State of Maine

Department of Conservation

Maine Land Use Regulation Commission

Public Hearing

August 2, 2006 through August 4, 2006

Zoning Petition ZP 702, Maine Mountain Power, LLC

Redington Township and Wyman Township, Franklin County

Held at the Sugarloaf Grand Summit Conference Center

Carrabassett Valley, Maine

(The hearing commenced at 6:00 p.m. on August 2, 2006.)

* * * * *

THE CHAIR: Good evening everyone. My name is Bart Harvey. I'm the chairman of the Land Use Regulation Commission, and I'm the presiding officer for the hearing; and as most of you are aware, this is a hearing that starts tonight and goes through to Friday night. Hopefully by 5:00 we'll be able to wrap it up, but that remains to be seen. It depends on how long winded we all are.

In addition to myself, members of the Land Use Regulation Commission who are with me here tonight are Steve Schaefer, Jim Nadeau, Catherine Carroll -- who is the executive director of the LURC commission -- Steve Wright, Gwen Hilton, and Rebecca Kurtz. Ed Laverty, a commissioner, the other commissioner, is out of the country right now.

In addition to the Commission, the staff, as I've introduced, Scott Rollins is here somewhere over near the sign-in sheet, Marcia Spencer-Famous will be making a brief presentation later, Fred Todd, and Melissa Macaluso is over here running the sound machine.

Now, in addition to the LURC staff, we also have a court reporter here tonight. Everything that's said tonight is going to be recorded and become part of the official record of this hearing. The court reporter will be here for all of the hearing, so there will be a very complete record of everything

we say. So remember that as you're making your testimony.

Now I have a brief statement that I'm going to read into the record, so if you bear with me.

This evening's hearing is being held pursuant to provisions of Title 12 MRSA Section 685-a, and the hearing will be conducted in accordance with Chapter 5 of the Commission rules for the conduct of public hearing.

This hearing -- evening's hearing is being held to receive public testimony on the matter of Zoning Petition ZP-702 submitted by Maine Mountain Power, LLC, to rezone 1,000 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 30 turbines on Black Nubble and Redington Pond Range, access roads, and underground utility lines.

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 building.

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 Subparagraph 8-A of

the Commission's statute and the Commission's Land Use Districts and Standards.

As I indicated, we've asked those of you who wish to testify to sign up on the sign-up sheets. I have three of them in front of me now. Fred Todd will bring the others down as they're completed.

We will be asking all witnesses to be sworn and will be required to 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 purposes of the hearing.

In addition to being transcribed, we'll be recording the proceedings, so I would request that everybody that wishes to testify comes down front and uses the microphone in front here so we record everything that is said and the court reporter can hear what you're saying.

I will remind everyone here -- this is very important -- that all of 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 from the record and will not be used in any part of the decision.

Now, the record of the hearing will remain open for at least ten days for written comments, until August 14th, and

an additional seven days, until the 21st, for rebuttal testimony as determined by myself.

Written public comments will be entered into the record until August 21st. No additional evidence or testimony will be allowed into the record after that date.

And I would add an amendment here that the record, given the nature of the hearing and how long and what happens over the next couple of days, those dates might change. But they will at least be the dates that I have specified.

Now, I went to remind you, I have a list here that has something like 40 names on it all saying they want to testify, and there's probably another 20 or 30 up there, so we're looking at having 50 to 60 people who wish to testify tonight.

Now, we'll be here -- I hesitate to say as long as you want us to be and we have been here all day already -- I think I need to ask all of you to please limit your testimony to three to five minutes. Long testimony doesn't necessarily mean we're going to remember it any better.

So those who speak briefly and to the point will be remembered. I hope I made myself clear on that. If you get carried away, I have a gavel here, too. I hope I don't need to use it. I don't want to shut anybody off that has something to say.

In the spirit of trying to get everybody up here who

wants to say something, we need all of your cooperation.

At this time I need -- the other thing is, all the people who wish to testify have to be sworn in, so all of you who wish to be sworn need to stand -- I'm sorry, who wish to testify need to stand up and raise your right hand for me, please.

(PARTICIPANTS SWORN EN MASSE.)

THE CHAIR: If you didn't get sworn in and you decide to testify, I would appreciate it if you would let me know.

Now, we'll begin tonight briefly by asking Marcia Spencer-Famous of the Commission staff, who is going to give you a brief summary of the whole administrative history of this application, and then the Applicant is going to give a brief presentation on the project, so everybody has a fairly complete picture of what is being proposed, and then we'll -- we have to, as a formal matter, introduce into the record all of the exhibits that will be considered. That's just a very simple administrative matter.

Then from there we will go right to your public testimony, and I'm going to be calling you up based on this list, and the only thing we'll take out of order, we do have a couple of State senators here that we normally as a courtesy allow them to testify first.

So we will be asking those folks to come up in a minute after we've made these two short presentations.

Marcia, would you go ahead, please, with your presentation.

MS. SPENCER-FAMOUS: This is Exhibit 9. It's a staff statement and administrative history.

In February of 2006 -- Exhibit 9 is a staff statement and administrative history.

In February of 2006 Maine Mountain Power submitted a petition to rezone approximately 1,000 acres on Redington Pond Range and Black Nubble Mountain in Redington Township, Franklin County.

The purpose of this rezoning is to construct a 30-turbine wind farm. The matter being considered at this time is a rezoning of the parcels and the preliminary development plan.

Within the proposed plan development subdistrict, the Applicant construct wind turbines on Black Nubble Mountain and Redington Pond Range, gravel access roads, and utility lines.

Outside of the proposed plan development subdistrict associated with the project in Redington and Wyman Townships, the facility would include 31.5 kV and 115 kV utility lines, access roads, maintenance building, and substation.

The activities within the subdistrict would include 12 turbines on Redington Pond Range, 18 turbines on Black Nubble Mountain, approximately 12 miles of new gravel roads, and above- and below-ground 34.5 kV utility lines.

Each turbine tower will be 260 feet tall with a 300-foot diameter rotor for a total height of 410 feet.

The area to be cleared within the planned development subdistrict will be 106 acres during construction, which will be reduced to 70 acres when operating after revegetation.

The total untouched area within the planned development subdistrict would be 898 acres.

The access roads and utility lines, both within and outside the planned development subdistrict, for a total area, will be cleared for a total area of clearing, including 11 miles of utility lines would be 307 acres. The total area of wetland impact will be approximately one-third acre.

Administrative history. A pre-application conference was held in 2002, and the Applicant has consulted periodically -- both before that time and after that time -- with LURC staff and with other State and Federal agency staff since the mid 1990s to make sure that agency concerns were addressed and that all materials required for rezoning were submitted.

A pre-submission meeting was held in August and then again in September with different State agencies and with LURC staff prior to the submittal, which actually was done in December of 2005.

A draft petition was submitted at that point in December, and staff reviewed it to see if it was complete in

processing.

A letter with deficiencies in the application was sent in January of 2006. The Applicant revised the petition in response to staff comments with a version of the petition and was deemed as complete for processing on February 7th, 2006.

Staff notified the Applicant on February 8th and the application was accepted as complete and processed. A formal review period was established and petition was sent to State and Federal agencies and to stakeholders for review. All interested parties were notified.

The deadline for new comments was established and that was April 28th. The Applicant then responded to agency review comments in June. LURC at this point also engaged the services of a contractor to provide a third-party review of the individual assessment section of the petition.

In March, Commission staff asked the Commission to grant a public hearing and that was granted. The public hearing date was not set at that time.

Staff -- in May of 2006 the Commission granted intervenor status to 15 parties and also acknowledged participation in the proceedings by the National Park System as a government agency.

Seven groups were in opposition to the petition; five were for; and four stated a neutral position.

The public hearing date was set for the week of

July 31st. Several other dates were tentatively scheduled, including June 8th, for a pre-hearing conference, various dates for pre-filed testimony to be submitted, and July 11th for a Commission site visit.

A pre-hearing conference was held on June 8th. A pre-hearing order specified the dates for submittal of pre-filed testimony and consolidation of Intervenors, hearing schedule, and other procedural matters. The final date for the public hearing was set at that time as August 2nd through 4th.

Pre-filed testimony was submitted by the parties on July 14th, except for the testimony from the National Park Service and testimony prepared by LURC's scenic reviewer, was submitted on July 25th.

Bart, do I need to submit the exhibit list -- do I need to just put them in the file or do you want me to read it?

The last number is 14 -- through 14. 1 through 14. I would like to submit Exhibits List, Exhibits No. 1 through 14 to the file.

THE CHAIR: Mr. Thaler.

MR. THALER: Mr. Chairman, members of the Commission, I'm Jeff Thaler. I'm one of the permitting attorneys for the Applicant.

Randy Mann will be giving an overview of the project for the Commission and for the public. I think for convenience of the public and the Commission, Randy will stand a little bit

over that way rather than right in front of you. Otherwise, his back would be to the audience.

MR. MANN: Good evening, Mr. Chairman, LURC Commissioners, LURC staff, and ladies and gentlemen.

Thank you all very much for coming out to hear us tonight. It's a rainy night, it's a good night to be inside.

My name is Randy Mann, and I'm with Edison Mission Energy. I'm responsible for developing Edison Mission Energy business. I'm honored to have the opportunity to present Maine Mountain Power's Redington Wind Farm proposal to you tonight.

The proposed project is a $150 million 90 megawatt wind generating facility. The picture that you're looking at here is a proposed simulation taken from a surveyor's hut off the Appalachian Trail on Crocker Mountain.

The wind turbines that you see to the left side are on Redington Mountain. Those are done a mile and a half from where the photo was taken. The wind turbines that you see in the distance are about 4.8 miles to Black Nubble Mountain.

Maine Mountain Power is a partnership between Edison Mission Energy and Endless Energy Corporation. This partnership brings together Edison Mission Energy's long and successful track record of wind energy, development, ownership, and operation, as well as Endless Energy company's capabilities and development of local expertise.

Joining me tonight from Edison Mission Energy are

several folks. One is Jerry Lockman, who is the senior vice president of the company. He's responsible for all new business development within Edison.

We also have Tom McCabe somewhere in the room tonight. Tom is responsible for our environmental health and safety activities.

Charlie Purnell, I think I saw him in the back, he's responsible for our government relations activities.

Then we'll be joined over the next couple of days by Peter Goldbrunner, who is responsible for construction of wind energy projects within Edison, and also Ron Muse will be testifying tomorrow. He's responsible for project operations.

And of course we're joined by Harley Lee. I shouldn't forget to mention Harley, he's right here in front. Harley is president of Endless Energy Corporation. And you'll be hearing from Harley tomorrow morning as well.

Maine has been blessed with a tremendous amount of natural resources, and your state has tapped into those natural resources for hydro electricity, for foresting, fishing, farming, and for natural outdoor recreation. What we would like to do is harvest the wind in your state. Right here in the western mountains of Maine there's a tremendous wind resource.

The photograph you're seeing is an operating wind turbine, which is of the same type and model as what we would

propose to deploy here in western Maine.

Our project will deliver three principle benefits to the state of Maine:

First, we'll deliver clean, renewable energy, enough energy to serve about 40,000 Maine homes;

Second, we'll help relieve Maine's over dependence on fossil fuels, fossil fuels that are expensive and volatile in price;

And thirdly, perhaps the most importantly, we'll help to reduce greenhouse gas emissions and air pollution caused by fossil fuel generation. This type of air pollution can contribute to acid rain, smog, and other air quality problems.

We've brought together a fantastic team of industry leaders to help bring this project to fruition here in Maine. In addition to Endless Energy and Edison Mission Energy, these companies include Vestas, who will be supplying turbine equipment for our project.

Vestas is the No. 1 turbine manufacturer in the world. They've installed over 30,000 units.

We'll also be joined by Mortenson, a leading construction company for wind energy here in the United States.

And Constellation Energy, who is a leading retail supplier of energy in Maine and in New England, will be buying 100 percent of the output of our project and then selling it in turn locally here in Maine.

You'll be hearing over the next couple of days from representatives of each of these companies about their plans and qualifications to help execute this project.

Our partner, Endless Energy, has spent more than a decade searching for the most appropriate site for wind energy development here in the state of Maine. They've scoured New England and Maine and chosen Redington and Black Nubble Mountains as the most appropriate place for wind energy development.

There really are a series of reasons, but the two that I want to highlight are that there's an outstanding wind resource on those ridgeline mountains. That's No. 1.

And No. 2, we're at one of the few places in the state of Maine where an outstanding ridgeline wind resource is close to high level transmission. And those two features together make this an excellent spot.

We are not alone in seeking to develop a project in this area. We're joined here by other development, which also takes advantage of the natural resources in this area.

Other development includes ski areas, a biomass project, and extensive logging activities. In fact, that development allows us to take advantage of some existing roads and transmission lines and thereby minimize the environmental impacts that our project will have.

Over the period of time that we've been developing

this project, we have solicited advice from a large number of experts in a variety of fields, and these experts, including local and national experts, have given us advice about how to best design our project to minimize the environmental impact that it will have. Over the next couple of days you'll hear from those experts about the design and the plans for our project.

We've also conducted extensive studies and analysis. Experts in each of these areas will talk about the extensive studies they have done and their conclusions that indicate that our project will have no adverse impact -- no undue adverse impact on the natural environment.

We know that the scenic resources in this area are important to you and to your state, and so we've been attentive to that issue as well.

We have engaged visual experts who have studied this issue extensively, and their analysis concludes that the project will be visible from a very small amount of the area, in a 15-mile circumference, around our project.

We also know that our project is close to the Appalachian Trail in several spots. Again, we have studied the Appalachian Trail and the viewpoints from that trail, and we've analyzed it and concluded that for only about 9 percent, the trail within this 15-mile circumference, will our project sight will be visible.

It's important to note that from most of those places the hikers will also be able to see other development in the area, including the ski resort, the logging activities, other activities that I mentioned earlier.

Our project will also offer a series of benefits, economic and other, to the local community and the state of Maine.

First of course are jobs. These will be well paying jobs, both in construction and in operation, and we have an approach of trying to hire here locally if we can.

We also offer other financial benefits, including property taxes, the purchase of goods and services, and so on.

We also know that recreation and conservation is important in this area of Maine, and so our project offers a proposal which combines a package of land conservation and land protection, as well as some new opportunities for recreation and education. In the next couple of days we'll talk about those plans in a little more detail.

We have been very gratified by the support that we found in the state of Maine for our project. There have been numerous polls, petitions, testimonials that have expressed support for our project. This is consistent with what we found across the country as we develop renewable energy projects.

People recognize the need for renewable energy to help make the electric generation industry more sustainable,

particularly in the face of increasing demand for electricity.

In summary, we have a well developed project, we have an outstanding team that's ready to bring this project to fruition, we have analyzed all of the issues and all of the aspects of it, and we conclude that there will be no undue adverse effect on the environment.

We look forward to speaking with you over the next couple of days, taking your questions, listening to your feedback, and we hope that the process will be informative for all of us.

Again, thank you very much for coming out tonight. I'm going to turn it back over to the chairman.

THE CHAIR: Thank you, Mr. Mann. We will begin our testimony now from the public, and I'm going to call on Senator Cowger. Is he here?

PUBLIC TESTIMONY

SENATOR COWGER: Thank you, Commissioner Harvey, other Commissioners, Director Carroll.

For the record I was actually No. 2 on the list.

I am Senator Scott Cowger from Hallowell. I represent Kennebec County in the State legislature. I'm also the Senate chair of the natural resources committee, and I also have served eight years on that committee, and I also serve in the current term as a member of the utility energy committee, so I'm hopefully well versed to speak with you for a just a

couple of minutes.

I'm also not running for reelection this year and can't see this project in my district, but I'm here to speak with very strong support of the Redington Wind Farm project for both environmental and utility benefits.

I believe this singular project is a watershed moment for the future of renewable energy in Maine. The decisions you make with this project are going to shape our future, not only for us, but for future generations as well.

Wind power projects, as you've heard, must be sited in an area where there's steady wind in order to have a reasonable economic payback. These areas are often going to be on pristine mountain ridges or on sensitive coastal areas. That's just where the wind is.

So all of us, especially you, have to make some very important choices. If we're going to have viable wind power projects on a commercial scale in Maine, we have to site them where the winds are strongest and continuous.

I believe that if this means that our mountain ranges are lined with large turbines generating pollution-free energy, then that's a choice that we just have to make, and I say, let's do this project and as many other wind projects as we can.

And why? You heard some of it just a minute ago. We in this country, our state, our towns, we're facing an

irreversible and dramatic change in our climate as a result of global warming.

