think that our time on this planet is long. But compared to the mountains themselves, our time is scarcely a blink of an eye.

Changes to the landscape that have taken place on these mountains over hundreds and even thousands of years -some of them by nature, some of them by humans -- have been far more destructive and obtrusive than what's being proposed here.

We will solve our energy problems and our global warming crisis, perhaps with new renewable energy sources that we haven't begun to imagine. When we do, the Black Nubble turbines will come down and the area will return to a more natural state just as it has after the all the logging operations and clearcuts that have dotted these mountains for generations.

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Thank you very much. He had some more things to say. I feel sorry for him.

THE CHAIR: Thank you. Steve Bien, it's B-i-e-n. Are you here, Steve?

MR. BIEN: Appreciate your patience. My name is Steve Bien and I'm opposed to this project even though the project sponsors presented a mitigating compromise. I feel that even in its reduced form, Black Nubble wind farms fails to cross the threshold that should be required and allowed the rezoning of this protected mountain area.

I am a 25-year resident of Franklin County residing full time in Jay. I'm a local physician, and I have been a registered Maine guide. I've also hiked the Appalachian Trail many times, including the area in Saddleback/Redington region at all times of the year, so I've very familiar with the viewscapes up and down the state.

I also have a strong interest in renewable energy, believing that shrinking that carbon footprint is vital to the health of your state and our planet; however, I do not feel that this project will make a significant contribution and that a vital scenic and recreational treasure will be sacrificed unnecessarily.

Balancing economic and conservations needs, which is your charge, is a very difficult undertaking, especially now with the face of Maine changing more rapidly than ever. The 752
recent Brookings report charting Maine's future spent a great deal of time detailing the sprawl and suburbanization as a threat to the culture of recreation and economic prospects for our state.

You are no doubt familiar with the term Maine brand used throughout the report. It would be crass to look at our wild lands as simply props for our brand, but at the same time it would be foolish to ignore the economic value and the central role they play in our state's future.

Indeed our economic future depends as much upon our projection of the integrity of these areas, which constitute our brand, but it does when developing our educational and technical infrastructures.

Maine is famous for its scenic beauty and undeveloped vistas. If we are to attract young talented people, it will certainly be for the lifestyles and recreational opportunities that Maine can offer. Being will to sacrifice in areas such as this, which in my view will be degraded by an industrial site on Black Nubble, is a step in the wrong direction.

Much has been made of renewable energy potential the Black Nubble Range site offers and how important this is to our environmental health. Yet, the challenges raised to the projections of this project have yet to be answered.

Last summer's hearing, Tom Hewson, an expert witness, pointed out the transmission limitations of the power lines in
western Maine and predicted that there be no net green or renewable output that cause the configuration of our lines and the distance for power must travel to misplace its use. In effect, the renewable inputs will compete against existing hydro and biomass power for transmission.

To my knowledge this argument has not been answered. It has also been pointed out that the output predictions given for this project were based on unquestioned suppositions and not on hard calculations that a project of this scope and consequence to Mainers.

It is my understanding that where possible development -- especially industrial development such as this -- should be clustered, adjacent to, or near other areas of development to prevent sprawl.

Black Nubble Range project does not follow this developmental guideline. Indeed, its isolation and distance from population centers makes power transmission all the more expensive and inefficient and contributes to sprawl of the worse kind.

Renewable energy alone will not get us out of the energy difficulties we face. Without a comprehensive energy plan by our State and attention to the management, no amount of wind power will successfully offset enough carbon to help us towards our target of abatement.

Energy conservation is the fastest growing and most

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economical new energy source being developed today and is the only one that saves us money. Absent serious attention to this side of the energy balance, it's unlikely that projects like Black Nubble will have any substantial effect either in or out of Maine.

It is an irony to me that the ills of mountaintop removals are featured in many of the presentations by supporters of this project. Mountaintop removal is a bad practice without question, but putting wind towers on a protected mountain ridge is another kind of mountaintop removal.

Would we allow strip mining of our Maine mountaintops if they could provide us with high quality low sulfur coal? I hope not. In sum, I feel that the Black Nubble project does not fulfill the development standards that must be set to allow its destruction in the protected mountain zone. The operator's energy projections are weakly supported by data that has not been adequately scrutinized, questions about capability of existing transmission infrastructure have not been answered, and the reasons that while more suitable sites have not been given.

While some parts of the Redington region have been heavily logged, trees and scenery are resilient and will recover with time, but the concrete pads and wind towers and the power lines that serve them are all structures that are not
easily removed should our needs or the technology change. I believe this remote area should be protected from this industrial development. Thank you.

THE CHAIR: Suzanne, are you going to speak again?
DR. SAYER: Yes.
THE CHAIR: This is your third bite at the apple.
This is yours, I take it.
DR. SAYER: This is mine.
THE CHAIR: You're not going to read that whole book, are you?

DR. SAYER: No. I'm Suzanne Sayer. I have a Ph.D. in environmental geophysics, and I have a degree that's very similar to that of Cameron Wake. I'm going to skip a lot of my stuff, too, because I feel sorry for all of you.

I came to the hearing last summer, and I spoke about the earth and how it's the only planet that I know that supports life.

After listening to the testimony last year, I felt torn about the impact of views those huge tremendous turbines would have on the scenery; but I also know what's going to happen to our planet if we don't do something drastic to help solve the global climate issue, and I also know about peak oil, I have a degree in geophysics.

After all of the statement by opponents of wind farms that might have been true, I went back and I did research.

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That's this [indicates]. I did research to find out if any of the opponents had this information. The only conclusion I came up with is that either you like wind turbines or you don't like them. There's a global climate change issue, and I agree with Cameron Wake.

Black Nubble is a well intentioned compromise, but already it's a fruitless attempt to curb the might of the bog lemming and the Bicknell's thrush, the three-toed woodpecker, the spring salamander. All those animals that you're afraid of dying are going to die because of what is already in the pipeline as far as carbon dioxide.

We need to work on all the wedges that Dr. Wake talked about, including the megawatts which would mean not using energy. We have to get improved automobiles, we have to start car pooling, we have to get rail transport, we have to harness tidal power, we have to get efficient housing, down-size our housing. No $\$ 400,000$ homes. Those are ridiculous.

We have to do carbon sequestration, we have to do carbon infusion into the soil. We have to do nuclear energy. I know Cameron does not like that one. Carbon we have to do carbon tax and cap, we have to use less water. We have to do agricultural products differently, and we have to eat locally.

New England is ranked the seventh largest generator of carbon dioxide. If it was a country on its own, it would be in?
the seventh largest producer of carbon dioxide in the world.
If we don't do something in New England -- if New England is
the seventh largest generator of carbon dioxide, can't do something to curb our use, then we're all in trouble.

I have a list of 12 different reports that have come out in this year, in the 13 months since I was here, that talk about global warming, peak oil, and these are reports by the British, Americans, and several other countries.

Since last year Mexico has started going to a peek decline of its oil, and last Thursday, September 13st, the price of oil passed $\$ 80$ a barrel for the first time ever. I'll turn this in in a revised format.

I also want you to know that I support the whole two-mountain project because after what Phyllis Upton [sic], the forest lady said, that the Black Nubble is a weak compromise. If it's that weak, then I support the two-mountain project. I think we need both of them. Thank you very much for your time and your understanding.

THE CHAIR: Thank you, Suzanne. Mary Lou Sayer, did you intend to testify? Come right down here, Marilyn. Speak right into the microphone.

MS. SAYER: My name is Mary Lou Sayer. I
congratulate all of you for putting up with this as long as you
have. You have a tremendous job to do.
I'm in favor 100 percent of the proposition that is
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before you, and I you hope you will pass it. Thank you very much.

THE CHAIR: Thank you. Well, I don't have anybody else on my list, and I'm not going to ask if anybody else wants to speak.

## MR. WEINGARTEN: Can I speak?

THE CHAIR: Come on down Bob. Have you been sworn

MR. WEINGARTEN: Yes. My name is Bob Weingarten from
Vienna, Maine. What I want to say is, first of all I am opposed to the Black Nubble project. I'm opposed because I
don't believe we should rezone the mountains of Maine above 2700 feet.

I also want to say that I believe that the Commission should take a look seriously at a moratorium at this moment in time on any rezoning projects, no matter where they are in the pipeline.

Yesterday in the Lewiston Sun Journal there was an editorial calling for a moratorium. I think that the evidence shows from last summer all through this year to this hearing and the hearing that's going to happen in two weeks on the Kibby project that we need to have a rational plan to deal with these issues.

There is a wind power siting task force that is meeting. I have spoken to so many people who say it makes no
sense to have a siting task force that is supposed to be determining the criteria for siting while these other projects are going through the pipeline. It's closing the barn door after the animals have escaped.

I believe that your mission and the values that you have to protect in the unorganized territory arise to the occasion that says you have to have a moratorium on all these projects while a rational plan is developed for the state of Maine. Thank you very much.

THE CHAIR: Thank you, Bob. I guess that we have heard everybody that wants to be heard, and we will adjourn the hearing for this evening and we'll be back here at 8:30 tomorrow morning for -- I'm sorry, I'm being reminded that just so you -- if you're not coming back tomorrow, I will -somewhere I've got a date here -- it's right in here Catherine -- just to remind you, if you want to submit written testimony, if you want to send additional material to us, you're going to have a couple of weeks to do that. I'll give you the date here in a minute as soon as we find it. I think it's October 10th.

Ten days until October 1st, yeah, I was pretty wrong.
The record will be open until October 1st if you want to summit additional material.

If you just send it to LURC in Augusta, and then there will be -- the thing is, anything you send in, if you
want to go through the record, you can rebut stuff that somebody else has sent in, and that rebuttal period lasts another week, another ten days -- another seven days, I'm sorry, until October 8th.

Keep in mind you've got until the 1st of October to summit any more written testimony that you didn't give us already.

The end of the rebuttal period is October 9th, not October 8th.

With that, we're adjourned.
(The hearing was suspended on September 20, 2007 at 9:01 p.m.)
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(The hearing resumed on September 21, 2007 at 8:40 a.m.)

THE CHAIR: Good morning everyone. For the record, this is a continuation of our public hearing on Zoning Petition ZP 702. And this morning commissioners present today, Steve Schaefer, Jim Nadeau, and Bart Harvey, and along with the LURC staff that has been present for the balance of the hearing.

Before we begin with the testimony of the intervenor, Natural Resources Council, the Commission would like to resolve one of the issues that was brought up by Attorney Plouffe
concerning the ex parte communications issues, and that was the one about the -- his request that the Commission deliberate without a staff recommendation. I believe that was the essence of what he asked for.

I wonder if he -- I would just -- we would kind of like resolve that before we leave today so you all know where we're going, and so I would ask if he, Mr. Plouffe, has any additional things he needs to say about that or any of the attorneys, the intervenors, an opportunity to comment.

MR. PLOUFFE: Thank you Mr. Chairman. I don't intend to go into the reasons why I asked for that in my letter. I laid all of that out and will just say again, there's nothing dramatic about this decision making. It's used by some other State agencies, it's used by planning boards and zoning boards, local and all over this state, and what I have in mind is the Commission deliberating on central issues that are involved in this case, with staff taking notes and listening, and then staff go back and draft a decision that parallels the critical decisions, if you will, on key issues that have been made by the Commission.