Without immediate and definitive actions at the Federal, State, and local levels, do we even stand a chance at minimizing the effects of climate change?

I personally believe it's already too late to stop global warming, so we must take action now to eliminate the effects, including the actions you take, the approval of this project.

Without this wind farm and others like it, we will be facing in the next half century the likely loss of our ski industry. These buildings will be vacant. Sugar maples will stop running sap, taking the maple industry with them, and our beautiful fall foliage will be a memory only our grandparents will remember, devastating our fall tourism economy, taking away the beauty that it provides.

But most importantly without actions to minimize climate change, the wilderness experiences that we all now enjoy today are not in the future. We're just going to have a view of some gleaming silent white wind turbines, but they're going to fundamentally change.

With global warming, we will lose entire species of flora and fauna, and the Maine woods will be a different place.

I don't want that to happen. I hope you will take action, approving this project as a step, yes, a very small

step, but a definitive step, to mitigating the impact of climate change here in Maine and across the country.

We need electricity and we need clean electricity.

I also just want to say that beauty is in the eye of the beholder. I think you'll hear from many people that the objection of this project is viewing the turbines on seeing them on mountain ridges and seeing them from the Appalachian Trail. I think wind turbines are beautiful.

Parts of the AT go along highways in two towns, and that's not a resemblance at all of wilderness. A view of clean energy wind turbines viewed during a small portion of a hike on the AT to me would be a welcome sight, a human commitment that we have made to minimizing our impact on the environment.

We will continue to have wilderness experiences with this project, just a distant view of some clean renewable energy generation.

Finally on a personal note, I have a personal size wind turbine at my home. It's 10 kilowatts, very small turbine compared to these, granted. But many people from around the country and from around our state have marvelled at that small turbine. They've been excited to see it performing, and they ask me about it all the time. They're very excited to see that it provides some of the power that they're actually using.

We hope in our little home business to augment that with some solar panels, a solar tower, this fall and actually

provide a majority of our power from renewable sources.

I think it's time the state of Maine makes a commitment to doing that as well, and this project is just a step in that direction.

Thank you very much.

THE CHAIR: Is Senator Strimling here? There he is.

SENATOR STRIMLING: Thank you very much, Mr. Chairman, Commissioners. I very much appreciate your being here tonight and hearing this testimony. Being in the legislature, we often have hearings like this. I actually find it to be the most exiting part of our democracy. It gives people an opportunity to speak.

I would say to begin, I find it ironic, or sad I guess, that we are debating today alternative energy on perhaps -- a necessity for alternative energy -- on perhaps the hottest day of the year and perhaps the hottest year on record and perhaps the hottest decade on record.

To summarize what Senator Cowger was saying, it is an inconvenient truth that wind projects must go where the wind is, and we must develop these projects.

I have submitted to you a letter in support of this project. I stand by that letter. I had submitted legislation last year, which was signed into law by our governor, to allow tax incentives for small-scale wind projects.

Part of the reason that I created the bill for

small-scale wind projects is because of how difficult it is to create these larger projects. Because people are fearful of the larger projects, I thought, well, maybe we'd start with some of the smaller ones.

If you approve this project, it will make bills like mine completely unnecessary because I believe once this project goes up, people will start to recognize this is okay. In fact, this is better than okay, this is necessary.

The air we breathe is so much more important than the subjective aesthetic of whether we like something or not.

I am a senator from Portland. And lest you think I am an interloper or a carpet bagger in coming up to testify here today, please recognize that I also -- my family owns property in Redington.

And not only do they own property in Redington, but the back porch looks exactly on these mountain ranges. Exactly. There is Sugarloaf to the right, and there are these mountain ranges where the turbines are going.

Everybody in my family supports this project because I think that if we can give up a little bit of our view -- and again I think it's subjective because I don't have a problem with them -- but if we have to give up just a little bit of our view to make sure that our children and our children's children breathe fresh air, then let the turbines rise.

Thank you very much for your hard work.

THE CHAIR: Are there any other State representatives that I'm not aware of? If not, I'm going to start at the top of the list.

I'm up to 8 pages now that have 13 names on them.

We'll go right back to the top of the list. We have Dave Evans.

MR. EVANS: Thank you.

THE CHAIRMAN: Make sure you tell us where you're from. Somebody left me a note. Tell me where you're from, Dave. Thank you.

MR. EVANS: Thank you, Chairman, thank you, Commissioners.

I am Dave Evans from Brooklin, Maine. I'm retired, I don't have any associations -- affiliations. I am a proponent of renewable energy, and I plan to tell you why.

I've hiked in these mountains and on the Appalachian Trail, and they're both very, very beautiful. I've also hiked past oil wells, with their noise and their stink of sulfur. I've helped to plant trees in old coal mines.

I've rode a row boat through extremely, alarmingly hot water from a power plant. Perhaps these are the reasons that I get all my electricity now from four small solar electric panels.

But I don't operate in a vacuum. The community around me, my neighbors, the schools, most of them get their

electricity from the grid, and if they don't get electricity from clean sources, such as wind, they will be getting it from more strip mines, more oil wells -- either here or in other countries.

I've seen these destructive sources, and I don't like them. Environmental groups often say, Not here, not there, and it's time to say developing wind on Redington Mountain is far less destructive than developing mines and other types of power plants elsewhere.

It takes days to pedal a bicycle past the destruction through Kentucky and West Virginia. We can do better with Redington wind.

Thank you.

THE CHAIR: Sally Iverson, is she here?

The next after Sally we have Jo Craemer. I believe that's the pronunciation. Why don't you -- if you could get yourself ready to go when Sally is done, that would be helpful.

Thank you.

MS. IVERSON: Good evening, Mr. Chairman and Commissioners. I'm Sally Iverson. I live in Eustis, Maine.

I'm here to oppose this project. My husband and I live on Eustis Ridge, and we are among those blessed with a panoramic view of the mountains, including Redington and Black Nubble.

We watch the leaves change, we watch the seasons

change. I'm an artist and I draw a sense of peace and inspiration from that view.

I can't fathom looking out on these mountains and seeing turbines that are as tall as 40-story buildings. I just can't even imagine towers that high.

What I can imagine, though, is that these towers would be a detriment to the mountains themselves, to the wildlife, to the local folks whose economy depends upon hikers and snowmobilers, tourists coming into our area. I can even imagine these turbines would be a detriment to the value of my property.

I'm also appalled that strangers among us are coming into our area and ask this Commission to reverse an earlier decision to protect our mountains. The reasons you came to that decision initially are still valid.

And why do they want you to change that zoning? To produce electricity the state of Maine doesn't even need. Please deny Maine Mountain Power the permission to come in here and desecrate our mountains.

Thank you.

THE CHAIR: I know we all want to applaud those folks who are espousing your point of view, but we're gobbling up a lot of time when you do that, and I don't think it serves a lot of purpose. I appreciate that you would limit your demonstrations in support or disapproval because that doesn't

serve any purpose at all for any of us.

If you want to say thank you to Sally afterwards, that's quite appropriate. It just bogs the process down.

We have Miss Craemer and after her is John Dutton.

MS. CRAEMER: Good evening. Thank you, Commissioners, Mr. Chairman, and for taking the time to come here.

My name is Jo Craemer, and I live in Eustis, Maine. Let me say at the outset that I think the concept of harvesting the wind to create electrical power can be in the right geographical and economic environment is a pretty nifty idea.

But I have serious reservations about the proposed wind farm here in Maine. There are five items that I would like to bring to the attention at this hearing.

First, my first point concerns the economics of power generation. Electricity generated by these proposed wind turbines will depend upon financial subsidies if it's to be cost competitive. These subsidies paid for with my tax dollars will be needed both to build windmills and to pay part of their operating expenses for unending years in the future.

I strongly object to my tax dollars -- State or Federal -- being used to produce electrical power that competes with and is intrinsically more expensive than power generated by Maine's existing eco friendly biomass and hydroelectric plants.

Maine's existing generating facilities already produce power in excess of our state's needs, and it is my understanding that there are longstanding plans for more biomass and hydroelectric plants to be built.

Power plants utilizing Maine's abundant biomass will bring jobs to people who will be utilizing a renewable use resource and will keep our forests cleaner, reducing risk of fire, as well as reducing the emissions generated by natural decompensation of wood trash let in the woods from lumbering operations.

My second point concerns the proposed location of this windmill project. I strongly object to the proposed site plan for these wind turbines. It makes no sense to permanently and drastically damage visually and ecologically one of our state's most magnificent scenic areas.

The visual pollution will not be in our face 365 days a year -- will be in our face 365 days a year, forever. The power that these wind turbines produce will not be produced 365 days a year.

We're being told by the folks who are pushing this project in our faces that the towers are capable of producing X kilowatt hours. What we're not hearing from them is a realistic statement of what will actually be produced.

Let me repeat this. I am not hearing from them exactly what benefit we can expect in exchange for visual

pollution and habitat destruction that these turbines will bring.

I want them to tell me now, not after the turbines are built.

And this bring me to my third concern. I'm astonished and I'm appalled that anyone thinks that these wind turbines will be operational for any significant percentage of the time.

First we have to deal with ice and snow. Those of us who live here or who vacation here and those of us who ski or snowmobile on the higher terrain, are well aware of the reality of the heavy, thick incrustation of hard ice and snow on the trees on all of our ridges. This is hard ice. It makes every needle and twig of our trees sparkle with beauty. That incrustation of frozen snow and ice will also build up on the towers and blades of the wind turbines.

These blades are functionally comparable to the propeller blades of an airplane or a helicopter rotor blades. As a pilot, I know that ice accumulation means that you must have a way to remove the ice from your propeller and your wings and that ice accumulation does not come off evenly, not in random chunks or there will be an imbalance that can cause catastrophic damage.

These windmill blades have the same aerodynamic imperatives. They cannot operate until the accumulation is

melted off to a safe level, and it won't take much accumulation to be unsafe.

Ice can accumulate in many ways on the wind turbine blades. Dry snow won't present much of a problem, but wet sticky snow will, freezing rain will, ice fog will.

Ice fog is the stuff that forms from super cooled water droplets in the clouds. When this super cooled liquid comes in contact with turbine surfaces that are colder than 32 degrees, it will solidify into a coat of ice crystals known as whore frost.

Another type of ice is rime ice, r-i-m-e, which forms when freezing fog or moisture laden clouds come in contact with the cold blades and towers and forms a continuous thick layer of ice.

Who among you think the ice will melt quickly off in the winter. Our temperatures will remain below freezing for months at a time, especially at the altitude where the windmills would be built.

Another factor is the wind speed. It's not only snow and ice conditions that will impact the percentage of time that these wind turbines can operate. There's wind speed to consider as well: Too little wind, they don't operate; too much wind, they won't operate. They need to be shut down for operational safety reasons.

Wind speed is a factor 12 months of the year, not

just the winter. For example, the existing small towers, the radio/telephone towers on top of Sugarloaf's peak, are structurally engineered to support a 6-inch layer of solid ice and they're designed to withstand wind speeds up to 150 miles an hour.

Winds up on that peak routinely reach 60 to 70 miles an hour, and it's not unusual for them to be higher.

These wind turbines may remain standing under these conditions, but they most certainly would be shut down operationally and at much lower speeds than these.

What happens when the windmills are not generating? Will our houses go dark? No. Other generating plants will have to pick up the load and they'll have to be ready to go at a moment's notice. This means they have to stay powered up at an operational level to take up the slack.

My fourth point, I have great concern that the Mountain Power folks are drastically understating the visual impacts of these wind turbines.

If you're driving to this area, for example, up Route 27, Sugarloaf Mountain is first visible from about 10 miles east of Kingfield. We were coming home last Sunday, the air was clear and crisp, and I could clearly see the three small towers on Sugarloaf's peak. One is for the radio station, WTOS-FM; the other two are for radio transmission used for such things as police and emergency communications and for

cell phones.

I stopped and took several pictures from this location and have attached them to my written statement, which I will give to the Commission when I finish.

I also stopped in Kingfield and at Oh-My-Gosh Corner to take more photographs as we drove home. These small towers were clearly visible from every spot on Sugarloaf as we drove home.

The windmills are not only tall. They're wider, they have rotating blades and will draw the eye to them and will flicker in the sunlight. There will be 30 of these huge towers. If I can see these existing small towers from such distance and from so many locations, how could even one windmill, much less 30 of them, not be a huge visual feature.

The fact that you folks are here at this hearing implies you have concern for and knowledge about the natural world.

As a nurse, I would like to point out one interesting fact. The human eye is naturally disposed to focus on movement. You might not notice, for example, a bird perched on a tree limb, but your attention will immediately be focused on its movement when it takes flight. A small stationary cow will not have much visual impact. Huge light towers with rotating blades flashing in the sunshine or with warning lights at night will almost certainly constitute a visual impact on our

wilderness.

My fifth and final point concerns trust and honesty. I already have grave doubts that Maine Mountain Power has been up front with us about the economic, ecological, and visual impact of this project. My dad used to say that honesty isn't a sometimes thing. You're either trustworthy or you're not.

I want an explanation of why Maine Mountain Power thought it necessary to bus in supporters for the windmills from coastal regions.

Why did they think it necessary to provide them with free transportation, free food, a tour, as well as pens and badges showing their support? Who are they trying to impress, LURC? Us? Are they trying to overwhelm the local folks with numbers?

If they're willing to indulge in such blatant representations of support or this project, what else are they doing to misrepresent to us?

I have attended some of the preliminary information meetings about these wind turbines. The representatives proved to be pretty darned evasive. When we asked them pointed questions, they replied with answers about something entirely unrelated.

The view from my house extends from the east slope of the Bigelow Mountain Range to the west slopes of Saddleback Mountain in Rangeley. I clearly see Sugarloaf, Redington,

Black Nubble Mountain, and all of the associated slopes and ridges along this chain of mountains.

I really don't want to put these huge towers and turbine blades flickering for miles along these beautiful ridges, and I don't think most other people will want to either. I especially don't want to forever destroy the fragile beauty of this mountain area for dubious rewards that only line the pockets of people from away.

Our mountains are a resource for Maine. They bring tourists, they brings folks here for recreation of all kinds. They attract property owners. This brings jobs, tax dollars to Maine and to our local area.

The dubious benefits from the wind turbines aren't worth the costs to our economy or our environment.

Thank you for your time and your attention.

THE CHAIR: Mr. Dutton, and following him there's -- I'm sorry, I can't read your last name. James from Alexandria, Virginia.

MR. DUTTON: Hello, I'll be quick, I promise.

THE CHAIR: You've got to tell us who you are and where you're from.

MR. DUTTON: Where am I from? I'm a Mainer.

John M. Dutton. I live in Portland, 16 Hawthorne Street. E-mail, JMDutton@Maine.rr.com.

Hot in Sugarloaf? Wait a minute, rain and drain.

Rescued again by Maine. Keep it that way.

I am opposed to this thing. Thanks for letting me speak here and saying this way, I feel more comfortable this way. Is that all right with you folks? I have to hold on. It comes with time.

PARTICIPANT: We can't hear you.

THE CHAIR: You have to speak into the microphone, John.

MR. DUTTON: I'm against this windmill project. I'm not against all windmills, just against putting 30 400-foot windmills between Saddleback and Sugarloaf right beside the A Trail, the Appalachian Trail.

Incidentally, these windmills are designed to stand taller than the cable towers of the new Penobscot River Bridge or the new Waldo-Hancock Bridge over the Penobscot to Verona Island.

MMP's wind use plan is faulty on the face of it. Just put in 30 400-foot windmills between Saddleback and Sugarloaf right beside the Appalachian Trail. Incidentally, the people who are building the bridge over the Penobscot are two good Maine companies, Cincette Brothers from Pittsfield; engineers are Reed & Reed --

THE CHAIR: John, this is a hearing about wind power, not about the bridge down in Bucksport. Now please stick to the subject.

MR. DUTTON: You want to tell me what to say? Go right ahead.

THE CHAIR: I'm telling you to either tell us what your objections are to wind power --

MR. DUTTON: Do you want to hear what I have to say or what you have to say?

THE CHAIR: I don't want to hear about the bridge.

(To the audience) Okay, hold your hands up if you want me to talk. Hold your hands up if you want me to talk.

THE CHAIR: John, please, I'm saying you have to stick to the subject.

MR. DUTTON: Do you want me to talk or don't you?

THE CHAIR: I do. I'm happy to have you talk but I'd just ask you to stick to the subject.

MR. DUTTON: May I talk?

PARTICIPANT: You've got three minutes.

THE CHAIR: You've got three minutes left, so go ahead.

MR. DUTTON: You folks aren't that friendly, are you?

THE CHAIR: Well, we've got about 60 other people who would like to say something.

MR. DUTTON: I know that. I promise to be quick. You're not helping.

THE CHAIR: Go ahead and finish.

MR. DUTTON: How much time did you use? Can you add

that to my time?

THE CHAIR: Finish, please, John.

MR. DUTTON: Okay. Who am I to say these things? Well, I'm a Mainer, born and brought up here with all those old Maine biases.

How old? Let's just say I've got more road behind me than ahead of me. At one time or another I've lived, worked, travelled, fished, hunted in about every one of these 16 counties plus most of its ocean bays, fox holes, and all.

Like others I love this state. I want it to have a special future. Maine needs to be special. It's always been recognized as a special place for millions of people outside of Maine, and once special places are gone, they're gone for good.

My family's been in Maine for generations. Does that make us different? Not at all. Does Maine welcome others? Of course it does. How did we all get here in the first place?

Being in Maine means respecting Maine. Do these MMP people respect Maine, or do they just want to make a fast buck?

MMP says its power will light 40,000 homes. Are those Maine homes? Don't be fooled. All of those electrons go out of state into a multi-state electric grid.

Do you want a multi-thousand bulb electric entrance in your home sending 30,000 kilowatts? I don't think so. Not if even if the fire department is next door and not unless you want new neighbors and friends very soon.

Are you okay?

THE CHAIR: Are you done?

MR. DUTTON: I've got another paragraph.

THE CHAIR: Go ahead. Please finish up.

MR. DUTTON: Energy is fast, very fast, as fast as the wind blades turn the meters. What a nice way to collect pay. Not many Mainers are that lucky. We can buy it back. Why should we? The many times it cost to produce right here, okay.

Finally, more seriously. Sorry, this is hard work for me.

PARTICIPANT: I know.

MR. DUTTON: Finally more seriously, what lies between Saddleback and Sugarloaf is not just any old view.

Whenever you come this direction, Black Nubble and Redington stand out. You can easily see it from right here. I know because I learned to stream fish right here. Where? Well, the South Branch of Dead River, Redington Stream Augerton, Perry, Nash Stream, and the Sandy River.

These peaks are also seen when climbing Crocker, Bigelow, East and West Kennebago, Spotted Mountain, Snow Cap, and so on.

These run right along the A Trail, and right below the A Trail are many natural mostly wild townships.

Dallas, Davis, Lang, Bigelow, Cartland, Carrabassett,

Redington, Mount Abrams, Silas, Wyman, Madrid, and Sullivan, each 36 square miles. Altogether more land than Rhode Island.

Spoil this place? I trust the answer is thank you for your kind offer, but no. Again, thank you very much for letting me be here. John Dutton.

MR. HUTZLER: Good evening, Commissioner Harvey and the other Commissioners. My name is James Hutzler. I'm a resident of Alexandria, Virginia and part owner of a summer camp here on Oquossoc.

I'm an avid Appalachian Trail user and a volunteer trail maintainer with the Potomac Appalachian Trail Club.

My grandparents came to the Rangeley Lakes region 90 years ago. They came for a very good reason, because it truly was and still is God's country, pure and simple.

What you're considering here today is the question of right and wrong and indeed good and evil. All of God's wondrous creations must not be sacrificed to satisfy man's lust to consume.

The sheer scale of this industrial installation placed in what is perhaps Maine's most precious inland mountain wonderland leaves me remarkably sad and bewildered.

Over these three days you will hear many facts refuting the promoter's disingenuous propaganda. In the simplest of terms, this massive industrial installation would leave this place wounded and scarred forever.

Oh, beautiful for spacious skies, for amber waves of grain, for purple mountain majesties above the fruited plain. America, America, God shed his grace on me.

Please stop this madness.

THE CHAIR: Fred Hardy. Ed Miller will be the next one.

MR. HARDY: Good evening, Mr. Chairman and members of the LURC committee. I appreciate the opportunity to come before you tonight.

My name is Fred Hardy. I live in the town of New Sharon, which is also in Franklin County.

I have lived in the town of New Sharon for some 46 years and I'm a native of the state of Maine. I've lived in Franklin County for all but nine years of my life thus far.

I am also a Franklin County Commissioner, although I represent District II, which is Farmington, New Sharon, and Chesterville, and I'm testifying here tonight on my own behalf, not as a county commissioner.

I am also a retired dairy farmer, which makes me an environmentalist, maybe not because I wanted to be but because it's necessary to be able to keep a dairy farm going.

So I have nothing -- I'm not opposed to viewsheds, so to speak, and I say to you tonight that that's basically what this is mostly about is viewsheds. We've heard a lot of that with the Saddleback issue, and it's about the aesthetics, and

somebody mentioned before here tonight that, you know, beauty is in the eye of the beholder. I certainly agree with that.

I, myself, enjoy travelling in this area of Franklin County from time to time and over the years. I'm very proud of Franklin County overall. I certainly would not want to do something to basically tear down this beauty, but I can't, in my own opinion, see that these towers would be so devastating to the views.

We've heard here before tonight -- and I'm sure you will many times throughout -- about the global warming issue. I have never been all warm and cozy to that idea, but at the same time there appears to be some truth to it, and certainly if we believe in global warming, wind towers are going to be one way that we can produce electricity with a renewable source which certainly won't contribute to global warming.

Oil depletion, I've heard for several years now that we're on the down side of our supply of oil throughout the world. We may have a fair amount of oil left in and around the United States that they haven't drilled for yet, but sometime in the distant future we won't have oil. Certainly I'm not going to see that but looking down the road for our grandchildren and their children.

Also, coal, of course, coal and oil both are very polluting.

It was mentioned here once before tonight -- and I

had included this in my testimony -- the concern for this power not being sold within Franklin County. I have had a couple of discussions with Harley Lee from Endless Energy, and certainly he assures me that we're going to get first dibs, and there are people here who I'm sure that may not believe that.

However, that may be beside the fact that no matter where this power gets used, the fact remains that we still don't contribute to the global warming and the use of oil, the depletion of oil and coal, wind certainly being a clean and renewable source.

I -- just the other day thinking about coming in to give testimony at some period in time, I was riding -- it happened to be in the Madison area over the roads over there where they're building a new greenhouse, see, so they put in some extra poles for power generation, so as far as views are concerned, I think if we hadn't got used to seeing all these poles and hanging with the wire up and down the road, I'm sure we would be upset about that.

The other thing I think is this beautiful setup that we have on Sugarloaf Mountain. If we had some of the same people opposed to any type of development 50 years ago, I doubt this would be here, because who would want to look at all these scars of clear cutting up and down this mountain, and yet it's been a great facility.

I would just leave you with one thought. I thought,

putting testimony together, I thought as far as wind power is concerned, if not us, who? And if not now, when? And if not here, where?

Nobody seems to -- they don't want it here, but they don't seem to say where they'd like to have it, just not have it here.

Thank you very much.

THE CHAIR: Thank you.

Ed Miller. Neil Iverson is the next one on the list.

MR. MILLER: Chairman Harvey and members of the Commission staff, my name is Ed Miller, I'm the CEO of the American Lung Association of Maine. I'm here today to speak in support of the Redington project.

Our organization's been around for almost a hundred years with the mission of preventing lung disease and promoting lung health.

Over those hundred years, we address what we consider to be the most serious threats to lung health in the state of Maine, starting off with tuberculosis and moving quickly to tobacco, and air quality is now right at the top of that list, specifically particulate air pollution, which, as I've told a number of legislative committees, the more we learn about it, the more dangerous it is.

Air pollution is a significant problem in this state for everyone but especially for the 120,000 people in this

state who have lung disease. Combine that with one of the highest lung disease rates in the country, and we have a significant public health problem in this state.

Regardless of what happens with the Redington project, in our Healthy Air Report that we issue each year, we call attention to the two most significant air quality problems in this state, and one of our serious recommendations is that there be air monitoring in the western mountains. There is no air monitoring here. That stuff that you see out there is not just fog, it's air pollution, and we need to be determining how serious it is.

We need to do everything we can to reduce air pollution sources in Maine and the nation to the lowest levels possible. Those sources are largely a result of our fossil fuel energy and transportation systems.

They're the same sources responsible for global warming. If nothing is done, the health risks to Maine people will continue to increase. Doing nothing is not an option. Corrective action will require a sustained and aggressive combination of energy efficiency, conservation, and increased clean fuel capacity, including solar, biomass, and wind.

Is the investment in clean energy here worth it? Absolutely. We're spending over $150 million on lung disease alone in this state, much of that is contributed by our poor air quality. We can't afford not to take action.

Wind power is viable, necessary, but undeveloped.

Maine's capacity to host wind farms is limited. Our organization was very interested with the potential community level wind power to meet more of our energy needs. Last summer with our partners, Coastal Enterprise Institute, the Jedediah Foundation, we sponsored a study to explore community-based wind power. Included with my testimony is a summary of our feasibility study.

We would hope that community windmills might become as available and common as water towers in communities to supply clean, reliable energy.

What we found even when looking at smaller wind projects, only 15 sites in Maine have the right combination of factors, including wind speed, to make community wind projects a viable option.

Maine's best wind sources, as you've heard, are in the western mountains and along the coast. Redington is one of the few opportunities for large-scale significant wind power in Maine. Given this reality, the need for Redington as a key wind resource is magnified.

This is not just a local issue. All the people in Maine have a stake in Redington because all people are affected by air pollution. Even those of you who do not have lung disease probably know somebody with asthma or other form of lung disease.

Those people that hike are no different than the rest of us. They are also susceptible to air pollution. In fact, a study that was done among hikers in Acadia National Park found that 50 percent of them had allergies. Many of them had respiratory problems; 15 percent had high blood pressure and hypertension, hypertension and heart disease, all of which are affected by air pollution.

Unfortunately, it's going to take a lot more than bringing Redington on line to break our addiction to fossil fuel. Our organization will continue to support a project that proposes healthier alternatives to coal, oil, and natural gas.

We realize that you must take many factors into consideration in reaching your decision. But Redington is a healthy air step in the right direction. The American Lung Association in Maine urges your support.

Thank you very much.

THE CHAIR: Neil Iverson. You'll be followed by Barbara Ulman.

MR. IVERSON: I thank you for the invitation and the possibility of speaking to you tonight.

THE CHAIR: For the record could you state your name, please, Neil.

MR. IVERSON: I'm Neil Iverson. I live in Eustis. I'm retired, and I am opposed to this project.

Though we readily acknowledge the need for

alternative sources of energy in our nation, the proposed development site of this wind farm is totally inappropriate.

The mountain peaks in question -- Redington and Black Nubble -- are a treasure given to us millions of years ago, a treasure to the thousands of hikers that come across the Appalachian Trail, to the many tourists who come to enjoy hunting, snowmobiling, and the fall foliage.

Most of all, these mountains are a treasure to those of us who work and live in Franklin County and experience them every day.

Back in the 1970s LURC zoned these mountains above 2,700 feet to be fragile mountain areas to be protected for the future of Maine and all who come here to visit. That decision by LURC expressed a wisdom and respect for one of Maine's most valuable assets and resources.

The criteria that went into that decision years ago exists very much today.

I live on Eustis Ridge with a clear view of these mountains. Every fall many tourists and even some tour buses climb the ridge for a view of that mountain foliage.

Many of these people stay at our local motels, they eat at our restaurants, they contribute a substantial amount to our local economy.

I've talked to some of these tourists because they've come and they've turned around in my driveway. Tourists from

Massachusetts, from New Jersey, from Pennsylvania, and they all make the same point: How fortunate we are here to have unspoiled, underdeveloped mountains. Back home everywhere they go it seems they see factories and malls and power lines and urban development.

The windmills proposed for these mountaintops will be over 400 feet high. That's taller than a 40-story building. The destruction and devastation of these mountaintops resulting from this project will be forever.

There is no one alive who will be able to restore their natural state of beauty. That beauty, that treasure, will be extinct.

I urge you to protect these mountains. Leave the zoning restrictions in place and preserve these mountains for our generation and for all the generations that follow.

Thank you.

THE CHAIR: Following Barbara is Duluth Wing.

MS. ULMAN: I'm Barbara Ulman. I'm a landowner on Rangeley Lake. My family has been coming to the same place for 91 years. I have a deep and abiding love for this area, for the beauty, for the peace, for the darkness at night, for the animals and creatures that live here.

I'm very much opposed to this project. I've seen similar projects in California, huge ones.

In my experience, about a third of the windmills are

working at one time. They break, they don't work. They're still there on the land.

Bats and birds are killed by these windmills. I understand that this company needs to prove that they will not be killing wildlife. I don't think they have proved that. I think they need to look at what they're doing and think about what destruction they might be causing.

It's not that I'm opposed to alternate energy. I really feel we do need an alternate to fossil fuels.

Solar power is cleaner and less dangerous, less destructive, and it's available.

Wind power, in the right place, yes. The right place is in the Great Plains. There is a power grid in the United States.

The center of our country is huge and vast. A wind power plant there would not destroy mountains, they wouldn't have to level the tops of a whole ridge -- which I've heard is what is planned -- in order to put up wind turbines. If they must do it, it should be done there where it's not obscuring beautiful views -- or changing beautiful views I should say.

I think someone else mentioned that the wind isn't predictable or steady enough to always have the wind turbines working, which means that the fossil fuel plants will always have to be fired up. This doesn't save us much in the way of energy.

I come to this area from the Rangeley region fairly often. We come to restaurants in Eustis and Stratton. We do some hiking on the Appalachian Trail and some of the other trails outside of the Stratton area.

I believe that it would be a desecration to the land to create an industrial site here, which is what is proposed.

I also understand that Edison Power, which is a partner in this, is not always green. I know that they have many very highly polluting plants, so to be touting themselves as a green source of energy is a very partial description of what they actually do.

The minuscule reduction in the use of fossil fuels that this plant might produce is not worth the destruction that it would cause to the view and to the animals.

Also the fact that it will be lighted at night is an insult to the residents of the area, and destruction to the animals that require it dark at night. There are many nocturnal animals whose habitats are very much disturbed by lighting at night of this kind.

I feel that in respect for the people and other animals and the scenery, that this project should be definitely and resoundingly defeated.

Thank you.

THE CHAIR: Duluth. Following Duluth is Davis from Rangeley. I'm sorry, I can't read your last name, but if

you're here, you're next.

MR. WING: My name is Duluth Wing. I'm opposed to the project of rezoning any of Maine's mountains. My message tonight is for LURC and all concerned.

In 1950 the people of Dead River Valley lost their homes, their jobs, their way of life when the Central Maine Power Company proved to us that our value would be a huge lake to generate electricity.

We were hoodwinked, hoodwinked by a large concern in the name of electricity. They didn't even put generators in the dam that created such havoc.

Apparently they didn't need electricity then, nor do they need it now as they are exporting it at a loss to be used in other states.

If we could have had LURC in those days, a hearing such as this might have prevented such havoc.

We were hoodwinked again when the proposed energy shortage of the '70s dropped us the Stratton Biomass. Apparently CMP signed a long-term contract with them, and I am told now that the reason our rates are so high is because of the biomass contracts.

Again, a large firm from out of state is selling us power we don't need at a higher rate. Come on Mainers, stand up and be counted. Save Bigelow.

And another thing, these large concerns from away

will tell you anything to get their foot in the door, then change their promises. For example, the biomass people promised us to burn only clean forest products. Their smoke stack would emit only white steam, yet at present they are burning out-of-state demolition.

The blue smoke from the smoke stack is observed every morning as it covers the valley. It's very evident to me that when any large industry utilizes our resources, they will change their minds later to their advantage, and I strongly feel that if we let them disfigure two mountaintops today, we will be hard pressed to prevent wind towers on many more of our Maine mountains.

Again, it is our loss all in the name of electricity for out-of-state consumption.

In my 38 years as a forest ranger, I have spent many days in lookout towers on these nearby mountains. I can truthfully attest that there are many days when there is no wind, and there are many days when the wind is so strong that the turbines would not be able to operate.

In the five long months of winter, there is rime ice forming on our fire towers to the point that it breaks them apart. Rime ice is frozen cloud material present at most high altitudes.

During these down days, the wind power people must purchase electricity to fulfill their obligations, which no

doubt would come from water power or other sources.

So why not just put generators along those dams and many of the other places if we are obligated to furnish them power?

I fail to see what anyone can demonstrate a need for more power to the extent that our valuable mountaintops must be disfigured.