Staff would come back with a draft order, findings of fact, conclusions of law, which will be reviewed by the Commission to see whether or not they represent what the Commission reached, conclusions reached in its deliberations, and then you would vote on that.
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It's done very often, and I don't think you'll do it in this case. I think that will be beneficial to everyone.

THE CHAIR: Thank you.
MR. THALER: Thank you Mr. Chairman and members of the Commission. For the record, Jeff Thaler for the applicant.

I think to put in context as we're nearing the end of the hearing, the circumstances of Mr. Plouffe's request, he requested that there not be a staff-recommended decision to the Commission, which is the norm of the staff to do that, as you know.

He suggested in his eight-page letter that several commissioners and staff were biased and could not be objective. As I said on Wednesday morning, we strongly disagree with those accusations, and commissioners stated on the record their ability to be objective and impartial and fair, and we said on behalf of the applicant that we take you for your word. We also believe that staff can be objective and fair and do their jobs as professionals.

We think it's an unfortunate pattern in this proceeding that it seems like whenever anyone expresses support for the project -- be it a commissioner in a vote or a staff recommendation or the Natural Resources Council of Maine supporting a one-mountain-only project -- they're accused of being biased or true believers or zealots or something like that. I think it's really regrettable.

We are comfortable with staff -- the normal LURC process, but I would say that if -- I'm also mindful of the fact that you have a lot on your plate. The Commission has a lot on its plate. It's no secret that you have another wind project hearing coming up in less than two weeks, that you have the Plum Creek hearings, endurance contests, whatever you want to call them coming up November.

You have a small staff, you have almost a volunteer Commission, and that if the Commission in its discretion decides that as a matter of still due process but efficiency to have preliminary deliberations -- the record will close October 9th, you could schedule -- and as Bill said there is precedent that Board of Mountain Protection does this -- you schedule, say, for early November, before Plum Creek hopefully before your brains get fried with Plum Creek, you can have at your next Commission meeting a public discussion.

The record's closed, the parties may have five-minute closing arguments as you did before. The Commission does general deliberations, and you give direction to staff on what kind of order you want to see, and then staff can go and draft it.

If you want to go in that direction as a matter of efficiency and time management and to keep things going, I mean, the applicant is certainty supportive of that goal and mindful of your concerns; however, we would not want you to do
that on the basis of not trusting your staff or on somehow the notion the staff is biased. Thank you.

THE CHAIR: Thank you. Any of you -- do the rest of you want to weigh in on this?

MS. BROWNE: Juliet Browne for TransCanada. I just would like clarification. The BEP in the past has done it in one of two ways. When they have that initial deliberative session, they actually take a straw vote.

More recently they have moved to a process where they have a deliberative session and they give some direction to the staff for a draft recommendation, but it's not actually a vote. I'm just curious which way, if you make a decision to go one way or the other, that that's clear.

THE CHAIR: Thank you. Anybody else? It's my understanding that as presiding officer and chairman of the Commission I have the discretion to make this decision on behalf of the Commission, and I think that we're going to proceed in that direction.

We will hold deliberations absent the staff recommendation on this project and possibly others. I guess that will be a judgment we have to reach in each one.

I don't think I need to expand on that at all. That's the direction we should count on in this case.

MR. THALER: Thank you Mr. Chairman, that's fine with the applicant.

MR. PLOUFFE: Thank you.
THE CHAIR: Very good. We're proceeding now with the testimony of the Natural Resources Council and their witness. We have set aside 20 minutes.
(Witness was sworn.)
MR. DIDISHEIM: Mr. Chairman, members of the Commission and those in the audience, NRCM is here to today to testify in support of the Black Nubble wind farm. We're doing so as an organization with a deep tradition and a record of working to protect Maine's natural resources and environment, including Maine's mountains.

We're also an organization deeply involved in efforts to help the threat of global warming and our dependence on fossil fuels. Our members are passionate, you might even say they're zealous, about both of these priorities. We do not believe that global warming trumps other values within LURC's jurisdiction, which is why NRCM opposed the original project. But our members also believe that visual impacts do not trump our need to move forward with wind power. We need to strike a balance.

As I said in my comments last January to the Commission, you have a hard job, but this isn't just your job, this is our job. We have a hard job. Although two sides are pitted against each other in this proceeding, we're all in this together.

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We have a common challenge of figuring out how to shift away from an energy system that currently is causing widespread harm to the environment and public health. We have an addiction to fossil fuels, and we would like an easy answer, but there are no easy answers, and this decision is a hard one.

NRCM appreciates the time and effort that you and everyone else has devoted to this. NRCM has concluded and strongly believes that voting for the Black Nubble project is the right decision.

Compared with the original project, this project has reduced environmental impacts, reduced visual impacts as a result of protection of Redington Mountain for wind power development and generate a significant amount of clean power.

We firmly believe the project is consistent with LURC criteria and State policy and is in the best collective interests -- the best collective interests -- of all the people in Maine and our environment.

So what is different about the new project? Well, obviously the big difference is that the 12 turbines on
Redington have been removed and all of the associated roads are off of Redington.

This chart, which I showed you before, shows the highest mountains in the state of Maine, Redington Pond Range. Other than Sugarloaf, it's the only one that currently is not projected.

It is a high value, possibly the most high value, mountain range unprotected in the state, and we've negotiated a restriction agreement that would protect it. And that would provide permanent enforceable protection, which I would be glad to get into later.

Redington Pond Range is very different than Redington within Black Nubble. Redington is higher elevation, larger subalpine forest, more significant Bicknell's thrush habitat, bog lemming habitat is there, high elevation wetlands,
Redington is a hiking destination. Essentially across the board, Redington has higher resource values and Redington will be protected if a project is built on Black Nubble.

I just want you to recognize that this is Redington viewed from Black Nubble, and you can see on this blank of Black Nubble that it's been cut pretty hard. As I'll show later, there is a substantial section of Black Nubble where turbines have been significantly disrupted from timber harvesting, and that's Redington in the background.

Does Black Nubble strike the right balance from our perspective? We believe that there's little impacts to the P-MA zone above 2700 feet. Only 64 acres will be cleared. Some of that will revegetate, but there will be 64 acres cleared. This is out of 139,201 acres, according to LURC, that currently is in P-MA zone above 2700 feet. So this a .05 percent impact, 64 acres out of 139,000 .

It's important to recognize that $\mathrm{P}-\mathrm{MA}$ is not a zone that is protected from disruption. This has been substantially disrupted. Wildlife habitat has been disrupted; 21,300 acres have been cut since 1974, according to more than NRCM's analysis, more than 4500 acres in Redington Township alone, including in the project area, 1900 acres on Black Nubble, 700 acres on Crocker, 1100 acres on Mt. Abram.

The Black Nubble project will have a reduced impact. There's no northern bog lemming habitat. This was a major concern in the original proposal. An expert witness, John Albright, delivered entire testimony about the bog lemming habitat. He's not here in this proceeding, and that means a lot.

Black Nubble has lower natural resource values. The record and the facts clearly document that Redington is one of the most significant unprotected mountains in the state ecologically, also in terms of recreation values.

It's further from the Appalachian Trail, as we have already discussed. Many of the viewpoints will have reduced visibility -- I'll be glad to get into that in more detail with you -- and some significant stretches down to Sugarloaf Cirque the project has disappeared completely from the hiker's experience.

We believe that Dr. Wells will substantiate that there's no undue adverse impact on Bicknell's thrush. It will
be a minor habitat loss, .02 percent of US habitat, and in there's other threats to Bicknell's thrush in the larger context that must be factored in as you consider risks associated with Bicknell's thrush posed by this project.

So this is a depiction of the project on Black Nubble. The green is what currently exists as uncut forests, the yellow is land that has been disturbed by logging. The orange line is the 2700 -foot elevation line.

All of the red turbines are on or adjacent to land that has been recently cut, fairly recently cut, through logging operations. Ten of the 18 turbines will be in areas that have been cut. Like that image I showed you earlier, only eight of the turbines will be in the green area, the forested area. Sixty-four total acres will be cleared for the project, only 35 of those acres are in the subalpine forest.

There's been discussion about the S-3 subalpine fir forest in Maine. This is the chart that shows the ranking. Redington Pond Range has an A excellent rating with 761 acres on the top of Redington Pond Range. The top of Redington Pond Range will be protected.

Black Nubble recently has been given a B, C rating down here, good or fair, with 300 acres. There's a total of 24,243 acres of this type of habitat in the state of Maine.

The building of this project is not going to take
Black Nubble off this chart. It my affect where it is on this
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chart. There are some habitats here with as little as 6 acres, 52 acres, 72 acres. As I mentioned in a previous slide, only 35 acres of that 300 are expected to be cleared.

As I've said in our testimony, this is a significant amount of renewable energy. This is a good way to look at it. These are hydro dams in the state of Maine. This is their annual generation. This isn't about capacity factors, it isn't about megawatt, name plate capacity. This is about how much energy comes out.

Black Nubble will be right up there with the largest hydro dams in the state. There are no major renewable energy projects coming forward right now other than wind power, and Black Nubble would provide a significant amount of wind power.

It's consistent with State policy, as you've heard repeatedly, both from us and others since. And we believe that this project will provide a meaningful amount of renewable energy.

These are 23 organizations that represent more than 75,000 members, supporters, more than 5000 Maine businesses, 600 churches, 12 Maine colleges and universities that have endorsed the Black Nubble project.

This is the largest showing of support ever in the state of Maine for a -- probably for any renewable energy project, but certainly for any wind power project. And as you have heard, a public opinion polling showed that 85 percent of

Maine people, when asked about wind power -- specifically about the development of wind power in LURC jurisdiction -- is how the question was asked, 85 percent are supportive, 11 percent opposed. We believe that the majority of the Maine people by and large margin support wind power development.

The role of wind power, its environmental benefits are real and meaningful. NRCM has focused on wind power and energy considerably. It's a major part of our expertise. We believe that the benefits are real and meaningful.

It must, however, be part of a broader energy strategy that has to include energy efficiency. Energy efficiency is no silver bullet either. It will take heroic efforts just to eliminate demand, but then we're still left with all of the existing harm caused by the current forms of power generation.

So we have to do pretty much everything, all the efficiency we can, and introduce clean power appropriately and expeditiously. There's no silver bullet. We need to do them all. We probably have to do 25 percent solutions to deal with the issues that we have in front of us, and clean energy has become a critical strategy for the long-term protection of LURC jurisdiction values.

Global warming is a threat to LURC jurisdiction values. It's NRCM's love for the landscape and the resources in LURC jurisdiction that drive us to support wind power
development. We're not interested in wind power development for wind power development sake. It's because we care about our natural resource environment.

In summary, we believe that the Black Nubble wind farm deserves your support. It provides protection for Redington. Redington Mountain is a privately owned mountain. It will remain a privately owned mountain in the absence of a protection agreement as was put forward. People should not be complacent in thinking that that is protected in its current zoning situation from a future wind power project.