Come on Mainers, stand up and be counted. Let's tell them that our Maine mountains are zoned protected areas, and that is the way they will remain.

Thank you.

THE CHAIR: Davis. After Davis is Jon Crasnick.

MR. WURTS: My name is Davis B. Wurts, PA. I'm a resident of Rangeley. I'm very much interested in the effects of the proposal.

I copied off a couple of paragraphs of the letter I sent earlier just to save time.

There is more at stake in this petition than the mere deprecation of scenic wilderness views and a potential depreciation of tourism-generated economy in these beautiful mountains of Maine.

Many local residents and visitors from near and far enjoy the wilderness in our midst and do not choose to align themselves with those who profess to speak on our behalf regarding the potential intrusion of any development into that

wilderness.

Many such persons appreciate the good works done by the trail maintenance organizations but do not wish to become members of those organizations for financial or legal or other personal reasons.

The good works duly recognized include trail maintenance by clearing, marking, erosion control, publication of trail descriptions and maps, sharing the use of many association properties, and publishing caveats of dangers to life and limb presented by inauspicious use of the wilderness and access facilities.

The beneficiaries of these good works generally do their best not to add to community problems and frequently contribute physical effort in the good works I've cited.

Hikers include those outfitted with mere tennis shoes, boating shoes, lightweight sandals, and loafers, and not always the best of foot and ankle protection offered by the ultimate sports outfitters.

I have even witnessed the youth of the Penobscot Nation running barefoot through Franklin County woodlands with both toughness and perseverance.

Local hikers and through hikers alike do not find historical intrusions into the wilderness offensive. The Wildcat Ridge Trail in the White Mountains passes about 15 feet from the uphill sheath of the gondola lift system.

The presence of abandoned ox nooses, ancient stage coach roads, and logging routes unite natural and civilized elements. Enthusiastic hikers welcome these reality breaks from the inspiring monotony of natural wildlife.

Hikers will find much wilderness on and close to the trails. Nature abhors the backyard and also as you leave the developments unincreased, the wilderness will soon return.

I have talked with Rangeley residents who have visited the wind towers on the northwestern portion of Prince Edward Island. They have reported that the slow motion and restful whoosh sounds at close range are very comforting.

Visitors are also delighted with the information centers maintained for tourists at this site. The windmills in the Netherlands and in Colonial America have generated tourist traffic.

We need alternative energy sources. Global warming and increasing prices for energy generated from fossil fuels are distressing. Nuclear energy has horrendous disposal costs.

I would like to comment on the visual aspects of these towers as we've seen in pictures presented this evening. I find them much less offensive than endless residential development and endless construction of condos.

I thank you for your attention. I will give a copy to someone over here.

Thank you.

THE CHAIR: Thank you, Duluth. Jon Crasnick, is she here? Jon, I'm sorry. Following John is Nick Whittemore.

MR. CRASNICK: Good evening, my name is Jon Crasnick. I'm from Portland, Maine, and I'm the executive director of an organization called Democracy Maine, a nonprofit also located in Portland.

Democracy Maine was founded about a year ago, and as a mission of exposing and challenging political extremism and its effect on Maine's ability to work towards and find solutions to challenges that it faces, we've come to view battling of the environment as a battle of extremes, and we see this proposed projects as compromised and a viable new option.

I thank the LURC Commission for allowing me to speak tonight.

Along with many Maine citizens, Democracy Maine is alarmed by the increasing and undisputed evidence that global warming is affecting our world, dramatic consequences.

Also, like many others, I personally have often felt a sense of helplessness in the face of this problem. However, this sense of inevitably about global warming is our greatest threat, for it wrongly implies that nothing can be done, when in reality we can all do a great deal to avert the results that global warming experts fear.

So when our state is presented with an opportunity to address local climate change and reduce our dependence on

foreign energy sources, Democracy Maine is an enthusiastic supporter.

The energy producing capabilities of this project should not be of numbers, they are a large bite out of Maine's production of global warming gases and represent a direction where we must head to reverse the harmful effects of carbon dioxide on our planet.

There are no silver bullets to reverse global warming, but this project will help reduce emissions.

Global warming produces $CO_2$, which causes heat waves, droughts, smog, and asthma, rising sea levels, and coastal flooding, reduced maple syrup production, and risk of viability of the ski industry here at Sugarloaf, Saddleback, and Sunday River.

The benefits of this project to both Maine's environment and the economy greatly outnumber its risks. The biggest objection to this project appears to be the visual effect from the Appalachian Trail.

However, I would applaud seeing a wind farm because it would indicate a rational and environmentally friendly source of energy. Obviously some might disagree, but in order to overcome the overwhelming issue of global warming, we are going to have to make sacrifices, even in our own backyard.

To quote a recent editorial from the Portland Press Herald written in support of this project, [quoted as read] If

we're going to get serious about wind power in Maine, we're going to face tough choices.

It's already been said that it's an inconvenient truth that our society must locate windmills where the wind blows, and there are limited number of sites where the wind blows consistently and as strongly as Black Nubble and Redington.

Some have asked why the project cannot be operated from only one mountain. There have been environmental groups that have been advocating proceeding with only the Black Nubble portion of the project. That would be less economical and would virtually kill the project.

Democracy Maine was founded by several individuals possessing a wide range of knowledge and experience in political, business, and energy issues, and after our own internal analysis, we have concluded that the Black Nubble-only approach is an unreasonable option. It does not take into account the economics surrounding the wind power project.

What LURC does here will indelibly describe a path forward for Maine. Do we do what we know must be done or do we, like other states in the nation, stand back and wait for others to act while the glaciers and ice caps continue to melt.

In conclusion, Democracy Maine respectfully urges you to choose the lesser of the competing harms, which is a wind project that will help determine the future of our planet and

indeed the role of the state of Maine and that cause.

Thank you very much.

THE CHAIR: Nick Whittemore, is he here?

Following him I have Scott Samuelson. I don't know if they plan to testify or not.

MR. WHITTEMORE: Okay, good evening, gentlemen. I'm Nick Whittemore, and I live in New Sharon, lived there for 35 years.

I'm an investor in Redington Mountain wind power, which is affiliated with Endless Energy, and I'm a farmer down in New Sharon on the other side of town from Fred Hardy.

I agree with Fred, you can't be a farmer without being an environmentalist.

I've been planting crops down there since 1983, and things went along pretty well until about 1990. The weather did what it was supposed to and was reasonably predictable.

But 1990 and later things changed. There was more rain, there was more drought, there were more insects, there were more weeds, and my land is right on the Sandy River, which used to occasionally flood in the spring and now it can come up any time.

I believe that these are problems that I have experienced that are directly related to global warming and it's right here in Franklin County.

We have Japanese beetles, which never used to be

around, and other bugs that have come in that used to only be to the south of us.

So I think that we have a very real problem here in Franklin County, and I think there is a need for the problem of carbon dioxide and other emissions that are going into our atmosphere to be addressed.

Sunday in the Portland paper there was an article about how pollution from China is now coming across the Pacific and has been detected in California.

Now, we can't do anything about what's going on in China and probably we can't do anything about India, and we have so far had very little effect on the coal plants in the central part of this country.

But we do have a chance here to do something in Franklin County, right here, to do our part to address the problems of global warming, and we have an opportunity to generate clean, renewable energy right here.

Now, I'm well aware of how pretty it is up in Carrabassett Valley and all those mountains. I've hiked them, I've skied them on cross country skis, I've snow shoed, I've snow mobiled, I go through there, and I don't need to be convinced.

But in 2000 I took a snowmobile trip around the Gaspê Peninsula, and some of you may know that in the north central part there's a wind farm near Cap-Chat, I think it is, and the

trail goes right through that wind farm.

Now, I was very excited to see that and the weather was kind of drizzly, it was around freezing, foggy, but there was enough wind coming off the St. Lawrence so that the blades were turning. We went right in there and the Gaspê is beautiful, and I'll tell you, I didn't mind seeing that wind farm along the snowmobile route.

And I feel the same way about this project up on Redington, that I would be willing to sacrifice a certain amount of the view in order that we can have some energy independence and freedom from being jerked around by the OPEC people and the instability in the Middle East, in Africa, all over. There's seems to be no way out.

Periodically I get a breakdown in the mail with my electric bill. Probably everybody gets one of those things. I don't know if you read it or not, but I look at it from time to time.

Now, 30 percent of that electricity is supposed to be renewable, and we get zero from wind right now, something like 7 or 8 I think from hydro, some from biomass, and then there's cogeneration. They have to throw that in there, which means that there's energy being produced that comes from non renewable sources.

I'd like to see that 30 percent come completely from renewable sources. And you go further down and see where our

electricity comes from, and nuclear, it's very dirty. That's one of the big suppliers. Coal, oil, that's it, okay.

Anyway, I'm in favor of this project, and I hope that you Commissioners give it thorough consideration, and I hope you pass our permit. Thank you.

THE CHAIR: Is there a Scott Samuelson here?

After him is Steve Barr. Somebody wrote these all with the same pen and it's the same handwriting. Is there a whole group of you here who are going to testify?

MR. SAMUELSON: Well, I came by myself but somebody did sign that for me.

THE CHAIR: Steve Barr is next if he's planning to testify.

MR. SAMUELSON: Thank you for a couple of minutes. I appreciate the opportunity. My name is Scott Samuelson and I live in Freeport, but I've spent probably the last 20 winters as a weekend warrior up here with my family.

We are skiers, we hike avidly through the summer in this area, and we certainly feel it's one of the most beautiful places in the entire world.

In addition to that, I have the utmost respect for Maine Audubon and the Appalachian Mountain group. I certainly respect their opinion on this issue.

I also believe that we're at a crossroads right now with decisions about some crossroads in our society that we

have to make some very profound decisions about energy use, and I feel as though after doing some research and reading materials such as The Weather Makers and The Final [sic] Hours of Ancient Sunlight, I think that our addiction to burning fossil fuel is creating an environmental problem that will dwarf all other environmental problems in our lifetime probably, most certainly, in the lifetime of our children.

So I think -- I come before you today and over here tonight simply to say that I would urge you very -- first off, I don't envy you making this decision because I realize that there's two completely legitimate sides of this story, but I urge you to help Maine be a leader in terms of global -- of alternative energy, and certainly one day I would love to be able to ski and hike in this beautiful region and look out on to what I consider graceful windmills and know that we're doing our very small part for larger global warming issues in this world and perhaps be sure that there is going to be some snow for our grandchildren and children to enjoy this area as we have.

Thank you very much.

THE CHAIR: Thank you. Marguerite Pennoyer. I'm just giving somebody a warning over there that they're next.

Go ahead, Steve.

MR. BARR: My name is Steve Barr and I appreciate the chance to speak before the Commission tonight.

I'm a physician practicing in Portland and I've worked for three years with the US Public Health Service in New Mexico prior to arriving here in the state seven years ago.

However, my roots in Maine are deep, as the Merrill side of my mother's family has been in Maine since the mid-18th century.

I'm a board member of my local land trust, and I've been a member of the AMC for 18 years, and a regular contributor to the Natural Resources Council of Maine.

I enjoy hunting, hiking, fishing, swimming, foraging for mushrooms, canoeing, organic bee keeping, and gardening, and skiing here in Maine. I live with my wife and three children in an old farmhouse which is heated primarily by wood. I also stand solidly in favor of this project.

In the spirit of full disclosure, I'm also an investor in this venture. You may not realize that this is a project built with the hard work of many local Mainers in an effort to make our state more independent in its energy profile while at the same time promoting long-term renewable energy.

The capital behind Endless Energy comes from small Maine investors living in Maine, caring about Maine, willing to put their money on the line to make a difference.

In due deference to what Jo Craemer and Duluth Wing said earlier, we are Mainers. We are here, and we want to make a difference for our state.

My great, great grandfather Alias Merrill, a Bangor native, served in the Civil War as pay master for the union troops under Abraham Lincoln.

Alias started the first bank there in 1871. Before that he was treasurer of the Penobscot and Kennebec Railroad. Much of the financing that underlaid that railroad and later the Merrill Trust Company came from local Bangor natives who handed over some of their hard earned savings as risky seed capital for the ventures in that growing city. They invested in their community and led Bangor to be one of the most prosperous cities in the United States at the time.

PARTICIPANT: (Interrupted speaker) This is not about windmills.

MR. BARR: With a relatively small group of local Maine investors, Endless Energy has scrabbled together enough capital to do research, the environmental due diligence, and the hard work to make sustainable wind power energy a reality here in Maine.

This has not been easy. This project has been in the works for over 15 years.

We selected Black Nubble and Redington Mountains because the wind blows up there. It's close to existing power lines, and there are already many logging roads in the area already.

Our data suggests that when up and running, our wind

farm has the potential to be the most efficient wind farm presently operating in the world.

Yes, there will be some impact, but I believe it will be minimal and well worth it to save 800,000 pounds of pollutants a day.

We'll save money for Mainers in the long run. We'll have a local source of power with a fixed cost not dependent on the Middle East for oil and gas.

We'll create good paying jobs. We'll add to our independent streak. Hey, maybe we'll put out business those antiquated power plants upstream that pollute our Maine land, poisoning our children's heritage.

For the NIMBYs here in Maine I say, yes, please put this project in my backyard. This is good for Maine now and good for our future in every way.

Thank you for your time.

THE CHAIR: Thank you, Steve.

Following Marguerite will be David Endrizi. I'm sorry if I'm not pronouncing that right.

DR. PENNOYER: My name is Marguerite Pennoyer. I'm doctor specializing in asthma and respiratory diseases.

My concern centers around the increasing threat that we all face from exposure to carbon-based fuel.

My message is a simple one but it is such a critical issue that we all must address. As a physician I feel I must

entreat you to consider this project.

Thank you very much.

MR. WRIGHT: Marguerite, where are you from?

DR. PENNOYER: I'm from Portland, Maine.

THE CHAIR: Pamela Dickey Tifft, T-i-f-f-t I think or "i," I'm sorry. I'm having a hard time reading some of the writing. You're next, anyway.

MR. ENDRIZI: My name is Douglas Endrizi. I am no longer a student at Scarborough High School, I just graduated this year. I was vice president and one of the cofounders of the Environmental Club of Scarborough.

For the past three years, I've given up my Friday afternoons. I've spent two hours at school, which on a Friday afternoon at the end of a long week for a teenager I think is significant, three years running, and we come to the club with 60 members, and every Friday we recycle about 500 pounds of paper and 2,000 bottles. In the total of those three years, we have recycled 100,000 pounds of paper and almost a million bottles.

Yet, I can give up my Fridays for the next thousand years and I wouldn't make the same contribution that this wind farm can make in a day and a half.

Sometimes I feel so helpless as just an individual in Maine and here I am speaking about it. This project is very important.

On a separate note, a speech on diversity and what this project could really save for the world.

As the temperature of the world increases, because it is increasing, it provide a phenomenal impact on species in ways that we don't fully appreciate.

The directional selection it implies on species is really incredible. We don't properly appreciate how much it changes the gene pool. We need to realize that species is a finite resource, just like we treat coal, oil, and fossil fuels.

When you increase the temperature, you increase the ways that species reproduce, for example, interrelated systems like caterpillars, they mature and develop according to a the weather cycle and temperature cycle. As it increases, it pushes it earlier into the year.

While other species are dependent on it, like some birds can't cope quite as quickly, so it creates a very strong directional selection.

And that -- because there's just so many changes related to it, reducing the gene pool can make species very much more susceptible to certain diseases and many other risk factors.

As the world warms, it affects every single species around the world. So here we are, we have these wind farms going in, and yeah, they can affect some species of birds and

raptors, and there are some species in there that will be directly affected, people are worried about.

We need to realize that if these wind farms don't go in and our society doesn't start changing in this way, it's going to affect every single species around the world.

In closing, I would like to say that the environmental group has 50 kids, and we would like to say that we are strongly in support of this project.

Thank you.

THE CHAIR: Thank you. Is Nicol going to testify as well?

MS. TIFFT: Nicol, actually.

THE CHAIR: Oh, I'm sorry.

MS. TIFFT: That's okay. A lot of people make the same mistake.

Good evening. Since there's been a lot of talk about Mainers, for the record, I'm a fifth generation Mainer having grown up at my great grandparents' farm in Embden, my grandfather's farm in North Anson, and then my family's home in Skowhegan. I have lived in many towns in this state these past 53 years, and I now reside in North Saco.

I'm also a member of the first generation in our family to have had running water, an indoor toilet, and electricity my entire life.