There's reduced ecological impacts, there's no northern bog lemming, it's reduced visual impacts resulting from this project. It's outside the 35,000 acres of mapped roadless area.

It's a significant amount of clean power that will reduce our dependence on fossil fuel, and it is in the best interest, we believe, of the people of Maine.

It may seem like you have had two worlds, different worlds, in this proceeding, but as I said, we're all in this together. We do have an addiction to fossil fuels. We would like easy answers. If there were any easy answers, we would have done them already. This project is not a panacea, wind power itself is not a panacea, and we don't have any panaceas, regrettably. But it does help put us on a path to reducing the harm from our current forms of energy generation, and we need
to get on a more sustainable path.
I'm going to pass along the mic to Jeff Wells, and Dr. Jeff Wells is an expert on Bicknell's thrush.

DR. WELLS: My name is Jeff Wells. I was asked by NRCM to testify to provide my comments on the -- my opinion about the impacts of the Black Nubble project on Bicknell's thrush.

This is my first formal LURC hearing, and I've been impressed by the deliberations and by the amount of effort that goes into this, and I appreciate especially the difficult decision that you commissioners have in front of you. I know this is not easy and I really appreciate your service.

I'm going to give a quick summary of the testimony that I submitted, and I won't go over fully my background, but I do want to say that what has compelled me to participate in my first LURC hearing in my 20-plus years of experience in conservation work, and in particular, the work that I just completed recently for a book in which I analyzed the overarching big picture threats to birds in the United States and in North America. It gave me a picture that I think was somewhat unique to conservation of bird communities in the US and allowed me to really look at the threats in the proper context.

My own interests in bird conservation is really related to trying to -- my broad goal is trying to see that the

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organizations that I'm working for and the activities that I'm involved in are preventing any further human cause declines in birds. So we've heard over the last couple of days a lot about visual impacts from this project. My own interest is in what impact this would have on Bicknell's thrush and wildlife and the environment.

The Bicknell's thrush, you've probably heard in some of the previous testimony, is a bird that is restricted to the northeast US and adjacent Canada, breeds at high elevations and winters in the Caribbean. It's in the Greater Antilles, higher elevation forests there. Unfortunately, it's that habitat where it winters that has put it at greatest risk.

The loss of forests in its wintering -- this a map showing the Dominican Republic on the island of Hispaniola and the remaining forest there, the habitat loss in the Caribbean is dramatic and the loss of forested habitat in places like Haiti is nearly 100 percent.

If you've ever flown over the area, it's a stark contrast -- if you look at the line between the Dominican Republic and Haiti, it's almost all gone in Haiti.

In the Dominican Republic, though, over 90 percent of the habitat is gone, 80 to 85 percent in Cuba, and 75 percent in Jamaica. This is the sole area where the species lives and as we speak, forests are continually being lost. This isn't something that happened in the past. It's happening now.

The habitat is lost to clearing for agriculture, burning for charcoal, and unfortunately after it's gone, it doesn't regenerate. It's not like the forests up here, because it's continually kept in agriculture and oftentimes it's destroyed in this burning process, so when they have storms and things like that, it just erodes away.

We're talking about habitat loss that really puts the species at greatest risk. This is well documented in a number of papers that are cited in my testimony.

On the breeding grounds, the species is really pretty well protected. It's sort of a paradox in that you tend to think of -- when you're trying to protect a species that you try to go and protect its breeding habitat. Most of its breeding habitat is actually already within protected areas.

So the greatest threat on the breeding grounds is actually coming from atmospheric deposition problems related to burning fuels, mercury, bioaccumulation, and acid rain effects that can deplete calcium and make it difficult for the birds to reproduce, not enough calcium to produce eggs or healthy eggs.

The species' greatest threat is really from these factors that are related to dirty energy production.

I note in my testimony there is a recent study just done a couple of years ago found that the Bicknell's thrush had the highest levels of mercury in their bodies of any of the high elevation song birds. We really do know that these birds 776
are being impacted by these factors.
Sadly, the biggest long-term threat to Bicknell's thrush is the same threat that's impacting most of the wildlife on the planet is global warming. You've heard lots of testimony about this, but in the case of Bicknell's thrush, modelling efforts have shown that we're expected to lose over 90 percent of the balsam fir elevation habitat, and clearly loss of that much habitat is going to cause a serious decline in Bicknell's thrush and will highly increase the species' risk of global extinction.

As part of my work to try to assess the current presence and absence of Bicknell's thrush on Black Nubble and Redington, I did carry out surveys in June of this year following the established protocols of the Vermont Institute of Natural Science, which is the experts on Bicknell's thrush and high elevation birds, and I carried out two sets of surveys on Black Nubble and one set of surveys on Redington.

I did find -- I surveyed 24 locations on Black Nubble and did find Bicknell's thrush at three locations. The red spots in this map are the locations where I found single Bicknell's thrush, and the yellow places are the other places that I surveyed and did not find. All of these are in the same.

So for my work on Black Nubble and Redington, it appears that Redington provides more significant and higher
value habitat. You've already heard Pete talk about that and it's in the testimony.

I wanted to look at specifically what impact the project would have on any Bicknell's thrushes that were on Black Nubble, so I did some simple calculations based on the maximal possible impact of habitat loss and based on the sort of maximum number of Bicknell's thrushes that could occur on the site.

Again, I only found three that I could document there, but if you look at the amount of habitat and the territory size of the birds, you could have up to six males that would be impacted within the 64 acres that are going to be cleared on Black Nubble.

If you look at that in the perspective of the total global population, that's about .103 percent of the global population impact. This is just a Google earth image of Black Nubble.

I also considered the potential impacts of the wind turbines on Bicknell's thrush at the site. The birds are famous among bird watchers because they love to stay very low and hidden in the low vegetation. In general their behavior makes them at low risk from being struck by a blade.

They do have one behavior, which has been mentioned, in which the males occasionally do flight displays that move them up into an area where they could be within the blades.

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In talking to the experts at Vermont Institute of Natural Sciences, they characterize the extent of that behavior as something that happens in a 10 - to 20 -minute period each day, usually just in the evening, over about a two- to four-week period, and usually one to two males engage in those 20-minute periods.

The proportion of time that the birds would be at risk is quite small, and birds are well documented to be able to visualize and see these blades and avoid them.

So I said -- I pointed out that the protected habitat loss of 64 acres on Black Nubble is a space that could theoretically support six males. In contrast, the area that's proposed for protection on Redington is a space that could encompass 47 males.

On Redington, work from the applicant has clearly documented a long-term population that has existed at the site. My bottom line from that is clearly Redington is going to provide some significant habitat protection for Bicknell's thrush. That would be one of the major benefits.

Finally, as I said before, in my work for my recent book, I really had a chance to look at the broad context of what is impacting America's birds, including Bicknell's thrush, which is one of the birds I profiled in the book, and we've already heard about the major likely impacts from global warming and habitat loss.

The other major impacts on North America's birds, including many of the birds that we love here that are migrating through here right now, they come from places that are being heavily impacted by mining, by oil and gas exploration, by dirty energy, by mountaintop removal, mining. In these cases we're talking about places that have extensive habitat that would be destroyed or removed in the ranges of millions of acres.

That's really what -- when I look at the contrast between what we're doing to the habitat for our energy needs in other parts of the world and literally talking about places like in the Appalachians, thousands and millions of acres are being completely removed, places in Canada that have involved upwards of 10 and 20 million acres of habitat that will be removed, all impacting, again, birds that we enjoy as migrants in Maine jurisdiction, as well as causing further impacts on birds like Bicknell's thrush and other high elevation birds.

Thank you.
THE CHAIR: Thank you, Dr. Wells. Do you have anything else, Peter, or can we proceed to the questioning?

MR. THALER: You can proceed.
THE CHAIR: Would you like to let the other people question and we kind of come in at the end?

It's kind of a path we followed yesterday, it kind of gives us the last word.

Let's see, according to my schedule I guess the applicant has the right for the first crack at you. Who's going to do that?

MR. THALER: I am. I have no objection to your having the last word, Mr. Chairman.

THE CHAIR: Thank you. You wouldn't prevail anyway. You have 30 minutes.

MR. THALER: I will probably use less than that. I know I will use less than that because I will not use more than that.

Good morning. Dr. Wells, I'll start with you first. I have a personal interest in some of your testimony and background.

## EXAMINATION OF JEFF WELLS

## BY MR. THALER:

Q. Can you just briefly tell the Commission what your credentials are, education, and where you work now?
A. I received my Ph.D. and masters degrees from Cornell University. I have my doctor's degree from the University of Maine in Farmington, not far from here obviously, and I work as a senior scientist for a nonprofit called Royal Songbird Initiative, as well as another nonprofit. I'm on the National Board of Conservation campaign.
Q. Doctor, the reason I'm personally interested in part is because I grew up in Ithaca and my family's connected with
the ornithology lab at Cornell.
Did you work at one point for the National Audubon Society?
A. Yes, I did.
Q. What was your position with the National Audubon Society?
A. I was the State bird conservation director for New York state and then the National Bird Conservation director.
Q. Has National Audubon Society given you an award?
A. I received a New Star Award as it was called when I worked there, yes.
Q. Have you published books on the topics that you're testifying to the Commission about this morning?
A. Yes, I have.
Q. What was the most recent book that you published and the topic?
A. It's called Birder's Conservation Handbook: 100 North American Birds at Risk, published by Princeton University coming out in about a week.
Q. Have you written about, in book or articles, Bicknell's thrush?
A. Yes, I have. I have in several academic publications related to conservation concerns of the northeast US in this book.

The book looks at this data, threats, and conservation needs and actions for 100 birds of

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conservation concern in North America, and Bicknell's thrushes is included within that.
Q. Let's turn then to your opinions concerning this project and the two mountains that have been talked about during this hearing, the Redington Mountain and the Black Nubble Mountain.

Of the two ridgetops, Black Nubble and Redington, do you have an opinion as to which one offers the better Bicknell's habitat than the other?
A. Yes, I think that Redington offers better and more habitat for Bicknell's thrush.
Q. Therefore, would eliminating wind development on Redington Mountain if this project is approved be significant in terms of maintaining high value Bicknell's thrush habitat?
A. Yes, absolutely. Yes.
Q. Your testimony -- I think you indicated in writing and a little bit this morning, but I wanted to clarify so I understand -- your testimony said in writing that the collision risk for Bicknell's thrush from turbine blades is minimal.

Can you explain in more detail the basis for that opinion?
A. Yes, the birds spend the vast majority of their time close to the ground within zones that would never take them within the areas where the blades are spinning.

The one behavior in which have they engage -- the males engage only -- in the flight display behavior, which I explained earlier, and that behavior is really quite a very small part of the time budget of the birds.

As I said, it occurs in about a two- to four-week period when the birds have 10 or 20 minutes where a couple of birds may engage in the behavior, and my opinion is the risk from that -- not only from the fact that they engage in it for such a short time, but also that the birds can actually see the blades from the information that we have about the visual acuity of birds suggests that they will be at low risk from collisions.
Q. Just one or two more questions before I turn to Mr. Didisheim, Doctor. If this Commission approves the proposed wind project on Black Nubble, will Bicknell's thrush continue to use Black Nubble for habitat?
A. Certainly, yes.
Q. There were some questions yesterday about roads. Would the presence of a road going up to the turbine sites or turbine pads themselves cause Bicknell's to abandon Black Nubble?
A. I don't think there's any evidence to suggest that, no.
Q. The last question -- and I'll go to Mr. Didisheim.

You had something in your prefiled about Partners in
Flight. Can you explain to us what that is and your
involvement with it?
A. Partners in Flight is a coalition of government and non governmental groups that have been working together over the last ten or 15 years to try to develop and -- to develop bird conservation initiatives and plans for songbirds, in particular, land birds and to collectively find ways to increase funding and resources and develop plans that make things better for birds.

I've been involved in that coalition for roughly ten years or so and was the chair of the northeast working group for Partners in Flight for a number of years, which during that time we were working develop and bring forward a number of management and conservation plans for parts of the northeast US.

MR. THALER: Thank you. If you could give that mic to Pete.

MR. THALER: Mr. Chairman, how much time do I have
left?
THE CHAIR: 20 minutes.
MR. THALER: Thank you. That should be plenty. EXAMINATION OF PETER DIDISHEIM
BY MR. THALER:
Q. Pete, first of all, there was some testimony from opponents over the last day or two about the restriction
agreement between Maine Mountain Power and NRCM on the Redington project -- Redington Mountain.

The first question is, the agreement says that NRCM can enforce the agreement, and I believe Mr. Horn, in his prefiled, said, well, NRCM doesn't have experience doing that and questioned the value.

Can you respond to that?
A. Sure. Page 3 of the agreement is very clear that the agreement can be transferred to the State of Maine or the New England Forestry Foundation.

It was the preference of the parties and the intent of the parties to seek transfer of the enforcement responsibilities of its restriction agreement to the State. That would have required legislative action, which was not achievable in the time frame or appropriate until a project had been permitted.

So we are not an organization like a land trust, but it's the preference of the parties and the intent to transfer these responsibilities.
Q. There was also testimony yesterday that this restrictive agreement is -- I think the word was hollow or lacks value.

What is your position on that?
A. That's a very unfortunate description of it because it's not accurate at all.

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This is a privately owned mountaintop and it will remain a privately owned mountaintop in the absence of this restriction agreement.

If this project is defeated, the owners of this mountain, Redington Mountain, wind farm who are patient owners -- they have demonstrated that over the last ten or 12 years -- they have an interest on return on investment on the top of this mountain, and they have a particular passion in their -- they're zealous about it -- about building a wind farm on the top of Redington Mountain.

Over the course of ten years, 13 years, we know that things change. The Kibby wind farm is returning to the Kenetech site, where the project previously died. Five years ago people may have thought that that was protected from wind.

Over the next ten, 15, 20 years, LURC commissioners will change, State policy will change, the regulatory environment will change. It may well be that our awareness of the imperative to deal with global warming changes to the point that at some point in the future, absent this restriction agreement, global warming does trump the resource values on the top of Redington and a project would be built there.

NRCM believes that this is an enforceable and permanent restriction on wind power development on a very
precious part of Maine's mountain landscape and it is anything but hollow.
Q. Let's turn to sort of what I'll call on-the-ground issues.

The Commission heard testimony over the last day or two as to which experts have hiked where. I think you used some photographs in cross-examining some witnesses.

What's your personal experience in terms of this section of the trail, the area roughly 34 miles or so, we talked about the study area, particularly, summits that have been the subject of the visual impact assessments?
A. This is one of my favorite places in the state of Maine. I've hiked every 4000-foot peak in this area, I've hiked the entire Appalachian Trail, I have backpacked it recently between Route 4 and 27. I have summited many of these peaks multiple times. I've hiked the Bigelow Range. I have seen Redington and Black Nubble from all vantage points that have been discussed.
Q. Can you tell us, then, in your view given your experience and knowing what's at contention in this case and now hotly contested as your assessment of what the impact would be of seeing 18 wind turbines on Black Nubble from the various viewpoints that you've hiked?
A. I can only speak for why my perceptions are, and I think everybody who hikes this trail probably has a different experience. That's what's so beautiful about hiking
trails.
The Appalachian Trail is a magnificent natural resource, there's no question about that. There are some wonderful views from this stretch of the Appalachian Trail. The reality of hiking this trail, for those who have not hiked it, is that you're mostly in the woods. That's the truth.

You are walking through woods -- and you can be in the woods for the better part of an entire day. Some of the views that have been brought forward -- Spaulding, Poplar Ridge, and Crocker, walking down a surveyor's cut -- these are not destination summits.

I have been to Half Dome. I have backpacked in ten states over the last 30 years. Many of the views that have been brought forward as ones that will be harmed are highly filtered views. These are not -- some of them are not spectacular. Other views are very significant.

The top of Sugarloaf, as I mentioned yesterday, you are surrounded by cell towers, buildings, humming buildings. That is not a place where the viewer -- and the majority of people that will see the wind farm, Redington in the foreground, Black Nubble in the background -- will be skiers.

They're going to have chair lifts, they're going to have skis attached to them. That's the majority of
people.
For the hiker's experience, the real impact -- and NRCM does not deny that there's a visual impact -- the real impact will be on the Saddleback to Saddleback Junior stretch.

On that stretch you will see turbines and you'll see them at a distance that is generally in the mid ground to background. If mid ground to background is not acceptable in Maine from a hiking destination and Maine is filled beautiful places, then I think we're going to have a really difficult time building any wind power in the state of Maine.
Q. Can you explain, there's also been testimony and maybe questions about if Black Nubble is only 54 megawatts, wouldn't that be a minuscule amount in terms of dealing with global warming and climate change? That's what Dr. Wells just talked about.

Why is NRCM supporting given the proposed size of the project?
A. In terms of a renewable energy plan, it will be one of the biggest in the state, first. So unless we think we can get rid of all our large dams and that isn't significant, then this is significant.

As I pointed out in my testimony, the amount of electricity generated by this, it is the economics. It

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can't be dismissed as a trivial calculation that the National Park Service has suggested.

The replacement of 3 million compact fluorescent bulbs -- it's easy for somebody to say, well, let's just go do that. It is incredibly difficult to get energy efficiency implemented. NRCM knows, it's one of our highest priorities, and there are few groups, if any in the state, that are working harder to improve energy efficiency.

This is a very significant amount of clean renewable power. Just to put it in maybe Sugarloaf terms, I'm looking here at Sugarloaf and I look over here and it says Sugarloaf Goes Green, Powered by Wind. It's not powered by wind from Maine. They have bought renewable energy credits from out in the Midwest because there isn't any renewable energy to buy here.

Throughout this area and Sunday River, we are informed that they are powered by wind.

Sugarloaf and Sunday River combined purchased 30 million megawatt hours of renewable energy.

MR. PLOUFFE: Is this cross-examination or is this further direct testimony?

I'm not hearing a question here.
MR. THALER: I did ask a question. Maybe the answer's going on longer. It's not my fault, Bill.

MR. DIDISHEIM: That's fair. I was going on.

## BY MR. THALER:

Q. Peter, last night in public comment the night before during the day, people have said that if the Commission were to approve this project, that that would be a precedent and have suggested that that would lead to a flood of other developments in the western Maine mountains.

Does NRCM have a concern about what precedent this Commission might be setting in deciding this proceeding and what is that concern or position?
A. Well, I think the question of precedent cuts both ways. I think in saying no to this project, you would send a signal out to developers that -- I can't say how they would interpret it -- but they wouldn't interpret it real positively.

I think there's a different question that also needs to be considered, and if you say yes to this project, you are in effect saying no to Redington at the same time you're saying yes to Black Nubble.

You're saying no to Redington in a way that is much more firm and establishing a line of what's acceptable and what is not consistent with what the CLUP directs you to do. It's much more significant than a 6:1 preliminary vote on a project that isn't even before you anymore.

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So I think the real precedent to think about would be that one, that you would be defining a line that would protect Redington.
Q. Mr. Horn, in his prefiled for the Appalachian Trail Conference, mentioned the Burnt Jacket subdivision proposal that has been before LURC.

Have you personally on behalf of NRCM been involved in the LURC proceedings on that project?
A. I personally was not involved. I helped manage NRCM's involvement in that matter.
Q. Mr. Horn was talking about adjacency in the Burnt Jacket project. Were you generally familiar with the arguments about adjacency in that proceeding?
A. Well, sure, it was a significant part of that proceeding.
Q. Well, is what the Commission decided in that proceeding on adjacency have any relevance to issues being on the fringe or remoteness or anything in this proceeding?
A. Well, no, adjacency used in the Burnt Jacket context is within the context of a sub development, and the one-mile adjacency rule that pertains to that type of rezoning has nothing to do with the type of rezoning here.

D-PD does not have adjacency a requirement. In fact, the D-PD is specifically intended to be for places that have -- that are resource dependent, which may be away from any sort of subdivisions.
Q. Let me just -- putting up on the screen here, this was in

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I'll give you 30 if you need them.
BY MR. THALER:
Q. 13 is an aerial view of the existing 2003 logging roads, the SERE Navy facility that we've heard about, this is the Dallas Road that we've heard about.

Have you generally hiked and seen some of this area?
A. Well, I've certainly hiked up Black Nubble and hiked the entire length of Black Nubble.

Black Nubble is not a destination for hiking; but yes, I have been on those logging roads.
Q. In your personal opinion, is that area pristine, undeveloped, untouched by humans?
A. Well, the 300 acres on the top of Black Nubble are not logged over. I wouldn't -- you could potentially use the word pristine.

The rest of the area, only the top of the dome, the rest of the area has been an industrial -- it's industrial timberland. There's no question about it.

To the south is the SERE facility, and you can look over there, you can see the roads. I don't think they have logging in there, but the effect of logging operations are visible throughout that area.
Q. Again, to wind up one or two more questions, in your prefiled testimony I think you have some discussions and photographs about coal and coal mining in the Virginia
area.
Is it your testimony that this project would displace coal and stop strip mining in the Virginia, West Virginia, Kentucky area?
A. No, that's not what my testimony says. My testimony is not saying that this project will displace coal. It does -- it is making the point, as Jeff Wells did, that we are causing very significant harm in the name of our energy needs.

Today we do know that wind power will displace natural gas. We don't know what the future brings. We went from zero natural gas to 60 percent natural gas in eight years. There's a coal-fired coal power plant proposed for 100 miles in here in Wiscasset that will take barges of coal from northern Appalachia if it was approved.

We do have concerns about the potential for coal in the state of Maine, and over the next ten, 15 years, it could be possible that wind power does start to displace coal if the regulatory environment starts to internalize the real cost of coal in terms of mountaintop removal and harm to the environment. We wish wind would start to displace coal.

MR. THALER: Mr. Chairman, two more questions and you can hold me to that.