My ancestors were frugal Yankee farmers whom

sociologists titled "rural poor." Far from poor in a nontraditional sense, harnessing and/or using natural resources in a sustainable way was second nature.

On my grandfather's farm there was an old metal windmill that was used to pump water from the spring to the barn, so I grew up understanding the use of wind as one of our many renewable resources.

In 1975 I attended a lecture by R. Buckminster Fuller at the College of the Atlantic. During his presentation he stated in so many words that we have ten years to make significant changes on this planet or we were headed down a path of planetary destruction that would be difficult, in fact, nein near impossible to turn around.

That ten years ended in 1985. Since 1985 I have witnessed people of my generation having larger families, building bigger first and second homes, driving larger vehicles that get horrible gas mileage, and owning numerous recreational vehicles.

The warning signs continue to present themselves. Glaciers are melting at an unprecedented rate, polar bears are drowning. We're experiencing huge storms, more tsunamis, and a rising water level all over the world.

And yet, here we sit bickering over whether or not wind towers are a blight on the horizon with the "not in my backyard" attitude, or that they may endanger the

ecology of subalpine environment.

Has anybody read lately what's happening in the Cloud Forest of Peru? These forests are home for more species of birds than Canada and the US combined, and yet we get tunnel vision on this one little area of Maine and seem to forget the far greater impact that wind power will have on the entire planet.

Have you ever seen the Lathisi Plateau in Crete, Greece? For hundreds of years these Cretians have harnessed the wind to irrigate their land using canvas sails, and the first time I saw a modern wind farm on South Point in Hawaii, I was awestruck.

From the ancient wisdom to the modern, wind power has been and continues to be a magnificent energy solution for our planet.

We should be celebrating the fact that we have this amazing capacity and someone who has dedicated so many of his human resources to make this wind farm a reality.

This wind farm is not only good for Maine and the people of Maine, it is also a huge positive step forward for this planet and all of its inhabitants.

Thank you so much for your time.

THE CHAIR: Burt Weymouth will follow.

MR. TIFFT: My name is Nicol Tifft. That was my wife, and I also wanted to point out what she didn't, which is

that we are one of those small investors in Endless Energy. We invested in 2000 way before the price of gas was $3 a gallon. It's something we believe in and continue to believe in.

There have been very many eloquent points made, but what I'm left with -- I guess I'm not going to read off from my prepared text.

I'm also a chairman of the Saco Valley Land Trust, and I spend a lot of my time opposing developments, so I understand that fear, that cynicism that a development presents to the public, because quite often I'm in that position of opposing yet another development in southern Maine.

But I think we need to look at the larger picture here and realize that this particular project is for the good of humanity and it needs -- I just was thinking about where would the snow -- where would these mountains be without snow making?

I think when we were kids there was snow on the mountains. They are still viable. I ski once a week on Pleasant Mountain, and without snow making, there would have been no skiing this year.

I think this is an indication of global warming.

But I briefly want to say that I'm -- the only solutions I see for global warming revolve around wind energy and solar energy, and we can't miss this opportunity to be a leader in the state of Maine.

Thank you.

THE CHAIR: Thank you. Burt Weymouth.

MR. WEYMOUTH: Good evening. My name is Burt Weymouth. My home is in Freeman Township and it's located about eight miles from Black Nubble, which puts it in full view through my kitchen window.

Since the age of 4 I have been a resident of Franklin County. As a boy I've enjoyed hunting, fishing, and other outdoor activities in this area.

In recent years I have also enjoyed making ATV trips to other portions of the county. I've especially enjoyed rides near Rapid Stream, which provides drainage for the basin between Mt. Abrams, Sugarloaf, and Black Nubble. It is area of unsurpassed natural beauty with unbroken vistas of forest land and unblemished mountaintops.

During my 28 years of active service in the Navy, I have seen many parts of this world and scenic landscapes, which I will never forget.

None of them, however, are equal to those in northern Franklin County, specifically right here in Kingfield and Carrabassett Valley.

Throughout my service I remembered my youthful experiences here and looked forward to retirement when I could resume living in Maine and living life as it should be.

I will admit right here, though, that I am not

against wind power or supporting Maine's generating wind power.

That is not to say, however, that it should be employed without due consideration of lots of other factors, not the least of which is the irretrievable loss of natural, geographic, and aesthetic features.

It is indeed a shame when outside organizations who have no interest in this area other than the almighty dollar are willing to sacrifice these features for the benefit of their bottom line.

There are numerous other regions of Maine where 30 windmills could be located and a loss of natural features would have less impact.

These comments in opposition to the wind farm proposal are offered tonight as reflecting my own sincere thoughts and beliefs. I have not been influenced by offers of free meals, transportation, or other items that are enticing me to be here tonight.

I urge the Commission to reject this application on the basis that there are other more appropriate sites in Maine.

Thank you for the opportunity to discuss it.

(There was a break in the hearing at 7:56 p.m. and the hearing resumed at 8:04 p.m.)

THE CHAIR: Ruth Taylor. Before we begin here, I was reminded by one of our folks that the names of folks who came in after they had planned to testify but came in after we had

the mass swearing in, so are there those of you who want to testify who didn't get sworn in? If there are, I would appreciate it if you would stand up, and is there anybody else? Just two people? Where are the other two? Somebody said there were four.

(PARTICIPANTS SWORN EN MASSE.)

THE CHAIR: Now, we left off with Ruth Taylor. Is she here?

MS. HASKELL: I'm actually reading for Ruth Taylor, which I'll give to you.

THE CHAIR: After her is Dudley Greeley.

MS. HASKELL: Hi. Thanks to the Chair and to the Commissioners for being here and for the opportunity to speak. I appreciate it.

My name is Corey Haskell, and I'm actually reading a letter for Ruth Taylor who, because of her health, could not make the trip up here; but I would like to read her letter and I'll give you a copy.

It says: [Quoted as read] To the members of the Land Use Regulation Commission regarding the Redington Wind Farm Proposal.

As a long-time member of the Natural Resources Council of Maine and the Sierra Club, I regret that I cannot be with you in person at the hearings regarding the Redington Wind Farm; however, I hope you will give serious consideration to

the content of this memo, which represents a great deal of contemplation since I am a strong environmentalist.

The Portland Press Herald's editorial, July 29th, 2006 titled, "Redington Wind Farm: A Step Towards Maine's Energy Future," states, "The biggest objections seem to be the visual effect from the Appalachian Trail.

"The wind farm will be visible from the Sugarloaf USA ski area and from high points along the section of the trail prized for its rugged and remote feel."

The people who ski Sugarloaf Mountain and climb the Appalachian Trail do not want those uplifting and spiritual experiences dampened; however, if the global warming continues, it is certainly -- it is certain that all the plants, including all the beautiful trees, all the animals -- including the bog lemming, Bicknell Thrush, and even man can be destroyed. Then there would be no Sugarloaf USA or Appalachian Trail.

We live in a new and dangerous age. We need to feel a sense of spiritual sustenance by the sight of the wind towers themselves, which serve us all by combatting the disastrous global warming, which, if unchecked, will eventually destroy the entire planet.

We need to view these wind towers that stand high and tall as a positive symbol that the earth can be saved. We need to be grateful that in Maine we have tall mountain peaks and strong wind areas to use these turbines to their best

advantage.

Those who ski Sugarloaf or climb the Appalachian Trail should acknowledge that the wind towers, by combatting global warming, will be a big factor in preserving the sacred beauty and environment of Sugarloaf and the Appalachian Trail, which we now enjoy.

Global warming is in our own backyard and time is of the essence. The Redington Wind Farm should be approved and appreciated.

Sincerely, Ruth E. Taylor, South Portland, Maine.

Thank you.

THE CHAIR: Thank you. Dudley Greeley. Following Dudley is Nancy Artz.

MR. GREELEY: Just as Mainers --

THE CHAIR: Your name and residence for the record, please.

MR. GREELEY: My name is Dudley Greeley. I'm a Mainer from Cumberland.

Just as Mainers welcomed the construction of light houses on our beloved shores in centuries past, it is my hope that you will, if not welcome, permit this project to proceed.

As you heard earlier from a student from Scarborough, even constructively engaged civic minded students often feel ineffective, helpless, and perhaps most dangerously a serious sense of hopelessness.

The enormity of the scale of the past we and future generations face is indeed daunting, but we have choices and work that we can and may do.

As some of you may have already read, the conservative news weekly, Time magazine, tells us that we should be very worried about this issue of global warming, which I'm sure you've all heard much about.

As a student who testified earlier and as the students of the University of Southern Maine, which I represent in part as the university sustainability coordinator, weekly, assuredly the greatest challenge I have is dealing with the students' sense of hopelessness.

I look forward to the day when I can point to wind turbines on the ridgelines of mountains in western Maine and tell my grandchildren and the students I deal with that there stands symbols of hope for their future.

We need such symbols just as we needed the light houses on the coast of Maine to guide us into a very difficult new century.

The scale of the task we confront is, as I said before, daunting. The world is growing at the rate of a new state of Maine population-wise approximately every six days, every six days.

Even with dramatic improvements in energy efficiency, the people that do this for a living -- the technologists and

the independent scientists -- tell us, don't "look us" [sic] for technological solutions. These are political, these are sociological problems.

Without assuming the leadership and engaging in ingenuity and innovation that has been one of the hallmarks of this state for centuries, we are not going to get out of this just using technology. Efficiency alone will not get us out of this issue. It will not guarantee our children a sense of a hopeful future.

You have a very difficult decision to make, but I think if you look at the larger issue here, which is creating a Maine that can be independent and move hopefully into a very, very difficult future, you can be the start of a national movement, certainly a movement that our students at the University of Southern Maine will thank you for, their grandchildren will thank you for.

It's a difficult decision. It's my understanding that these turbines can perhaps be removed much more easily than they'll be put up in 50 years, or 30 years, or 60 years, when we do find a better way to provide for our needs, but that is a decision for another generation.

In the meantime, I ask you to please allow Maine to do its share, it's fair share. I mean, we can't burden just the states in the Midwest or the coal mining regions of Pennsylvania and Kentucky with the dreadful external costs of

powering the wonderful future that we may share.

Please allow this project to continue, allow Maine to do its share, to build a sustainable energy infrastructure that offers my child a chance at a healthy, hopeful future.

Thank you very much.

THE CHAIR: Thank you. Nancy. And following Nancy is Rebecca Rockefeller.

MS. ARTZ: Hello, I'm Nancy Artz from Cumberland, which means that I'm one of the people that's been described earlier as a stranger from away, or alternatively, a tourist who supports the local economy. So take that perspective.

I'm asking that you make sure that the perfect is not the enemy of the good. Is this Redington project perfect? No. As an environmentalist, I don't see any environmental impacts.

But it's a good project that should go forward. Yes, I wish that 10 years ago we had the foresight as a state to assess the whole state and say, these are the best places to put wind, hydro, tidal, you name it. We didn't do that.

The more important reality is we also haven't done anything about climate change, and we need to act now.

The World Health Organization scientists estimate that already over 100,000 people a year die due to existing climate change.

I had to speak face-to-face with a Gwitchin asking me why am I forcing her entire ethnic community to leave their

ancestral home? Yeah, I'm an American. Less than 5 percent of the world's population is using a quarter of the world's energy. How do we answer that?

For me we don't have the luxury of waiting for the perfect site. We are decades away from being a carbon-neutral economy. We're going to need many, many alternative energy sites. We're going to need the good sites, not just the perfect sites.

I look at the environmental impacts of this project as the cost of past actions. We chose not to tell developers where we wanted the sites. We've chosen to buy SUVs, live in sprawl, and have very energy consumptive lifestyles that we don't know how to change at this point.

For me it's a moral responsibility for Maine to accept the cost of energy production of the energy that Maine uses.

I've heard some people say that Maine produces all the electricity we need, but I doubt we produce enough electricity for all of us to be driving electric vehicles. We need to look at all of our energy costs.

Our society needs this energy. I think that I'll just close by saying that as a hiker who comes and hikes annually in the mountains, I hope to see wind turbines so I can feel good about Maine accepting its responsibility and not putting those costs onto other people.

Thank you.

THE CHAIR: Rebecca. And following Rebecca is Eliot Field.

MS. ROCKEFELLER: Hi, I'm Rebecca Rockefeller from Brunswick, Maine. First a disclosure. I work part time for Maine Energy Investment Corporation, one of the organizations intervening in favor of this project, but I'm here on my own time. I took time off from work to come here because I support this project so much as an individual.

I am a fervent environmentalist. I'm about to go back to school for natural resources, and I'm also an avid outdoors woman. Perhaps because of these dual interests, in college I've led trips for Maine Audubon Adventure Camp, and one of these trips was with a group of teenagers on the Appalachian Trail.

I have a great deal of respect for both Maine Audubon and the Appalachian Trail Club; however, I feel so strongly that we need to do something about climate change and global warming that I'm in support of this project.

As a trip leader, I can say that I would have been thrilled with some of the peaks on the Appalachian Trail with my campers and had the opportunity to point out wind turbines in the distance. It would have provided the chance for me to teach them about the current threats from nonrenewable energy, such as oil and coal, and also an opportunity to give them

hope.

And I guess that's why I'm here, because this project gives me hope for my future.

Without getting too personal, I'm 25 years old and at some point would like to have a family. And it does worry me thinking about the future that my children would have, the future of Maine for them.

I'm deeply concerned about the threats of global warming and I'm deeply concerned that if we don't act now, we will come to a point where action is superfluous, we can't do anything about it.

If the temperatures gets beyond 1 degree Celsius, additional warming will be at a point that we haven't been at in terms of earth's temperature for the past 2 million years.

There will be so many unknowns and that scares me. So I'm here supporting this project because it gives me hope, hope for some children that I might have someday and hope for the state of Maine.

THE CHAIR: Thank you, Rebecca. Eliot Field, to be followed by David Early.

MR. FIELD: Thank you very much and thank you for the opportunity to speak to you.

My name is Eliot Field, I'm from Dresden. I am a lawyer. I have an office in Wiscasset but I'm here on my own. I took the afternoon off to come up and speak, and I am also a

very minuscule member of the Redington Mountain, LLC, which would be the landlord, so to speak, the landowner leasing this property to the wind power people.

I'm also invested in our environment, and I think we all are. That's something I just want to emphasize here and implore that we all keep in this mind because every one of us, as the people before me have said, has a huge stake in the quality of our environment. We don't live without it. If it's too bad, we all suffer.

In fact, if you look at long term, evolutionarily, 95 percent of the species that have existed, I think, are now extinct.

When you look at the long run, which I hope you will be doing -- forward and backward -- hopefully we can learn from our past and bring a better future by moving away from fossil fuels and doing this sort of project.

I am, as I say, not here as a lawyer. I took the afternoon off. I also want to say that I rode a bus up here because that was better than driving a car with 30 other people driving 30 other cars.

So I'm happy somebody was smart enough to hire a bus and invite me to join them.

I'm a husband, a father, a want-to-be grandfather, a citizen of this planet, I'm a member of Maine Audubon, a member of the Natural Resources Council of Maine. I've been a member

of the Appalachian Trail Club, the Sierra Club, I'm an environmentalist, I care, I hike, I do all these things.

But if we don't smarten up in the long run, we're not going to have anything out there to hike on, and we're going to have lakes that are more acidic, et cetera, et cetera.

I'm just reminded, I stood on Mt. Katahdin and I've seen the paper mills in the distance. Is that offensive in some way? I think it's more offensive than a wind turbine, frankly, but that doesn't mean we should pluck them out or never have put them there.

I'm reminded of a couple of other things. One is, Maine Yankee has come and gone. I've lived in the mid coast area long enough to see that come and go. I've lived there long enough to see Mason Station bilch out black soot when it was running and now shut it down and be converted to some other use. I think that's a step in the right direction. I think this is a step in the right direction.

Frank & Ernest has a cartoon that has stuck with me. One asks the other, What do you think about evolution? The other answers, I think it's worth a try.

I think this is worth a try, I think we need to learn from our past and seize this as an opportunity to lead into the future, follow our own motto for the state of Maine. We're inventive folks, let's mold that better future and build it today for tomorrow.

Thank you very much.

THE CHAIR: Following David will be Delene Perley of Windham.

MR. EARLY: Mr. Chairman and Commissioners, my name is David Early, and I'm from Scarborough. I thank you for your valuable time and patience this afternoon in conducting this public hearing.

I'm here as the executive director of facilities management at the University of Southern Maine. We are in support of this project on Redington Mountain.