## BY MR. THALER:

Q. Pete, yesterday morning at the commencement of the National Park Service testimony, Pam Underhill said to this Commission that you, NRCM, threw National Park Service "under the bus" and that she and National Park Service would not forget that and one can assume not forgive either.

Has NRCM ever -- or you while you've been with NRCM -- received a threat like that from a federal agency or official?
A. Absolutely not. I'm not aware of anybody at NRCM who has. We worked with the National Park Service in the past. Our members love the Appalachian Trail, so that was a threat, not just to me, but to the 10,000 members and supporters of our organization which is very unfortunate.

We need a civil discussion. This is a difficult issue. Personal attacks don't belong in this at all.

MR. THALER: He answered what I was going to ask for my last question, so I only had one question and I'm done. Thank you Mr. Chairman.

THE CHAIR: Thank you. Mr. Plouffe. EXAMINATION OF PETER DIDISHEIM

## BY MR. PLOUFFE:

Q. Pete, you've made several comments on Redington about visual impacts, and you've talked about there not trumping
a need for clean energy, and you made some other comments in response to other questions from Jeff Thaler.

If the Bigelow Mountain Range out here were privately owned, would NRCM support 18 windmills along the ridge?
A. It's not privately owned; NRCM helps protect the Bigelows.
Q. You didn't answer my question. If it were privately owned, would you support the erection of 18 windmills along the ridge of the Bigelows?
A. It's an irrelevant hypothetical to this debate.
Q. So you refuse to answer the question?
A. There's no --
Q. Do you refuse to answer the question?

MR. THALER: Excuse me.
MR. PLOUFFE: He won't answer the question.
MR. THALER: Excuse me. I think this is not Law and Order, as Bill said the other day.

I think the witness should be allowed to answer the question before he is attacked by the next question. I think it's unfair to not let Mr. Didisheim respond.

THE CHAIR: You all can't talk at once because Lisa's got to try to record this.

Try and answer the question.
THE WITNESS: We do not take a position on any wind power proposal until we see an application.
BY MR. PLOUFFE:
Q. So you couldn't answer the question regarding any other mountain, including, for example, Mt. Kineo?
A. We have not taken a position on any wind power project until we have seen an application.
Q. Then what visual impact assessment does NRCM do in connection with wind power developments?
A. What visual impact assessment do we do?
Q. Let me be more specific. What visual impact assessment did NRCM do with respect to Black Nubble?
A. Our decision was based on site visits of staff, real-world experience hiking on the trail, visiting all the sites that have been identified.

As has been said by visual experts who have not been to those sites who have provided expert witness testimony to you, the real eye is better than simulations, and we have based it on actually what seeing what the world looks like.

I personally hiked this with the photo simulations in my hands and looked at the viewshed and looked at the sites, and I have to tell you, some of those photo simulations don't look anything like the real world.
Q. So you didn't hire a visual impact analysis expert of any kind?
A. We did not.
Q. Okay, thanks.

Are you suggesting that the visual impacts of wind farms should be assessed differently by this Commission from the visual impacts of other types of development?
A. We haven't said that.
Q. Well, I thought that you said at the beginning that they should not trump -- the visual impact issue should not trump renewable energy projects?
A. And the word trump means in all cases, so I would say global warming does not trump in all cases natural resource concerns, and visual impacts should not trump in all cases global warming concerns.

The LURC criteria, all of them are a balancing.
Q. So the regulation which talks about undue adverse impacts on scenic resources when applied to renewable resource projects should be interpreted differently from how it's interpreted on non renewable resource projects?
A. No, we thought a lot about the word undue. What is undue?

Right now we are doing a lot of visual impacts in the name of energy development that we're responsible to and is helping provide the energy in this room.

Again, it's a balancing of impacts against what our awareness is in the larger context of impacts.
Q. I'm asking you whether or not NRCM's position is that this board -- this Commission -- should apply the standard differently looking at wind power projects than how it
applies it in other cases, for example, subdivisions?
A. We haven't said one way or another on that.
Q. So you wouldn't disagree with me if I were to say that it ought to be applied the same way as it is applied to all projects?
A. There should be a visual analysis that's part of their deliberations and it is.
Q. So you would not disagree with me?
A. I guess I do not disagree with you.
Q. Thank you. Do you recall that you and I were at a meeting, Department of Conservation, called by LURC staff in late 2005 regarding the Redington project to meet with agency staff and to hear Mr. Lee do a presentation, and you and I had a very brief discussion -- I had only met you once or twice, so it may have been an unremarkable discussion to you -- we talked about the issue of decommissioning.

I said to you something along the lines of, don't you think decommissioning ought to be a part of this plan, and you said to me, in light of what happened in Kenetech after they went bankrupt, I agree with that, or words to that effect.

Do you remember that conversation?
A. I really don't. I don't but I don't dispute that it happened.
Q. Where's the decommissioning plan in this project which NRCM supports so strongly?
A. Well, the applicant has made clear that they are committed to provide the funds necessary for decommissioning.
Q. Is this decommissioning -- is that decommissioning plan, which I quite frankly don't understand, different from the decommissioning plan that's proposed by TransCanada?
A. I haven't done a side-by-side real closely.
Q. But you know enough about them to know whether or not it's different?
A. Since 2005 I have spent a little time looking at decommissioning, not a lot; but what I have --
Q. Is it different than TransCanada?
A. I can't answer the question. I haven't looked at it side-by-side.
Q. Is it different from the decommissioning plan for the Stetson Mountain project?
A. I think it's fairly close.
Q. There are no guarantees or third-party guarantees in Stetson. Is there an escrow account established in Stetson?
A. I don't know.
Q. Have you seen any figures produced by this applicant as to what the cost of decommissioning of a project on Black Nubble would be?

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A. I haven't; but I do know that the value of turbines is quite high and the financial incentive to remove them and to gain value from them is also quite high.

A speculation about turbines being left up there abandoned and not be decommissioned I think seems unreasonable speculation.
Q. So you're talking about turbines that still have a lot of useful life?
A. They're steel.
Q. So you're talking about the scrap value?
A. This site will not be very far from logging roads. You'll have an easy access to get them out of there.
Q. So you're talking about the scrap value of the turbines and towers funding the decommissioning of the project; is that what you're saying?
A. The funding to decommissioning, I don't know if that's how it would be structured. That would be more appropriate for the applicant.
Q. But NRCM is not just supporting this; you say in your testimony you're strongly supporting this project.
A. Yeah, and we believe that if it's built, we think the likelihood is that we're going to continue to need renewable power, that if this site is viable -- and we've done an economic viability analysis -- as you know some of it suggests it is, we think it will continue to generate
power, and fossil fuel prices will continue to increase, so the economics there, we believe, suggest the decommissioning is probably not going to happen.
Q. So you're satisfied with whatever Edison has put on Maine Mountain Power as offered here as a decommissioning plan?
A. We're satisfied with that.
Q. Jeff Thaler asked you something about this. Your Exhibit H to your prefiled was the West Virginia coal mining, strip mining, and you've testified today in response to Jeff's question that you understand that this project will not displace coal; am I correct?
A. Yeah, today.
Q. So why did you put Exhibit H on here?
A. I think my testimony is quite clear why I put it in there. We are currently dependent on an energy generation system all inclusive of fossil fuels that's causing substantial harm, and we are paying much attention to it.

In fact, we don't really want to know about it.
Q. You're not suggesting -- I just want to be clear here --
A. You heard my answer.
Q. Your inclusion of this photograph was not suggesting to this Commission that this project has anything to do with strip mining in West Virginia?
A. No.
Q. Okay. That's fair enough. I'd like to talk a little bit

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about the old growth community, which you said -- what you say arguably could be pristine or arguably could be said to be pristine at some other certain location.

Isn't old growth not in the mind of Natural Resources Council of Maine? I'm talking about the 300 acres on the top of Black Nubble?
A. It's at least late successional. Whether it's old growth, it's not clear. Whether the top of that has never been harvested is unlikely. There's very little old growth.
Q. How old are the trees, do you think, on the top of Black Nubble?
A. 80, 100 years.
Q. Isn't that pretty much the life span of that species of tree?
A. Yeah.
Q. And it's been recognized by the Natural Areas Program of Maine; correct?
A. As a B, C rating, yes, which is about 12 or 13 .
Q. That's not a priority ranking, though; it's a viability ranking, isn't it?
A. But there's no question the top 5 are priority. There's no question that Redington is an excellent -- in fact is a --
Q. But the ranking chart that you showed is a viability ranking by the Natural Areas Program?
A. Yes.
Q. Did --

3 A. I'm assuming that that is not a complete list either. I

8 A. Yes.
9 Q. The map that you showed that has the acreage that would be
Q. That's not the question, Pete.

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A. No.
Q. In fact, you pretty much have to be in a satellite to get that view of the Navy facility, don't you?
A. Yeah; I didn't use that slide.
Q. Let's find this. Can you go up to your map there and show me where are the underground power lines?
A. I can't precisely on this map.
Q. Can you locate it at all, imprecisely?
A. Underground power line on the ridge that's connecting to each of the turbines.
Q. Isn't there in fact, Peter, an underground power line that goes from here to here, and we can go over to the applicant's plan, if you want, and I'll show it to you.

So it's not on there, Pete.
THE CHAIR: Excuse me, you need to speak into that microphone. Your voice is kind of soft. Lisa's having a hard time.
A. Evidently it's not.
Q. While you have that up, as I understand it, we have ten turbines outside the old growth area, basically I think is what you said, and eight turbines inside; is that correct?
A. Actually, I'm not sure whether that yellow one down at the bottom is in the mapped habitat.

My testimony was in relationship to proximity in or adjacent to previously logged land or land disrupted by
logging.
Q. So eight of them are in this, what I'm calling an old growth area?
A. If you say so.
Q. I hadn't seen Dr. Wells' map before that showed where he found the Bicknell's thrush.

Was that in the prefiled testimony?
A. Yes, it was.
Q. The locations where he found them, the red and the yellow?
A. Yeah.
Q. As I recall seeing it, I didn't see it in the prefiled, but my fault.

MR. PLOUFFE: As I recall when you had it up here and you recall at the beginning, those locations were in here; is that right, Dr. Wells?

DR. WELLS: Two of the locations are up there and then one was down on the -- down on one of the -- yeah (indicating) -- well, not exactly -- down along the bottom edge there. We can get that up again if you want to.

MR. PLOUFFE: That's okay. I appreciate it.
BY MR. PLOUFFE:
Q. Pete, the Natural Resources Council, when you were -- last year you proposed a Black Nubble-only and that was rejected by the applicant, and then I'm assuming that you had discussions after January of this year with the
applicant on the Black Nubble-only proposal because here we are with your support; am I right?
A. I've been talking to all the intervenors for a couple of years about this, yes.
Q. You also talked to the applicant; correct?
A. They called us.
Q. Did you try to devise a Black Nubble plan that would have built only ten turbines so that we could avoid the Bicknell's thrush and old growth impacts?
A. I think you should probably talk to Jeff Wells about the relationship between old growth and Bicknell's thrush habitat, because you're suggesting a correlation.
Q. No, I'm not, I'm sorry. Two separate things. I understand.
A. No, we didn't. We did an economic viability analysis of what an 18-turbine project would, if it was viable; the margin is close but it's viable. We did not look into cutting out eight turbines.
Q. So even though that would have had significantly less natural resource impacts, you didn't think it was economically viable so you didn't propose it?
A. It probably would have meant there would be no project.
Q. I'm interested in your -- what I understand to be your analysis of the impacts of this project for both impacts on old growth and Bicknell's thrush habitat, understanding
A. The big bubble is acres above 2700 , which --
Q. Okay. And the chart has smaller and smaller bubbles until we get down to the 42 acres of area that would be permanently affected by this project; correct?
A. That's what this chart says.
Q. What's the visual presentation of the ratio that I'm talking about? Do you understand what I'm talking about now?
A. Right, yep.
Q. So the measure of the impact then from the perspective of NRCM is the number of acres impacted versus the total number of acres like that in Maine?

MR. THALER: Excuse me, could I just ask that what you showed him is in the record, Bill?

MR. PLOUFFE: It's part of the prefiled, Jeff. The bubble graph of Steve Pelletier.

THE WITNESS: I don't think you characterized correctly what our testimony shows.

We have discussed the number acres in the S-3
subalpine documented habitat type as a percentage of how much of that has been identified in the state.

Could you point in my testimony where you're --
BY MR. PLOUFFE:
Q. I could do that. That is not the calculation that you made?
A. You didn't explain it clear enough for me to know what
passage you're talking about in my testimony. You didn't give me a number. Restate it, perhaps I could.
Q. As I understand your prefiled testimony, the measure of seriousness of the impact of this project bears direct relationship to the number of acres impacted of that type of habitat -- or that type natural resource in the case of the heart-leaved-birch habitat -- versus the total number of acres of that habitat, or that natural resource, in the state?
A. We put it into context.
Q. Okay.
A. Yes.
Q. Now, is that how we regulate wetlands in the state of Maine? Is that really NRCM's position that when you have a sensitive natural resource, you say, how much of that resource is there in the state of Maine versus how much are we affecting? If that's a smaller number, then let's go for the project?
A. No, because as I have said in this -- all of LURC criteria are balancing and an evaluation of benefits and risks.

That information was provided for the purpose of providing the Commission with an understanding of the documented habitat of that type so that they could judge whether 64 acres out of 25,000 of that type would be undue adverse impacts.
Q. Would you take the same position with respect to wetlands filling, in other words, total number of wetlands in the state of Maine and how many were -- acres were filling on a project -- not on this project, but just in general?
A. It's a hypothetical. I would evaluate it based on the project in front of us.
Q. The poll you spoke of, 85 percent of the people support wind power. That poll did not ask about this project at this site, did it?
A. No, it didn't. It did specifically refer to the Land Use Regulation Commission.
Q. The Land Use Regulation Commission covers about half the state?
A. Yes.
Q. While we're on definitions, you've referred to undue that this Commission has to apply.

Do you agree with what I understood to be Mr. Thaler's definition of undue, meaning more than what is necessary and $I$ further understood his interpretation to mean that as long as you don't do more than what is necessary to build the project, then it's not undue in terms of impacts.

Is that NRCM's interpretation of undue in this context?
A. No, we don' necessarily use the same words.

1 Q. So you don't agree with his definition?
A. I don't disagree or agree. That's not the framing of it.

MR. THALER: Can I state for the record I don't think that was my definition. I was using in cross the dictionary definitions.

Bill's testifying about what I said. The record will reflect whether it was me who said that or not.
BY MR. PLOUFFE:
Q. So you don't have a position on that.

NRCM was a leader in the -- you showed a graph here of other renewable energy in the state of Maine, particularly dams.

NRCM was, as I recall, a leader in the effort to -successful effort for the removal of Edwards Dam in Augusta; correct?
A. Yes, ten- or 15 -year effort.
Q. And NRCM was a leader in the fight against the Big A hydroelectric project; correct?
A. Yes, we were.
Q. How do you square your position on this project with your positions that resulted in one case of removal of a hydroelectric generating capacity and the denial of it in the other case?
A. The Edwards Dam produced about 3.5 megawatts of power, I believe, at peak capacity, which is about two or three

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wind turbines.
These are very different situations. That deprived upstream fish passage for 160 years and resulting in essentially a very significant obstacle to the recovery of that entire watershed, the entire river.

The analysis that was done and was required by FERC statute to balance the environmental benefits with the economic benefits of a dam removal concluded and directed FERC to rule that the environmental benefits for the river and the restoration of Kennebec exceeded the small amount of power, and the Edwards Dam, as I said, in terms of power generation was a very small dam.

It probably would have been about 80th on the list of 102 dams in the state.
Q. But it still contributed renewable energy to the grid in Maine; correct?
A. A very small amount.
Q. Yeah, and this --
A. Much, much smaller than this, as you saw from the chart of hydro dams.
Q. So there is a balancing that you try to do, is that what you're saying? That you will support -- you would support further removal of hydro projects if you came to the same conclusions that you did on the Edwards Dam?
A. Every project we do a balancing.
Q. Did you do a --

MR. PLOUFFE: I'm coming to the end of this, Mr. Chairman, even with my extended time.
Q. -- you did an Action Alert to your members to come to support this project; correct?
A. Our outreach staff I believe did. Do you have a copy?
Q. Yeah, I saw it on-line. I don't have it with me.

Did you do one for Stetson?
A. Did we do one for Stetson? I believe we did, but I don't know.
Q. You don't know. How about Mars Hill?
A. For Mars Hill I believe we did both probably -- there was not a public hearing, that went through the DEP process. There was an appeal by Maine Audubon trying to deny.
Q. You don't recall?
A. I do believe that we had one in connection with the DEP.
Q. And you're putting a tremendous amount of -- so you're not sure if you did one in Stetson; Mars Hill, maybe you did.

You're putting a tremendous amount of time into getting this project approved.

Can you tell me -- this is a sincere question,
Pete -- why this project?
A. If you look at NRCM's resources into Stetson, into Kibby, into this project --
Q. I'm just talking about this project.

## - Q. Did youdo

Q. This project. This one project. This is the only project in which you divided, separated from Audubon, AMC. There are a lot of things about this --
A. We believe in our position on this. We believe that this is the right outcome for the state of Maine. We believe that it strikes the right balance and is the right compromise for what's on the table.

Every energy facility siting involves a lot of effort. It is not easy to get any new power plant of any type -- in this case, it's a type that has clean fuel coming out of it.
Q. But they all do. Do you see this project as setting a bar for future projects?
A. No, we never thought of it those terms. It's entirely in terms of our energy situation and what it's going to take to reduce our dependence on fossil fuel. It's going to address the threat of global warming.
Q. This is my last question. You said you strongly support this project, and in my words I think you've taken some pretty creative and aggressive interpretation of the LURC rules and the statutes that we've talked about, the undue, your attitude towards scenic impact in this case are probably different from positions you would have taken in other non wind power cases.

Global warming and climate change have been probably the drivers for you in this, and I can't find any reference to global warming or climate change in the CLUP or the statutes or the regulations.

It seems to me that --
MR. THALER: Excuse me, Mr. Chairman, that's testimony from an attorney and I would move to strike. If there's a question, he should ask the question.

MR. PLOUFFE: I'm going to ask the question. I'm also asking whether Jeff Thaler is NRCM's attorney?

MR. THALER: No, I am not. They don't have an attorney here, but I am sensitive to the record in this case and you as an attorney should be following due process.

So I object.
THE CHAIR: Your objection is noted on the record.
Please ask the question so we can move on.
MR. PLOUFFE: Right.

## BY MR. PLOUFFE:

Q. So aren't you really -- by this case, your advocacy of this case -- trying to get this Commission to stretch the current language of their rules and the State statutes? You're an advocacy person. I know you're a registered lobbyist.
A. I am.
Q. Aren't the issues that you're putting in front of this

Commission in the context of this proceeding better addressed in a policy forum, such as Maine State legislature?
A. No. We are advocating in support of a project that we believe meets LURC criteria and we believe is in the best interest of the State; and the Commission, on behalf of the people of Maine, are the planning body for half of this state.

This is a project that we believe the merits of, and we are focused exclusively on the merits of this case.
Q. You've heard the concern that the Commission has expressed both last year and this year about what the rezoning criterion means in this context, you've heard them struggle -- at least I have -- with whether or not global warming is something that they should be considering in this context.

You don't think that these are major policy questions?
A. My understanding of the Commission schedule at their August 1st meeting specifically for the purpose of considering input from other agencies and into understanding.

I believe that the demonstrated need criteria to some extent from the testimony of PUC and others has been satisfied by State legislative action.
Q. So you don't think that you're bringing up issues, which are really not addressed by the current legislation or regulations?
A. Our testimony is in support of the projects before the Commission on the merits and the facts that we believe are relevant to the project and to their consideration and approval of it, we hope.

MR. PLOUFFE: Okay. Thank you. Thank you Mr. Chairman.

THE CHAIR: You're coming up on the list, Mr. Trafton. You have, by contrast, only 10 minutes since I didn't make a mistake with you.

MR. TRAFTON: My name is Dain Trafton. I'm here representing Friends of the Western Mountains, and I have just one line of questioning addressed to you, Pete.

EXAMINATION OF PETER DIDISHEIM
BY MR. TRAFTON:
Q. I want to make reference to the record, which is still relevant, and goes back to the hearings, August 2006.

Do you remember, Pete, that during those hearings Tom Hewson, an energy expert who testified on behalf of Friends of the Western Mountains, cited a 2005 study by the National Renewable Energy Lab that concluded that there's a limited amount of wind power that can be integrated into a control area of the grid without causing
significant costs to the rate payers.
Do you remember that testimony?
A. It's reaching back a ways. I remember Hewson's general testimony; I don't remember the details of that or the details of that report.
Q. Are you aware that the controlled area within which Black Nubble is located is the so-called western central Maine/Saco Valley subarea?
A. Yes. I wouldn't have been able to recall that for you; but, yes.
Q. Mr. Hewson testified that relying on this study, which I'm sure you'll refresh your memory of, that 10 to 20 percent of peak load in this subarea would be the limit at which, somewhere in that range, would be the limit at which additional costs would become necessary in order to balance the load within the subarea. That was his testimony.

Do you remember that?
A. I don't, I'm sorry.
Q. 10 to 20 percent of the peak load in that area would be 100 to 200 megawatts.

I'm sure you are aware that there are a number of wind power proposals which are being spoken about, one in this subarea -- one of which is very imminent, and in fact you're a supporter of that, the Kibby project -- and that
even the approval of the Kibby project would introduce 132 megawatts into this subarea and bring the project into the range at which additional costs to rate payers might be become unnecessary.

You are aware of the fact that there are these other projects?
A. Yeah; and you just mentioned that testimony suggested that they might be necessary.

I'm not an expert on the details of that and I don't believe that I could testify one way or another about what goes into that "might" equation.

MR. TRAFTON: Just one more question, Mr. Chairman.
Q. Did you hear my cross-examination yesterday of -- I think it was Mitch Tannenbaum -- in which I asked him about the 15-percent penetration by wind into the control area of the Bonneville Power Administration, which is apparently going to result in a $\$ 4$ per megawatt hour increase in the cost of that power to the rate payers who receive it?