I'm also a licensed professional engineer, I'm also a member of the Association of Energy Engineers, and I hold several certifications from that association, such as a certified energy manager and certified green design engineer.

I'm also an active member of the American Appalachian Mountain Club and the Sierra Club as well.

I'm here today not only professionally but as a parent and a grandparent. We talk about energy, and energy capacity, I think, should be noted that today it's my expectation as a professional energy manager that ISO New England reached peak power, exceeded the capacity of the New England power pool.

Power capacity in New England is a serious issue. Because of that, recently the Federal Energy Regulatory Commission, FERC, approved a fuller capacity energy charge.

This FERC regulation had been opposed by our governor and the Maine Public Utilities Commission, but indeed because it's been passed, it's expected to cost the University of Southern Maine starting in December of this year $70,000 and on up to $170,000 annually.

This money is earmarked to support existing generating burning fossil fuel plants throughout New England, and you may have read recently about these issues. None of those funds go into support this project here.

Our governor, legislature, AMC, and I think most everyone in this room supports wind power. It is the most cost effective, large-scale renewable energy technology that we have available to us today.

The question is: Is it a suitable site, is it the right site?

I recently read much about Mars Hill and wind farms in Aroostook County. I wish to remind everyone that power generated in Aroostook County, including Mars Hill, does not connect or reach the power lines of Bangor Hydro or Central Maine Power.

In fact, if you don't realize it, you should realize that northern Maine is not connected electrically with eastern Maine, central Maine, or southern Maine.

If we desire to purchase and use clean renewable energy, Green E certified energy by the Environmental

Protection Agency as we do at the University of Southern Maine, development of wind farms in Aroostook County, while a positive step, does not truly meet our needs.

The proposed Redington wind farm could and would. Redington will need a surprise for its beauty and isolation. There's no doubt about that.

We also know that it's well suited with its mountain ranges facing north and south and the level of the mountains for wind farms. There aren't many sites as well suited for wind farms.

I believe as an engineer this site has been designed with very little impact and has indeed large benefits for the overall general good.

Indeed it has been said, and I concur, that it's just another renewable resource that can be harvested out of our forests.

I understand the feelings of those who will be impacted by the loss of a beautiful view, and I've tried to relate to this.

I've thought about Otter Cliffs on Sand Beach on Mount Desert Island and visualized a wind farm there. Indeed that is a special place as is this. But as a member of the AAMC who has hiked these paths, I know that these paths are far less travelled as other paths in Maine.

I also am concerned about the need for clean

smog-free air that are necessary to enjoying the views. We all know how often it is -- I'll use Mount Desert Island as an example -- the unhealthy air qualities are reported there.

Unfortunately, Maine is the exhaust pipe for the rest of the country.

Getting serious about wind power requires us indeed to make tough choices. That's been said. All sites will have some visual impacts.

Overall, these impacts I think have been minimized in this project. The project does demonstrate a need that's well documented. We need to reduce our carbon emissions.

Wind power is emission free and wind is free. Indeed, we need to be concerned about the environment, and that includes the direct and indirect impact that the carbon issues has on our climate, on our birds, and animal habitats.

This underscores the need again for the support of the Redington Wind Farm. Our response to global warming must include increased energy efficiency, demand reduction, and generation of clean renewable energy.

Maine needs also to support economic development. In terms of economic prospects, it's been stated that we're at the bottom of the ladder. Due to the continued lack of economic prosperity, our children are leaving the state of Maine. We now have the oldest average age of any population of any state in Maine.

This project makes sense. It makes economic sense. It makes environmental sense. I don't believe you can find a better location for it.

Thank you.

THE CHAIR: Following Delene is Jackson Lee.

MS. PERLEY: Hello, my name is Delene Perley. I'm from Windham, Maine. I am also a user of electricity.

I ask myself, am I willing to stop using electricity? My answer is no. I don't think the people in this room are either, since we are all taking advantage of the microphone, the lights, and the fans.

I cannot pay for a wind turbine on my property. I cannot afford solar panels for my house.

I can and I do pay extra money to get renewable energy electricity for my home.

As a tourist, we were in Albany, Australia two years ago. We went purposely to see the turbines there. There were 12 turbines on the shore. I am sure that the people opposed the appearance of those turbines along their shore when they were built. I also am sure that they were worried about birds.

However, as I looked at them I thought to myself, these people are smart. They decided that it was important enough to supply the energy for their town from a renewable resource.

I look at the fans on the ceiling and I ask myself, I

do not know the exact ratio of the size of the blades and the distance between the fans, but I see lots of space in between for birds to fly.

I was proud of the people in Australia and of other places in our country and the world for taking positive steps to solve their electrical needs.

The people were not mining coal as they do in the state where I used to live and then sending their acid rain to Maine.

They were not finding a way to get their energy from something that would provide nuclear waste. They were not worried about a nuclear accident from their energy source nor having to support families with black lung disease.

We as a country must become energy independent, and we need to do it cleanly. Maine's got wind. Let's send some of this -- I heard tonight for the first time that we might have extra electricity. Maybe we could send some of it back to West Virginia and Ohio. Wouldn't that be nice.

But Maine's got wind and I think it's time to put it to good use, and I thank you for your attention and your work.

MR. JACKSON LEE: Hello, I'm Jackson Lee and I'm from Yarmouth, Maine.

Hello LURC. You're looking regulating tonight. I'm not an investor. I don't have that much money.

I am Harley Lee's son but I'm going to say something

that's not his words, he doesn't know what I'm about to say. I'm very nervous so hopefully I'm not going to screw up and say something bad about him.

My dad tonight is wearing a tie that has windmills on it. I looked on-line and I found lots of other ties with windmills on it, but I did not find ties with little power plants on it maybe from nuclear power or coal power plants or something probably because they don't look very nice but windmills do.

A lot of people think so, so they put them on ties. That's why we have a lot of ties with windmills on them. A lot of people don't think that they look nice, but the people who put them on ties do.

So I guess those people could talk to the people who put the windmills on the ties.

So anyways, I was going to talk about how all the people that are like against this project are kind of old. No offense or anything. They're smart people and everything like that, but they're not representing the next generation that's going to be affected by this global warming. It kind of puts a shiver down your spine, doesn't it.

Anyways, so they're kind of like not the ones that are going to be affected by the global warming so they don't really care. They're just the ones that don't want to see those windmills spinning and they're PO'd about them and

they're getting their panties all in a bunch because of seeing them out of their back windows.

You know, that's not that big of a deal.

Anyway, even though they've lived in this place for a long time, I respect them and everything like that, they don't want to see them, and they don't think they'll be spinning long enough for them to create a purpose. They want them somewhere in the Midwest, not in Maine.

So you know what? Too bad. The windmills do provide enough clean energy, and people like me support the wind farm because we are the next generation. We're going to be the ones affected by global warming, and we're not going to spend the rest of our days just complaining about how ugly are the blades, those 400-foot monster towers.

Anyways, I'm just going to say that our generation is in favor of the windmills, and I guess we count a wee bit more.

Thank you.

THE CHAIR: Alethea. And after that is David Maxwell.

MS. LEE: My name is Alethea Lee and Harley is my brother. I live in Peekskill, New York, and I support his wind project.

My home in Peekskill overlooks the Hudson River and the mountains of the Appalachian Trail, and it's really beautiful.

However, Indian Point, a nuclear facility, and a plant burning garbage of Westchester County, are within a half a mile. This is a dangerous pollution that you can prevent here by supporting this project.

I've been asked to read and summarize this article called Wind Energy Comes of Age by Paul Gipe, or Gipé. The most frequently mentioned objection to the use of wind energy is the perceived aesthetic impact of the wind turbines which have -- which have on a rural vista.

Few can look at wind turbines without forming opinions. These opinions are often fluid and subject to change depending on the time of day, the viewer's mood, and numerous other factors.

It should come as no surprise that opinions of wind turbines on the landscape will differ from one person to the next in a pluralistic society with a host of different cultural backgrounds, beliefs, and expectations.

Contrary to the popular belief, there is no universal consistent and variable view of what is or is not pleasing to the eye.

One of the best examples in history was reaction to the Eiffel Tower, which was a long time ago in another country. In France -- just as a lady who was talking about Australia -- and the criticism of Gustave Eiffel's plan to erect a great tower in the heart of Paris is instructive.

There are many similarities between the initial objections of the Eiffel Tower and aesthetic objections to today's wind turbines.

Not insignificantly, several thousand wind turbines in California are mounted atop towers incorporating the famous compound paper that provides the sweep-and-curve characteristic of the Eiffel Tower.

The viciousness of Eiffel's critics and their personal attacks mirrors those similar seen in many controversies surrounding large public works today, including the construction of wind power plants like proposals to plant wind farms on pastoral landscapes. And the Eiffel Tower elicited a lot of strong emotions just as this does.

But I believe this is a good site, and the Eiffel Tower does blend in in Paris and people love it, just like it would blend in beautifully in the state of Maine in the mountains.

Thank you.

THE CHAIR: David Maxwell.

MR. MAXWELL: Good evening and thank you for the opportunity to speak here.

Let me begin by saying that I'm not a politician. I'm the minority here, I think, I'm not a politician.

I'm going to speak against this proposal tonight. I am a property owner in this area, and I and my family have been

coming here since 1969.

I think an important question to answer is why we and others like us have continued to return here, buy camps and houses here, to pay real estate taxes here, to spend money here not only on Sugarloaf and Saddleback Mountains but also the benefits of hotels, motels, restaurants, filling stations, home fuel suppliers, food stores, lumberyards, hardware stores, hunting and fishing and boating suppliers, sporting camps, gift shops, and for many other goods and services go a long way in support of the local economy.

We do so because of the excellent recreational facilities in the area, because of the beautiful mountains, the rivers, the lakes, the streams, and the abundant wildlife.

Presently this area is one of the few remaining havens where people can experience nature in a context that is relatively free from the mad rush of technology that may one day irrevocably alter the natural environment on a global scale in ways that have far reaching negative consequences for the quality of life on earth.

However, the purpose of this meeting is not to discuss global effects but local effects. And the local effects that I'm here to oppose in this statement and will continue to oppose relate to the proposal to shave the tops of the Redington Ridge and the Black Nubble Mountain in order to install wind machines.

How LURC responds to the wind power proposal under consideration today ought to be a major concern to all citizens in the state of Maine, as well as visitors who come here from out of state.

Once the door is open for such development, others with aggressive economic interests like Maine Mountain Power and such private investors as Endless Energy Corporation, will be knocking on the door again and again requesting approval for wind machines on additional mountaintops in this vicinity and elsewhere.

If approved, the final result surely will be what many will perceive as an ugly blight upon these lands.

Although I, like many others here today, recognize the need for so-called clean energy, I do not personally believe that windmills that encroach on precious resources as found in these mountains provide an intelligent solution to meeting this need.

The environmental and economic costs to the area are likely to far outweigh the dubious benefits proposed by Maine Mountain Power and its private investors, the only real economic benefactors, should their proposal be approved.

Therefore, I ask that LURC hold fast to what I personally believe is its most important official, if not moral, obligation and that is to protect the natural and ecological values of this state.

As LURC acknowledges in its own words, residents and visitors place a premium on the unique natural values found here.

Indeed, this is not only true for the bowl of mountains surrounding us today but for those stretching northward to the boundary of Canada.

Because the proposal being debated violates these values, LURC -- I ask that LURC, and related politicians who may be involved in this decision, reject the proposal.

Thank you very much.

THE CHAIR: Ami Robbins. And following Ami will be Peter Broderick.

MR. ROBBINS: My name is Ami Robbins, I'm from Yarmouth. I'm going to be a senior at Yarmouth High School, and I would like to start by saying that first of all I'm grateful that as an American citizen I have the opportunity to come before members of the community and government officials in order to state my views and opinions.

And also, that we are part of a democracy, which the good of the many is valued over the good and the one, I think that greatly helps our cause tonight, because the only people who are really against this are the people who are going to be seeing it from their backyard versus the rest of us who are going to be enjoying hopefully the cooler climate that will result.

My main point tonight, really the only point that I want to touch on, is one that I don't think has been mentioned enough, and that is that this project more than a simple cure-all for the energy crisis that we have dug ourselves in, it is an important stepping stone.

First of all, I think the visibility is important because people will be reminded every day that we are making an effort to fix this energy crisis and that there are ways that we can dig ourselves out rather than just sitting and burning more oil.

The stepping stone thing, as long as that mindset gets put into people's heads, that's the most important thing to come out of this project.

It's not the 900 megawatts. It's not the direct pollution that we're going to prevent. It's the mindset that hopefully we can instill in the general population of this town, this state, and this great nation.

Thanks.

THE CHAIR: Thank you. Peter, are you here? If not Gail Merrill. Sylvia Lambert.

MS. LAMBERT: My name is Sylvia Lambert. I've lived in Phillips for 45 years. I'm not affiliated with any organization.

I am not up here because I am against windmills. A windmill should not be the issue.

These hearings are about an application for rezoning two pristine, fragile wild mountains to allow development, which at this time happens to be windmills.

These mountains have been protected by a law wisely passed by the Maine legislature in the 1970s to protect elevations above 2,700 feet against development.

This is not a "not in my backyard" situation. It's the fragile mountaintops that are important to people from all over the country. It is not a matter of making a small sacrifice by a minority of people.

Rezoning our mountains will affect future generations as there will be no turning back if development such as the type that is being proposed is allowed on these mountaintops, as expert witnesses will testify to.

Please do not trade Redington and Black Nubble Mountains for a wind farm.

With 35,387 square miles of land in Maine, Maine Mountain Energy should be able to site their wind farm where the land can be revegetated years from now when new technology may replace wind farms.

All wind farms are no longer deemed viable without tax breaks or government incentives.

Thank you for listening to my position.

THE CHAIR: Matthew Davis.

MS. MERRILL: Good evening. My name is Gail Merrill.

THE CHAIR: We lost you there for a minute, Gail.

MS. MERRILL: I'm a landowner, I'm a business owner, and I work in the service industry here.

I must first say that I'm very much in favor of clean renewable sources of energy. There's a place for wind power but not when it becomes a destruction to the environment as it would be here in the western mountains.

Upon entering the state of Maine there's a sign that says, Maine, the way life should be.

I have lived on a green farm for 27 years. Myself and other people who choose to live in this area do so not to get rich, but for a quality of life. The greatest of these qualities is the pristine wilderness that surrounds us. I am not talking just about a view.

The service industry and tourism is one of the largest employers of the area. People who visit this area also come because of the pristine wilderness.

It has been said by many hikers that the most beautiful section of the Appalachian Trail is from the western mountains to Katahdin.

The lack of artificial light in our area also gives us the most magnificent nighttime sky. We are treated to spectacular meteor showers, beautiful northern lights, and nightly viewings of stars, planets, and constellations.

I fear the lights on 30 410-foot towers would ruin

this forever.

I feel 30 410-foot towers would have a serious negative impact on our wildlife, as well as all the ecosystems of these mountains.

Maine is a state with many special areas of diverse beauty. This is one of those special areas. We must be respectful of what we have in order to keep it.

Please say no.

THE CHAIR: Thank you. Matthew Davis. And following Matthew is Claudia King. I believe that's correct.

MR. DAVIS: Hi, my name is Matthew Davis and I want to thank LURC for giving us a chance to speak tonight.

I am here representing Environment Maine. I run the environmental organization called Environment Maine, and we advocate for clean air, clean water, and open spaces on behalf of about 3,500 members around the state.

My comments will be potentially unusual tonight because we are not taking a position for or against this individual proposal that is before you, but I do want to outline some of the reasons why we do support clean energy and potentially what, in your decision making process, you will weigh against the effects of this development.

We worked to pass a law last legislative session that set a State policy of 10 percent new renewable energy by 2017.

We believe that this is the best way to ensure stable

prices and low prices for Maine consumers, in addition to protecting our air, our water, and curbing global warming.

This project, therefore, being a wind project, would help fulfill the State policy of getting 10 percent new renewable energy by 2017.

The specifics of clean energy and why this will help drive down prices I think is something I also want to bring up tonight very briefly.

Maine right now exports some amount of power to the grid. It's been mentioned a couple of times. This position is one not necessarily going to last forever because the natural gas prices going up so much, there is the potential for capacity, literally, power plants, to move outside the state to where they have capacity shortfalls. I know this gets into sort of a deeper level than you probably want to get, but we may not have an extra abundance of power in Maine very much longer.

Secondly, having more power that we can export outside of Maine keeps Maine's energy prices low. In fact, Maine's energy prices, if you look over the past year, have been lower than the rest of New England on average, and that story repeats itself as Maine has had more power than it uses itself.

The second sort of thing that I think is important to look at in weighing this proposal is the effects of global

warming specifically on the unorganized territories, so I want to just tick through a few effects that I think are of note.

There will be more diseases in our woods and more insects that last throughout the winter. We have always heard concern about spruce budworm, the wooly adelgids that attack hemlock in southern Maine are creeping northward, and we can have continued effects of their creeping northward in terms of their range into Maine and into the unorganized territories where, of course, forestry is of utmost importance.

There could be problems with habitat for species that are at the southern end of the range or that need more alpine climates, for example, Bicknell's Thrush. We could see those species continue to move -- move their range northward as this warming trend continues.

I think also traditional uses here at Sugarloaf Mountain or throughout the unorganized territories -- snowmobiling, ice fishing, cross country skiing, snow shoeing, whatever it is that you like to do in the territory -- will get harder and harder as we continue to have rainy winters and ice storms.

This year I came up here two or three times. The skiing was marginal at times.

We would like to continue to be able to do the traditional recreation that we've always done here in the northern part of the state.

And finally, the decreased snow cover in the winter is also cause for concern for wildfires and for decreased drinking water and water supplies in streams and lakes.

Luckily we had a wet spring this year, but you may recall in the beginning part of the spring there were major concerns with wildfires, especially in the Down East region, and there were a number of fires that were burning in that area, more so than there were in most years up to that point.

So those are the effects of global warming I think are important to weigh when looking at the effects of this development.

Again, it's going to be a hard decision, and my hat is off to you for reviewing this. I think you'll give it a very thorough eye.

Thank you very much.

THE CHAIR: Thank you. Claudia King. And following Claudia is Art from Stratton. Art, if you're out there.

MS. KING: Hello, my name is Claudia King and I'm here on behalf of myself and my husband, Lindsey Tweed. We live in Falmouth, Maine. We may not be local. The issue that brings us to this point, this place, is not local, it is regional, national, and global.

Several years ago we decided to put some of our money into the Redington project. Having recognized our nation's addiction to fossil fuels and the accumulating evidence about

global warming, we wanted to do what we could to promote an alternative form of energy.

After some research we were convinced that wind power was the best, most feasible choice and that Maine was and is a great place for it with some great sites, a great wind supply, and a populous concerned with preservation of the natural world.

The Redington Mountain and Black Nubble Mountain project is an exciting opportunity to provide a significant amount of clean power to Mainers and to demonstrate to New England and the nation that we can make difficult decisions with care and intelligence.

There are some trade-offs. There will be towers. My husband and I believe that the towers are signs of good news, not the eyesores some fear.

Some of the land will be cleared and some roads will be built. Much land will remain untouched and will remain protected from future development.

Two mammals recognized as rare will have some of their habitat disrupted. One irony here is that one of the great threats to these two animals is the heat increases that comes with global warming, the major adversity the wind farm hopes to address.

We wish there were no trade-off in this wind project or any wind project; but we feel that when all is said and

done, the positive aspects of this project will outweigh the negatives.

Thank you.

THE CHAIR: Thank you. Is this Art from Stratton?

MR. EDELHOFF: My name is Art Edelhoff. I live in Eustis and Stratton.

I'm going to wax a little philosophically this evening and go way off on another path I suppose. But when I was thinking about this situation, I thought maybe a little philosophy should be heard.

To effect the quality of the day is the highest of arts. Nature's way is the way of the wild. It feeds that quality. Men defile their lives when they do not abide by this basic law of nature of existence.

A maimed and emasculated country results in a maimed and imperfect nature.

The penalty for breaking this basic law of existence, windmills encroach upon that law of nature.

Science is a value of an interior meditative life. The sacred nature of living is a vital spirit. Windmills would upset that spirit.

Instead of having -- instead of hearing celestial music, we'll hear the grinding of 150-foot blades. We know that windmills lack consistency in providing power. They are commanded by erratic winds.

So it is difficult to understand the trade of spectacular scenery for a feeble, uncertain, and unsightly power operation.

Certainly the consequences of global warming have been cited by the scientific community, but how will the mutilation of a glorious mountain in this remote paradise be felt in the overall scheme of a global solution.

We have so few people here, and there are so many elsewhere. We don't need a jungle of windmills; we need instead to play guardian of what has been nature's gift of beauty and sanctity.

Oh, beware of corporate encouraging, gentlemen and madame. Do not destroy our peace.

I thank you very much.

THE CHAIR: Carry Trimble.

James Tierney. Is Jim hear?

Moving right along, Mary Henderson.

MS. HENDERSON: Good evening, Commissioners. We appreciate the opportunity to be heard regarding Maine Mountain Power's zoning petition ZP-702 requesting rezoning of two parcels of land in Redington Township on the Redington and Black Nubble Mountain peaks.

My name is Mary Henderson, and I appear before you tonight in a dual capacity.

First, I'm a 58-year resident of Stratton, Maine. My

husband and I raised our family here, and I have a deep love and appreciation of the beauty, heritage, and culture of the western Maine mountains.

I'm also here in my capacity as vice president of the Rangeley Lakes Chamber of Commerce. As there are many individuals and groups present to address the scenic and environmental aspects of this application, the economy of western Maine is the focus of my comments to you this evening.

It will come as no surprise to most of you that the economy of the Rangeley Lakes region is a success story. This status in Maine has not been obtained by accident. It has involved careful land planning and stewardship for almost 200 years.

We have chosen to impose strict conservation measures, been supreme stewards of the land, and have opted to pass up the fast buck to develop our economy. We are a shining example of an environmental economic partnership that has created beneficial achievements.

We are fortunate to have a seasonal home and vacation industries as the basis of our economy. Only 70 percent of our economic fabric depends on passionate lovers of Rangeley choosing to build a dream vacation home here.

These folks require almost no services from us, are zealous supporters of our clean, scenic environment, and contribute endlessly to our causes and businesses.

Thousands of western Maine residents depend upon this industry for their livelihood.

To attack our second home and transient visitor industries by eroding the very qualities these homeowners and vacationers cherish is economic suicide.

We believe that erecting a 30-turbine wind farm visible for miles around perched upon the country's most scenic areas with dancing, flickering lights 400 feet into the night sky is appalling and a disaster of monumental proportions.

Your report, three decades have changed in LURC's jurisdiction confirmed over and over again how valuable our real estate market is to us. Our appealing district accounts for 30 percent of all permits you issue.

Our homeowners build larger, newer valued homes than those in other districts. Our district has the lowest poverty level, our residents are more educated, and our district enjoyed 63 percent of your jurisdiction's net growth between 1990 and 2000.

The report states that our growth rate will likely continue. This growth is projected to grow faster than the state as a whole.

Nationally interest in seasonal homes has reached historic levels as both investment and recreational opportunities. The market will only increase as baby boomers reach their peak earning years.

Exceeded only by waterfront listings, properties with scenic views are the most sought after real estate. When property offers attractive views, its value is actually doubled than that of property with no view, and no view is decidedly more appealing than an ugly view. Imagine the economic ramifications of significantly devaluating hundreds of homes in western Maine.

We understand and support the zest to develop renewable energy sources. We urge Mr. Lee to expend his efforts and millions of dollars on some different type of alternative power that is more reliable, more consistent, more productive, and doesn't require other power producers, such as Stratton Biomass and Wyman and Harris Damn hydro plant, to be on costly standby when our wind is blowing.

THE CHAIR: Mary your time is up.

MS. HENDERSON: Okay.

THE CHAIR: I have Basil Powers down here but he put, no, he didn't want to testify. He's standing up, so I've got a feeling he's changed his mind.

Is that true?

It looks like a long speech, Basil.

MR. POWERS: I've been trying to get it to four minutes.

First I would like to thank Catherine Carroll, the director of LURC, I would like to thank her staff, and I would

like to thank the LURC Commissioners for giving we, the people, this opportunity to voice our concerns against the proposal for which we are here.

My name is Basil Powers. You probably all know me anyway.

I live in Coplin Plantation along the banks of the south branch of the Dead River. My wife, Harriet, was born in the farmhouse we have called home for the past 65 years. We own 245 acres along the river, practically in the shadow of Black Nubble and Redington Mountain.

I was not born here in this area, myself, but when I first came to Coplin Plantation in the early 1950s, I fell in love with not only a beautiful girl, but with the land, the river, and these mountains. I thought then, this is where I want to live, work, raise a family, and die.

That's all happened but the last, and I'm not rushing that, thank you.

The issue we're all here today to challenge is not about electricity. Please hear me well. It's not about pollution of the atmosphere or dependency on foreign oil. It's all about money.

This California-based company just wants to make big money. They care nothing about our beautiful mountains, our clean mountain streams, or our laid back form of life.

It's all about money. Federal tax money, which, by

the way, is easy to come by for just about any screw ball project you can think off.

They will call me a NIMBY. That's all right, go ahead, I've been called worse things; but it's not in my backyard, it's in my front yard.

If you look out my front picture window, Black Nubble Mountain fills my skyline, and as I said before, we are practically in the shadow of the mountains.

And I will tell you now, if this proposal was anywhere near your home, every single one of you in this room would become a NIMBY real quick.

This proposal states that they're hoping to hook up enough electricity to power 40,000 homes in Maine, but like someone before me, tell me where the hell 40,000 homes in Maine are that don't already have electricity. That does not need more electricity. Maine produces twice as much electricity than it uses every day. Central Maine Power Company would be glad to hook you up.

There is no need to rip the tops of all the beautiful mountains, destroy anymore forests, pollute anymore streams, and gigantic balsam fir in a quest for more electricity.

I hold here in my hand proof that there is hope just on the threshold or around the corner that will solve many, if not all, of our future energy needs.

So I say to you, the Commission -- and I've lost my

place -- your predecessors, and maybe some of you were there, in their infinite wisdom must have thought that protecting these mountaintops above the 2000-foot mark was the right thing to do and I firmly believe that it was.

If states and cities to our south and the west, namely, California or Rhode Island, have any need for more electricity, then that is exactly where this program should be placed, not on to top of our beautiful mountains.

Why should we who like these beautiful mountains have to suffer the indignity of looking at these horrible towers and whirling madness forever.

So we're asking you, because it is in your power, not to break that code of thought. Please deny this proposal. I thank you, all our grandchildren, and great grandchildren will thank you also.

But I would like to add a paragraph.

Please, not once have I heard this wind company say that they can reduce my electric bill $5 a month or $10 a month. That would be good news, but never once have you heard them say that, and you can't get them to put it in the paper, I'll bet you.

So Maine doesn't need this electricity. Not one kilowatt of this power is going to stay or benefit anybody in this state. It's going to Rhode Island, it's going into the grid.

So I'm asking you, please, take a real hard look at this thing. I ain't going to live, maybe, all that long, but I don't want to look at those ugly things 365 days a year, and I shouldn't have to. There are other places. I really think they could find a better site than the beautiful mountains.

I would like to leave these papers here. I would like to have you look at them.

Can I leave them with you?

THE CHAIR: Leave those with your testimony, Basil.

MR. POWERS: Thank you very much.

MR. HARVEY: You look like you knew what you were doing.

DR. SAYER: You didn't want to call my name, I know why.

THE CHAIR: Suzanne Sayer. And after her is John Hellie.

DR. SAYER: Hello, my name is Suzanne Sayer. I'm from Kittery and I'm a nuclear engineer. Before I became a nuclear engineer, I spent 45 years of my life studying the earth. I am an earth scientist.

I have studied the earth, I have three degrees, and I've been on six out of the seven continents, and I am terrified about global warming.

This is the only place in the universe that we know that we have life. I suspect that there are lots of other

places, but I know there's life here. If we do not do something about the global warming on this planet, there will be no life as we know it. The cock roaches will live, but that's about it. The cock roaches and a few animals in the ocean if they don't get too warm.

I want to say that most of comments have been reiterated by Senator Cowger; Strimling; Dave Evans, the high school student from Scarborough, which I'm very delighted that he actually learned something in science class; Mr. Whittemore; the good physicians that have spoken; the gentleman from the lung association.

I live in Kittery and I don't have the benefit of being able to put up a windmill or solar panel. I live on the northeast side and there's trees all around me, and they're dying from some type of blight.

I don't like them to die. I would like solar panels, but I think some of the diseases are caused by this global warming.

I love this earth. I want to think global and act local. These people talk about money. They talk about the wind power is subsidized by our Federal government.

If they looked at what the subsidies for oil and gas have been, the tax breaks they've gotten, if they've looked at all the wars we fought in the Middle East, having sent over our precious sailors and soldiers and Marines, and the death and

dying and the Veteran Association fees, these fees are all a part of the production of energy in a foreign country.

If you take a look at all those fees, the price of our gasoline at the pumps should be $8 a gallon. We are not getting a tax break for wind power anything close to the $8 a gallon. What our country is providing the oil companies for tax breaks is to produce oil for our cars and our guzzling SUVs.

I would like to say that these people who have tried to bring up people up here to testify, I would like to have been able to ride the bus with them to save the energy from consuming -- every mile I go in my car puts one more pound of carbon dioxide in the atmosphere. We need to take that carbon dioxide out.

There won't be any trees in Maine if we continue to produce carbon dioxide.

Thank you very much committee. I think that you have a very hard thing going ahead for you. I think the windmills -- I may not like one in my front yard, but I think they're also a gorgeous, gorgeous technology.

I'm a nuclear engineer, I've worked on nuclear submarines. I think nuclear power has got to have a place in it, too. I know that most of these people are not pro nuclear power, they're for wind power. I'm pro wind power, I'm pro nuclear power, I'm pro any type of alternative to get the

carbon dioxide out of our atmosphere.

Thank you very much and have a good evening.

THE CHAIR: Thank you, Suzanne. John, is he here somewhere?

Following John it's either Jan Collins or John Collins. I'm not sure which. Linda said no. I don't know whether she wanted to testify. Jan Collins or John. Linda said no. I don't know whether she wanted to testify.

Are you somehow associated with Linda?

MR. HELLIE: Ladies and gentlemen, LURC, Chairman, committee, my name is John Hellie. I live in Lang Township, otherwise known as Langtown. For the people that don't live up in this area, it's on the map. For those of you who do, you know where it is.

This has been literally broken down into a war between NIMBYs, NOOBYs, whatever you want to call it, and the out-of-sight, out-of-minders. It's been broken down to old people versus young people, but the big thing that I'm concerned about is the fact that this is a rezoning, a rezoning that states right in the title, Protected Mountains.

A man that lived in our area in Langtown who we lovingly called the governor, his name was Brad, he lived there for years and worked for IP for 40 years, he used to point at the mountains and say, do you see that? That's a clear-cut. Do you see anything up top? I said, trees. Yep, that's our

government. They finally wised up and did something good.

Now, I'm not a full-fledged Mainer, I've only been here 15 years, but I grew up in California. I grew up in Silicon Valley back when they had some sheep, otherwise known as Cement Hill, and then they had what they called a wind farm.

A wind farm that started out with 30, 40 turbines. Near going on the way to Fremont, they call it the Fremont Hill. Well, 200 later became what we call Pin Cushion Hill. They had turbines facing every direction to get every piece of power they could get, every piece of wind.

The problem we have here is that Maine isn't even the No. 1 state for wind. Wind is not even in the top 10. We shouldn't even be here at this point in time.

If we were No. 1, I would be all for it; but if it it's not going to benefit locally, if it's not going to benefit the people of Maine, if it's going to be shipped out, then we're giving up our mountains.

And I hear global warming. Well, the windmills right now at this very moment in the United States produce less than 1 percent of the energy that we consume.

How many mountains are we going to tear up to compensate for that? I guarantee you, if you open up the mountains, then you're going to have radio towers, you're going to have telephone towers, you're going to have TV towers if we don't stick them in the air for a satellite.

Everything is going to be all over the place. They're going to need more. They're going to be coming from California. They're going to be coming from Texas, from New York.

So when people say you want to give up and your own little world and get out of OPEC, well, I'm willing to get off of OPEC. I'm willing to look at wind farms, but not to the extent that OPEC changes Maine to New York, California, Texas, Nevada, Las Vegas.

These people that I've lived up here with for four years, I respect them because it's hard to live in this state. And every one of these people -- I've listened to both sides of this room today -- talk about how well that they are trying to do this, that, and everything.

It starts in the home. It starts in the grass roots. This is a grass roots state. This is how we do it, and that's what I respect about these people.

It's not right to have somebody from out of state all of a sudden decide you should put it up there. If you open it up, what happens next? Clear-cutting, harvesting. It's got to be clear-cutted to get them up there.