Do you remember that testimony from yesterday?
A. I'm sorry to say I was out of the room during that cross-examination. I'm sorry.

MR. TRAFTON: Thank you.
THE CHAIR: Thank you Mr. Trafton. The supporting intervenors, Mr. Wilby or --

MR. MAHONEY: Mr. Wilby is gone, and Conservation Law

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Foundation has no questions. Thank you.
THE CHAIR: With that I don't see any other people
who were scheduled for cross-examination. I think what I'm going to do, we'll take about a 10-minute break here for Lisa and for all of you, and then we'll move to what is referred to as rebuttal.

MR. THALER: Any questions from the commissioners?
THE CHAIR: Well, I'm sorry, a good point.
Jim? You can work them. It's your chance, Steve.
EXAMINATION OF PETER DIDISHEIM

## BY MR. SCHAEFFER:

Q. Pete, this is about the access -- I mean, about the conservation of Redington.

What is the proposed access policy for the public on Redington?
A. It will be kept open, and that was important for NRCM for recreational purposes. There will be public access.
Q. There's no definition of public access -- I don't have that in front of me.

If you could just briefly touch on it, include what access is there now that's traditionally been allowed, fish and game laws, the whole works?
A. I don't immediately have it in front of me. It does provide continuing access.
Q. Traditional?
A. Yes.
Q. The power production -- I keep asking this question -- the graph you had up there was based on 30 percent. It wasn't based on 54 megawatts every day?
A. That was based on estimated annual output, which has nothing to do with the capacity -- it's what they project on an annualized basis the electricity coming out. It's real power.
Q. This is a question that I don't expect you to answer.

10 A. I'll try.
11 Q. I just want to get it on the record. It has to do with, I think, the conception that wind power, once it's built and the turbines are up, there's no reaction to the action of the turbines. This is really a philosophical question, which one of the engineers could come up with in the next few months.

Assuming that a lot of these turbines are installed, there's got to be some reaction in the environment because of the turbines.

For every fossil-burning fuel plant, there's a reaction; for every dam there's a reaction. Up to this point there seems to be no discussion about if a billion wind towers were built on the earth's surface, what would happen? Would steel weather from the coast? Would it interrupt wind flow? Would it cause -- that's why I'm
A. I haven't heard any discussion or analysis of it, so I don't really have an informed position on it.
Q. I totally -- I just want both the intervenors from opposition and pro side, is that research out there anywhere, or is it being developed now?
A. We'll certainly take a look and include into the record if there's anything.
Q. That's all I want, to make it so we can have a discussion about it without being accused of anything.

MR. SCHAEFER: That's it for me. Thanks. MS. SPENCER-FAMOUS: I have one question for Dr. Wells.

THE CHAIR: Just let me get finished with Peter here. EXAMINATION OF PETER DIDISHEIM

## BY MR. HARVEY:

Q. The Redington restriction, this isn't a conservation easement in the typical sense as we know them, is it?
A. No, it's not a conservation easement. It would be a recorded deed restriction.
Q. It would be what?
A. A recorded deed restriction here in Franklin County.
Q. Deed restriction only for wind power. So, I mean, if the applicant wanted to come back and build a subdivision on top of Redington, I suppose that at least could be considered?
A. Highly unlikely.
Q. But it would be problematic. But it doesn't prohibit them from asking anyway; right?
A. It doesn't prohibit.
Q. So he hasn't ceded anything other than the right to develop another wind farm. I guess we want to be clear on that.
A. Yeah, and from our analysis, that's the only real significant legitimate development risk to that ridge.

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## Maybe Wal-Mart.

Q. I think we all understand what that means. I just want to make it clear to me that it's simply a restriction on wind farms and nothing else?
A. That's correct.
Q. So that other than that, the zoning protection that's now in place is the only thing there that protects it?
A. Yes, that's correct.

THE CHAIR: I was tempted to ask a question about Big A, but I think that would be very inappropriate.

With that, Marcia, you have a question of Dr. Wells?
MS. SPENCER-FAMOUS: Actually, I have a million questions, but I'll just ask one.

## EXAMINATION OF JEFF WELLS

BY MS. SPENCER-FAMOUS:
Q. I thought somebody else might bring this up, and I wondered whether you could offer an opinion or maybe some background information to explain why there might be a variability in the occurrence of Bicknell's -- you went and found Bicknell's on Black Nubble this year, previous years they haven't been documented.

Is there some ecological reason why there could be variability?
A. Yes, certainly Bicknell's are known to be impacted by annual cycles of predators -- red squirrels, basically --
when they peak, they are the major impact on the nests and the young.

So the numbers have the possibility to fluctuate from year to year, in which case in some years you might have more birds in the landscape showing up in more places and then disappearing. That's one possibility. There are other possibilities.

There's also some possibilities around the landscape level effects because of all the cutting that's been done and the fact that Bicknell's apparently are using these regenerating clearcuts.

If there happen to have been a large amount of that habitat in the right stage of succession, it's possible that in a broad landscape there might have been more of them, so you would have been more likely to find them in a place that they might not occur every year.

In a larger block of habitat like at Redington and from the information that the applicant's scientists have documented, there have been birds regularly there, so it's pretty clear that that's a population that is significant and sustaining; it's less clear on what's going on on Black Nubble.

MS. SPENCER-FAMOUS: Thank you.
THE CHAIR: Thank you. Well, all right. Lets take about 10 minutes for Lisa and all of us, and then we can come 828
back and conclude with the rebuttal testimony.
We have -- we just assigned a whole block of time to this. We didn't divide it up between you, so it's going to be your time to use. I hope I don't have to get into refereeing time.

MR. THALER: I don't expect there would be any problems. I think the others don't have any.

THE CHAIR: Okay. We will start with the applicant. That will be the only rule I'm impose right now.
(There was a break in the hearing at 10:31 a.m. and the hearing resumed at 10:52 a.m.)

THE CHAIR: I guess we're going to proceed with our rebuttal, and the way I understand it, anyway, is the applicant is going to -- I assume is going to ask a few questions of a couple of his witnesses and then Mr. Plouffe has the same opportunity, as do the other intervenors.

MR. THALER: That's correct. We only have one witness and we'll be very short.

THE CHAIR: I always hear that phrase every time you guys come up here.

MR. THALER: Mr. Chairman, thank you. Mr. Pelletier was previously sworn. Pam Underhill is also here. She pointed out to me at the break that when I restated her comment to NRCM, I had said that what she had said was that NRCM had thrown the National Park Service under the bus, but she had
said the Appalachian Trail, and we retract our version of the transcript.

She's correct, it was the Appalachian Trail being thrown under the bus, not the National Park Service. I didn't intend to misstate that and I apologize for the confusion. It was the Appalachian Trail under the bus.

THE CHAIR: Your correction is noted.
MR. THALER: Thank you.

## EXAMINATION OF STEVE PELLETIER

## BY MR. THALER:

Q. Mr. Pelletier, yesterday Jody Jones for the opposing intervenors said that Woodlot, you, identified 18 species of concern but then only went out into the field to look for just four.

Is that what you did, and if not, please explain to the Commission what you did do.
A. That's a gross mischaracterization of what we did.

We did surveys for all of these species. The desktop survey that you referred to is just one of a series of steps we do when we're doing any kind of analysis. It's kind of an up-front, what's out there, what kind of conditions are the habitat.

We follow that up with developing study plans. We've worked with the agencies and get reviews, and then we conduct those surveys. That's exactly what we did.

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Just for the record, this particular project, we do these ecological characterizations in species-specific surveys, flora and fauna, on a number of different types of projects.

We found over 60 wind power projects mostly along the east cost but they did go down as far as Mexico, and each one of them takes the same type of process, how do we character of what's going on out there.

That's a very typical step. The first step is what do we know about the area.

All of our projects, wind power projects, we have never spent more time in the field on any of the projects like this. We have never done more different types of surveys than any project than this. I just wanted to say we hadn't just gone out and did kind of a cruise, and a desktop is a gross mischaracterization.

MR. THALER: Thank you Steve. And my last question.
Q. Mr. Plouffe today, in his questioning of Pete Didisheim, suggested that if there were trees up on Black Nubble, they were 80 to 100 years old balsam fir, that that would be old growth.

Is that in fact an old growth forest on Black Nubble?
A. No, I was asked that question the other day. I just said it was not an old growth.

It's important to recognize that there's a commercial
age and then there's an ecological age. The balsam fir will start falling apart at sometimes 40 years old, 50 years old.

And the term old growth is also relative depending on the species and the type of forest that you've got going on. Is it a mixed forest? Is it a pure forest?

What we've got out here are trees that are falling over. We're seeing 80 to 100 , a little bit over 100 , but balsam fir can grow to be 200 years old, twice what we're seeing out there.

I've seen trees that are getting close to 175,180 , 200, an old growth balsam fir forest.

MR. THALER: Mr. Chairman, I kept my word. That's it, thank you.

THE CHAIR: Thank you.
Mr. Plouffe, do you have --
I think you're all set, Steve.
MR. PLOUFFE: I think we'll have probably comments on that second question, but why don't we submit them in writing so that you don't have to sit here and listen to that unless you want to hear Dr. Kimball's response to that now.

But I'm willing to wait and submit that in writing if you want, Mr. Chairman.

THE CHAIR: That's your privilege.
MR. PLOUFFE: Why don't I have Dr. Kimball come up.
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It will save him some writing, and that will be the only question.

DR. KIMBALL: I don't have any question that balsam fir can get up to 200 years of age, but that's very abnormal, particularly in a high disturbance environment like what you have up there.

There's a tremendous amount of evidence of the wind rime type of damage that you would expect at those elevations, and I would be pretty surprised to see a lot of balsam fir growing to 200 years in that particular habitat.

We do a lot of research, we've done a lot of tree coring, and this would be pretty unusual to have old growth balsam fir mature forest up there that's showing trees, you know, 200-plus years as just indicated.

THE CHAIR: Thank you. Is that it?
MR. PLOUFFE: That's it.
THE CHAIR: Thank you. Mr. Trafton?
MR. TRAFTON: Nothing.
THE CHAIR: Any of the other intervenors?
MR. THALER: No. Sorry to disappointment you, Bart.
THE CHAIR: Well, in that case we better close this hearing in a hurry. Are there any further questions on behalf of the commissioners or comments?

MR. SCHAEFER: I just want to compliment you, Bart, on your steady hand on these long days and throughout public
testimony. I think you do a magnificent job and very fair. I just want that on the record.

THE CHAIR: Thank you. With that I guess that my closing statement is to remind everybody that the record for this hearing -- there are kind of two phases of this because we have a public component for the folks who testified publicly, and since we announced this, we have to stick to it, we have a ten-day period until October 1st when we will receive written comments, and then obviously the additional seven days for rebuttal testimony until October 9th.

I guess my agreement with the intervenors and the applicant, they are going to make one filing of all of their final comments on October 9th and that there will be no comments-rebuttal-type paperwork from them. We're going to get one filing from the applicant and all the intervenors.

Does anybody have any questions about that or concerns?

MR. THALER: No, that's accurate. That's our agreement.

THE CHAIR: Thank you. With that I guess we can --
PARTICIPANT: Are you still allowing public letters to come in?

THE CHAIR: Yes, that's what I said. The public is certainly allowed to submit -- they have to have their information in by October 1st, and if they want to come in and

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read that record after October 1st, they're certainly welcome to and send an additional letter in, but that date is October 9th.

So, yes, members of the public certainly are allowed to continue to supply us with additional information.

The hearing is concluded. Thank you all very much for your cooperation.
(The hearing was concluded on September 21, 2007 at 11:00 a.m.)

I, Lisa Fitzgerald, a Notary Public in and for the State of Maine, hereby certify that on September 19, 20, and 21, 2007, a hearing was held regarding Zoning Petition ZP 702; and that this deposition was stenographically reported by me and later reduced to typewritten form with the aid of computer-aided transcription; and the foregoing is a full and true record of the testimony given by the witness.

I further certify that I am a disinterested person in the event or outcome of the above-named cause of action.

IN WITNESS WHEREOF, I subscribe my hand and affix my seal this October 9, 2007.

LISA FITZGERALD, NOTARY PUBLIC Court Reporter

My commission expires: May 10, 2011

| \$ | 457:19, 457:23, | 10-percent [3] - 39:7, | 11:30[1] - 507:1311th [2] - 29:1, 297:14 | $\begin{aligned} & 671: 24 \\ & 140,000[1]-722: 20 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| \$100[1] - 30:24 | $\begin{aligned} & 467: 13,467: 14, \\ & 473: 22,478: 6, \\ & 485: 2,518: 16, \\ & 518: 25,519: 4, \\ & 519: 6,536: 4,540: 7, \\ & 552: 11,585: 8, \\ & 610: 19,707: 5,740: 4 \end{aligned}$ | $\begin{gathered} 98: 10,125: 3 \\ \text { 10-year-old [2] - } \end{gathered}$ |  |  |
| \$100[1] - 30.24 |  |  | 12 [29]-22:2, 22:24, | 146[1] - 739:14 |
| \$110[4]-298:22, |  | 38:8, 738:1 | 8:15, 59:21, 82:20 | 15 [32]-76:7, 81:6, |
| 349:12, 670:21, |  | 24 [4] - $461: 25$, | 91:13, 292:9, | 10:23, 246:14 |
| 733:10 |  | 64:24 | , | 250:9, 251:12, |
| \$115[1]-167:13 |  | 10.25[1] - 462:1 | 507:21, 507:22 | 261:15, 264:7 |
| \$17 [1] - 739:3 | $\begin{aligned} & \text { 1-megawatt [1] - } \\ & \text { 264:10 } \end{aligned}$ | 10.25-E [2]-460:23, | 527:6, 533:8, | 270:11, 270:12, |
| \$20[1]-119:5 |  |  |  |  |
| \$250,000 [1] - 348:11 | $\begin{aligned} & \text { 1-mile }[1]-316: 8 \\ & \text { 1.1 }[2]-591: 3,591: 4 \end{aligned}$ |  |  | $\begin{aligned} & \text { 270:15, 274:18, } \\ & \text { 294:23, 309:16, } \end{aligned}$ |
| \$300 [2]-285:17, |  | 100 [28] - 73:10, 93:23, | 633:24, 633:25, $634: 2,665: 18$ | 328:1, 402:11, |
| 286:5 | 1.2 [1] - 376:4 | 374:12, 390:18, | 634:2, 665:18, 672:20, 681:6, | 487:13, 493:17, |
| \$400,000 [1] - 756:17 | 1.4 [1] - 458:25 | 417:3, 530:23, | 692:15, 757:5, | $\begin{aligned} & \text { 513:20, 550:2, } \\ & \text { 576:3, 592:17, } \end{aligned}$ |
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| \$581 [1] - 348:17 | 349:6, 454:6, | 555:10, 557:10 |  | 633:25, 639:20, |
| \$80[1] - 757:11 | 592:19, 675:2, 710:2 | 635:6, 650:5, | 12,000 [6]-47:16, | 744:4, 784:4, |
| \$84[1] - 364:19 | $\begin{aligned} & \text { 1.5-megawatt }[1] \text { - } \\ & 679: 11 \end{aligned}$ | 652:20, 653:1, | $\begin{aligned} & \text { 176:15, 300:4, } \\ & \text { 532:3, 597:22, } \end{aligned}$ | $\begin{aligned} & 786: 16,793: 13, \\ & 793: 25,795: 18 \end{aligned}$ |
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|  | 1.9 [2] - 593:5, 681:21 <br> 1.9-percent [1]-335:3 | 757:25, 774:17, | 672:13 | 15-degree [1] - 85:6 |
| '06[1] - 120:6 |  | $\begin{aligned} & 781: 16,781: 25, \\ & 795: 14,804: 12, \end{aligned}$ | 12,000-acre [3] - | 15-mile [6] - 80:14, 302:3, 303:9, |
| '51 [1] - 627:13 | 1.95 [1] - 348:23 |  | $\begin{aligned} & \text { 175:22, 543:25, } \\ & 650: 21 \end{aligned}$ |  |
| '60s [1] - 737:13 | $\begin{aligned} & \text { 1/10[3] - 60:20, 60:21, } \\ & 707: 5 \end{aligned}$ | $\begin{aligned} & 795: 14,804: 12, \\ & \text { 820:21, 830:20, } \end{aligned}$ |  | $674: 23,675: 21,$675:25 |
| '70s [3] - 694:5, |  | 820:21, 830:20, 831:8 | 12-foot [4]-59:19,102:16, 102:24, |  |
| 712:18, 745:5 | 1/20 [1] - 540:6 | $\begin{aligned} & 100,000[2]-520: 16, \\ & 600: 5 \end{aligned}$ |  | $\begin{aligned} & \text { 15-percent }[1] \text { - } \\ & 821: 15 \end{aligned}$ |
| '70s/early [1] - 726:7 | 1/3 [1] - 710:4 |  | $\begin{aligned} & 102: 16,102: 24, \\ & 103: 19 \end{aligned}$ |  |
| '80s [1] - 726:7 | 1/5[1] - 710:4 | 100-and [1] - 605:17 <br> 100-foot ${ }_{[1]}$ - $331: 15$ | 12.5 [1] - 253:15 | $15 \text {-year }[1]-813: 16$ |
| '89 [1] - 172:17 | 1/8[3]-52:19, 61:2, |  | 120,000 [2]-307:24,332:1 | 150 [6]-211:21,$308: 22,455: 5$, |
| '90[1] - 172:17 | 483:25 | $\begin{aligned} & \text { 100-foot [1] - 331:15 } \\ & \text { 100-mile [2] - 517:20, } \end{aligned}$ |  |  |
| '90s [2] - 331:9, 725:2 | 10 [60]-38:21, 81:5, | 518:9 | $1200{ }_{[1]}-376: 18$123rd 11$]$[244:20 | 502:12, 556:23, |
| '93 [2] - 161:23, 162:3 | 81:11, 82:18, 87:21, | 100-plus-mile [1] - |  | 557:11 |
| '94 [2] - 161:23, | 88:5, 135:20,154:12, 154:14, | 704:23 | 125[2] - 73:16, 73:24 | $\begin{aligned} & \mathbf{1 5 0 - f o o t ~}[1]-679: 10 \\ & \mathbf{1 5 0 - k V}_{[1]}-603: 13 \end{aligned}$ |
| 712:18 |  | ${ }_{\text {100-year-old [1] - }}^{169.13}$ | $\begin{aligned} & 126[1]-704: 23 \\ & 129[1]-585: 7 \end{aligned}$ |  |
| '95 [1] - 161:23 | 171:3, 171:7, <br> 176:20, 221:16, |  |  | $\begin{aligned} & 150-\mathrm{kV}[1]-603: 13 \\ & 156[1]-349: 3 \end{aligned}$ |
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| 171:25 | $\begin{aligned} & \text { 227:6, 238:8, 246:7, } \\ & \text { 255:1, 270:4, } \end{aligned}$ | $\begin{aligned} & \text { 73:21, 302:2, } \\ & 347: 22,411: 9, \end{aligned}$ | $\begin{aligned} & \text { 12:21[1] - 135:23 } \\ & \text { 12:40 [1] - 527:10 } \end{aligned}$ |  |
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| 02[3]-200:11, | 298:24, $331: 25$,$401: 10,408: 14$, | $102[1]-814: 14$$103{ }_{[1]}$ - 777:15 |  | $\begin{aligned} & 160[2]-60: 2,814: 3 \\ & 163[1]-679: 12 \end{aligned}$ |
| 616:25, 769:1 |  |  |  |  |
| 03 [1] - 74:7 | 459:1, 487:6, 487:7, | 10:23[1]-66:18 | 757:6, 786:11, | $\begin{aligned} & 17[3]-134: 20,390: 9, \\ & 533: 5 \end{aligned}$ |
| 04 [1] - 395:7 | 487:23, 487:25, | $\begin{aligned} & \text { 10:31 [1] - 828:10 } \\ & \text { 10:34[1] -66:19 } \end{aligned}$ | 793:4, 794:3, 804:18 |  |
| $05{ }_{[1]}$ - 767:24 | $\begin{aligned} & 488: 4,489: 7, \\ & 489: 25,490: 8, \\ & 493: 16,494: 20, \end{aligned}$ |  | $130{ }^{\text {[1] }}$-665:6 | 1700-mile [1] - 338:18 <br> 1700s [1] - 746:7 |
| $06{ }_{[1]}$ - 395:10 |  | $\begin{aligned} & 10: 38[1]-477: 4 \\ & 10: 52_{[1]}-828: 11 \end{aligned}$ | $\begin{aligned} & 132[2]-518: 7,821: 1 \\ & 134[1]-280: 22 \end{aligned}$ |  |
|  |  |  |  | $175_{[1]}-831: 11$ |
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| 135:20, 180:17, |  | 533:7, 771:3 | 200:20, 767:25 | $\begin{aligned} & 134: 11,134: 20, \\ & 136: 14.141: 24 . \end{aligned}$ |
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| $\begin{aligned} & 284: 6, \\ & 297: 21 \end{aligned}$ | 783:6, 819:11, | $\begin{aligned} & 1100{ }_{[1]}-768: 7 \\ & 115[2]-28: 5,45: 2 \end{aligned}$ | $\begin{array}{r} \text { 13th }[5]-3: 21,5: 1, \\ 6: 1,29: 2,297: 15 \end{array}$ | $\begin{aligned} & \text { 203:17, 236:15, } \\ & \text { 236:16, 256:4, } \end{aligned}$ |
| 314:18, 334:17, | 820:12, 820:20, |  |  |  |
| 334:23, 370:2, | 827:25, 835:25 | 115-kV [3] - 120:17, | $14[7]$ - 161:20, 337:3, 340:1, 355:17, | 298:23, 300:15, <br> 315:6, 343:9, 459:4, |
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