I'm worried about all that. I'm worried about anything that has to do with the final clear-cutting. You might as well change the mountain to a bald mountain, pin cushion, needle head or whatever.

But I do hope one thing. There was somebody that asked, if not here, where? Well, something to think about and this is just an analogy.

If you had somebody come to you, and it might not be your jurisdiction, and said I would like to put 20 turbines out in the bay -- think of Boothbay -- and there's already lines underground -- which there are -- and there's more wind on the ocean than there is in the mountains, would you give them the okay?

Thank you.

THE CHAIR: It was Jan, not John. Chris Keene, if you're still here, you'll be next in line.

MS. COLLINS: Thank you for the opportunity to address you tonight.

My name is Jan Collins, I live in Wilton, Maine. In keeping along with the things that people have said to give them creditability, I'm a member of the Oquossoc Indians. My family's been here thousands of years.

I also belong to an ecological club at my high school, Mt. Blue High School. I am a science teacher. I teach biology, chemistry, and physics, and I'm a farmer, I have a blueberry farm.

To the point: I have heard much testimony, outrageous testimony and outrageous claims tonight, unscientific in nature, things like if we somehow saved the

Cloud Forest of South America. If we build this, we'll somehow cut down the amount of $CO_2$ in the environment.

As far as I know, there is no quid pro quo. If you let us build it, we will retire a power plant that burns fossil fuel. If you let us build it, we will junk a bunch of cars. If you build this, we'll ensure that people somehow drive Priuses instead of SUVs.

There is no guarantee whatsoever that any of us will change our gas guzzling consumerism. This power plant may not reduce $CO_2$ at all.

Our consumption of fuel, fossil fuel, is not in fact decreasing, it is increasing, and the addition of this power plant will probably not change that.

It will not, in fact because of that, change the amount of $CO_2$ or other pollutants that are produced by fossil fuels and save our lungs.

There are some things, however, that could change that, but most of those require personal responsibility, personal responsibility that for the most part we choose to ignore.

In order to actually effect the $CO_2$ levels in this state or in this country, we will have to do things like reduce the amount of miles that we drive. Personally, I'll have to do that, or I'll have to buy a vehicle that gets better gas mileage.

I can also reduce my consumption of fossil fuel by living in a smaller house. That takes personal responsibility. If I live in a smaller house, I'll consume less fossil fuel because I'll burn less.

So the real alternatives if we're looking at saving Maine over saving the planet -- if we really think we have that much control over the planet -- is looking at personal responsibility.

The real crux of this question, however, is should we change the zoning.

I must agree with several of the speakers here that should we change the zoning on this mountain, what would keep us from changing the zoning for all mountains? In fact, once we change the zoning here, we set a precedent, and that precedent is that the mountains are not in fact going to be protected on their summits.

As a member of a comprehensive planning board for several years, what our duty was to decide what are the most important resources in our community and how can we zone to protect those resources.

What we need to do in Maine is the same thing. What are our most precious resources? How can we protect those precious resources.

So the onus is on us, what are we personally going to do to protect those resources.

I've heard lots of talk about saving endangered species in Peru. There are endangered and threatened species on top of this mountain that we need to protect and will be gone when we desecrate the top of this mountain. Gone, irreplaceably gone.

Is this what we want for the future of our mountains? By changing the zoning for this mountain, we are looking at that same change for all our mountains.

Thank you very much for listening to me. I really appreciate it.

THE CHAIR: Chris Keene. After Chris we'll be looking for Matt Tinker. Go ahead, Chris.

MR. KEENE: Good evening, LURC Commissioners. My name is Christopher Keene. I am from Greenville, Maine. I'm about 34 years old, which makes me eligible at least to breed someday and maybe I'm not the youngest generation.

Being a native Mainer -- I was born in Orono, moved to Greenville when I was 3 years old or something -- I was taught two things that I will pass on to my own children: Respect the environment and respect for my elders.

I'm also an avid hiker. I don't canoe, I don't hunt, I don't fish, it cuts into my hiking time. Exclusively hiking.

I'm also a registered Maine guide. I do much of my guiding up in that region, and the lady who just spoke before, I really have to -- you know, when you set this precedent, you

know, I worry about a few things.

One of the things I've read in some documents on about how they want much more of Maine's energy produced by wind power, and they said it would be upwards of 20 percent.

With that 20 percent, they would need a thousand such towers, and I wondered where the other 970-some towers would go. They wouldn't be done with this region. I know precisely some of the spots they would probably go. I have a good guess the high elevation peaks.

One of them I had the opportunity to go bushwhack earlier today and I chose not to. I thought that was pretty selfish to go do something like that way up there when I could come down here and kind of do the same thing.

I hiked nearby Burnt Hill earlier today, not Black Nubble, but Burnt Hill. My legs are really tired. And all that heat, despite the sweltering heat, you know, before the rain clouds came, I had some pretty good views. I could see Sugarloaf -- how could you miss it -- but also Crocker and Abraham and Spaulding. I think I was seeing Snow Mountain, another 4,000-footer right off in the distance.

There's another mountain, Bigelow, another valuable asset. When they had the slide earlier, they were going off about the biomass plant and all these things.

I think you could put Bigelow without its development, without anything, and you could put it up against

Sugarloaf, you could put it up against Saddleback, you could put it up against all those things.

It stands along with this natural asset, it's why people come here. I would love to be able to guide in this region. You couldn't drag me off these mountains.

From Burnt Hill I could see over there on Bigelow Mountain a little tiny fire tower about that tall (indicates) that couldn't be more than 15 feet high. It's the original ground house tower. I don't know when it was made. It was one of the first towers in the state.

To the point, I could see it 9 miles away. If something like that stood 400 feet tall, I know I could see it from the mountains in the Moosehead region. I've been on Moxie Mountain, just over on the other side of 201. I've seen Redington Pond Range. I can imagine what a 400-foot tower would look like.

We're not talking, I don't believe, about 400 feet. It's more like 550 feet if the blades are 150 feet long. There would be lights at the ends of those whirly blades, I would hope, so that a pilot would make his adjustment so he's not going 475 feet, he'll be going up much higher so he's not clipping the blades on the turbines.

I didn't see that Avery Peak is taller -- West Peak is taller than Avery Peak from that far away. I know that 400 feet is going to be visible for miles and miles away.

One of my -- so I certainly don't approve of their proposal, certainly not as written, and one of the other things I have objection to is they try to alleviate the visual impact by conserving 300 acres.

I would rather see something -- I would rather not see turbines here at all, I don't believe it's an appropriate place -- I would rather see something on the moon. How high can we aim? 30,000 acres?

How about a moratorium on future wind turbine development, say for 50 years. You have to put much more stringent restrictions on this.

Thank you.

THE CHAIR: Matt. Matt Tinker. I don't know if he's here.

Lucile Weymouth. Susan Devaney. And after her I have Jeff Porter.

MS. DEVANEY: I am Susan Devaney. I am from Steuben, Washington County, Maine, the other Maine.

My husband and I bought our home here in Steuben 10 years ago because Maine was the most beautiful place we had ever seen. And beauty is in the eye of the beholder because we had come from California. I also had lived in Seattle, in the San Juan Islands. I love beauty, I love Maine.

I found the first time I saw the windmill farm outside of San Francisco to be one of the most beautiful things

I had ever seen.

On frequent trips north -- this was almost 35 years ago -- I rarely saw still windmills; I saw them dancing and they were beautiful and they don't grind, they make a soft swoosh, swoosh, just like the ocean does at my house.

I fear for future generations. I fear for my grandchildren. I fear for global warming. I saw the ice storm in '98. The last three years I have not even had to plow. I've had no snow.

Maine is not the same state it was 10 years ago, it's warm. I can't think of anything worse than an energy crises, global warming. I've been to China. I've had coal dust all over my face, I've seen the oil fields in Long Beach, California, the oil fields in Texas. They're filthy, they're disgusting, they're loud.

I think we need to look at alternative options for energy. I've seen windmill farms all over the world, and they can be absolutely beautiful.

I understand the concerns. I'm only here because I think we need to look at alternatives and options, and I love this state.

Thank you.

THE CHAIR: Thank you, Susan. Jeff, you're an intervenor. Your group is an intervenor, right?

MR. PORTER: I am not an intervenor.

THE CHAIR: You're not?

MR. PORTER: I am not.

THE CHAIR: You've been withdrawn? Is that true?

MR. PORTER: There was no testimony. I have not submitted testimony at the attorney general's suggestion. All I wanted to do is state our support for wind power.

THE CHAIR: All right, I'll allow it.

MR. PORTER: I appreciate that.

Again, My name is Jeff Porter. I am with the Coalition to Reduce our Dependence on Foreign Oil. I'm from Cumberland, Maine. I'm a father of five children and I'm here for two reasons: One, I think it's important that we begin to take responsibility for our own actions.

We in this state and as a nation have a tendency to blame others, and I don't want my kids ever to be forced with the choices that we're faced with today.

Unfortunately, our soldiers have gone overseas many times in the past 20 years to protect our sources of power, and I think we have a viable option here.

Wind power -- I must take exception to a number of the individuals today who indicated that somehow the power is leaving the state. I think that violates the basic tenent of electricity.

This power is not leaving the state. This power is staying in the state of Maine. I'm not aware of power leaving

the state of Maine given the current configuration of the power sources.

I find it also interesting, it's very unusual in our state, I've been in Maine all my life, my grandmother was born up here, if you look you've got all three of the major papers -- Lewiston Sun Journal, the KJ, the Portland Press Herald -- come out in support of this project.

It's very unusual. You even see them come out for TransCanada. So I think we're moving in the right direction.

For a number of outdoor environmentalists and members of the Appalachian Mountain Club who have given money in the past to environmental groups, there are many of us who care just as much about the environment as those who purport to be environmental groups.

I've hiked all of these mountains. I've been in this area all my life hiking, and I need to correct one of the mistaken impressions that seems to be continually relayed, and I know a number of you have gone on the site walk, this is not a pristine area. This is an area that has been harvested and used for many, many years except for the tops of these mountains.

They've been harvested, they've been snow mobiled on. Actually what we're talking about is one additional use. That's all we're talking about, the additional road. Those roads are going to be used by people who hunt, people who cross

country ski, and people who hike.

I guess the final point that I would make is that there are a number of us that are here and are not from the local area.

I think there's one group from southern Maine and other who don't think we have the right to participate. It's preposterous.

I think the important thing is we need to look for ways to get power in a cleaner, more dependable way. I'm not sure where most of the opposition comes from. I've heard a lot of reasons for this.

My concern is that if we continue going down the road we're going down, let's go door to door.

But that's not written in stone. Things change. Our situation in the world has changed, and we need to find a way to be more energy independent, and Maine needs to be a part of that.

So with that, I would like to enter into the record the editorials that I have here from the three major papers in support of the project and again reiterate my support for this project.

THE CHAIR: Thank you, Jeff. Ted Allen, is he here tonight? After that there's another, Travis Lee. How many sons do you have, Harley? He's not going to testify?

Go ahead, Mr. Allen.

MR. ALLEN: I'm Ted Allen. I'm from Brunswick. I'm a lifelong camper, hiker, fisher, mountain climber in Maine, both as a resident and as someone from away. I come to you really as a biologist, which I have done all my life in one state or another.

I have a little bit of tunnel vision on this that I think hasn't been talked about as much as I would like to hear it talked about tonight.

This petition repeats what road construction has done to fragile environments throughout the world. By building on one of the highest wilderness mountain ridges in the state, the road will not only affect the immediate neighborhood and its rare inhabitants, but also everything downhill from it.

One of the axioms of sustainable development is to walk lightly on the land so as not to hurt those who live downstream.

This petition fails this axiom, one, because the project has chosen a site where it is impossible not to leave a large destructive footprint, and two, the evolution of the plan over the past couple of years has been to increase the size of this footprint and not to decrease the impact of larger towers.

There are ways to respect both the needs to preserve environments, which if destroyed are gone forever; and we need to press on with sustainable development.

But development should not destroy an inheritance,

and you've heard all kinds of ways that that should not happen and would make a big dent in this well preserved, so far, resource.

The inheritance from we get from fossil fuel is now going away. We need to think a lot more carefully about how we build sustainability in Maine versus sustainability has become a code word and not a way of life.

An earlier person talked about this 3,000-pound gorilla that's in the room, conservation. We are already, according to many views, over the hill. This is in some ways too little, too late.

For me the major issue is again a tunnel for the Commission. I am a biologist, I don't like roads. Roads kill lots of things, even in Maine, but mainly in environments as high and not as diverse. A road through a Wyoming trail does a lot of damage and is very similar to a road through a high mountain area in New England.

I hope -- this 3,000-pound gorilla is more of a big issue problem. I hope you can address this in some of your own solutions and the local problem it faces.

Thank you.

THE CHAIR: Thank you.

Bob Kennedy: And after Bob is David Demere. Is he still here? Bob Kennedy.

David Demere, is he here? David is from Belfast. He

came a long way.

Louise Tesseo-- I'm sorry if I'm mispronouncing your name -- from Coplin. She's close to home, I'm sure she wouldn't go home.

After her is Roger Gilmore from Castine.

MS. TESSEO: My name is Louise Tesseo, and I'm here because I strongly oppose the windmill project.

Our family has been coming here to the Rangeley Lakes area for a century and a half. I, myself, have made this my home for the past 26 years.

I have watched the area change immensely in the past 15 years and not all good. I wish I could just push my nose and have it all back the way it used to be, untouched and special.

I've listened to people comment on the changing landscape and how sad it makes them feel. Most don't know the half of it.

People in this area have depended on tourism for a long time, and it is generated by the beautiful mountain views and the pristine lakes. Without that we'll no longer thrive or survive in this place that we call home.

My husband and I purchased 30 acres of land on Route 16 surrounded by mountain views of Black Nubble and East Kennebago. We certainly weren't expected to look at monstrous windmills.

We are toying with the idea of having a tepee campground so as not to harm our surroundings and make our living in our middle age. If this goes through, why would anyone want to camp looking at views to lighted windmills. There goes my future.

We do all want -- do we all want to wait and see what these proposed windmills will do, or do we do the right thing and say, no, once and for all so that we can all relax and enjoy this very rare and beautiful piece of earth.

To clear highways in our protected forests is a crime and is a problem for most. I'm asking you to please say no to this project.

Thank you. Let's not forget it's protected. We really want to protect it.

THE CHAIR: Roger Gilmore, is he here?

MR. GILMORE: Yes.

THE CHAIR: After Roger there's Ken Spalding.

MR. GILMORE: Thank you for this opportunity. I came over from Castine this afternoon. Our primary residence is in Portland, but I'm fortunate to marry a woman with a family summer cottage in Castine, so we spend a little time there.

I climbed Mt. Katahdin for the first time in 1953 and was so impressed with the wilderness and the mountains of Maine. Although I lived away for a long time, I always wanted to come back here, and when a job opportunity presented itself,

we came here 17 years ago because of the wilderness and the mountains of this state. I'm an avid hiker and I'm an avid environmentalist. I just want to share a couple of perspectives here.

This is a hard issue because it's so emotionally appealing and philosophically appealing and even policy appealing to be in favor of this project, but I think in a broader perspective there are other more effective and more efficient ways to accomplish the energy savings that so many people have spoken so passionately for.

If we increase the miles per gallon standards for all of our motor vehicles, we would be making significant headway on reducing our dependency on foreign fuel.

There are always trade-offs in any kind of policy decision, but as we look at this particular one, the trade-offs don't seem to be worth the compromise to the environment that this project would cause.

In the interest of time, that's the main thought I'll leave you with. Thank you.

THE CHAIR: Thank you. Is this Ken Spalding?

MR. SPALDING: Yes.

THE CHAIR: And after Ken we have Steve Pierce if he's still here.

Go ahead, Ken.

MR. SPALDING: My name is Ken Spaulding, I'm from

Wayne, Maine, and I thank you, Mr. Chairman, and members of the Commission for this opportunity to speak.

I've been an advocate for alternative sources of energy for a long time, over 30 years now, and that includes just some of the bona fide people talk about.

One of the things that I'm maybe not most proud of, but I did work in an effort to help develop the biomass plants around Maine. Not everything we hoped for came true with those, but we certainly tried.

Personally, I agree with the person who said that this requires personal commitment. In 2002 I bought a Toyota Prius rather than a Civic hybrid because of the distinct difference in emissions between the two vehicles. So it does, I also believe, require a personal commitment.

I'm also what you would like to call a YIMBY, that is, yes, in my backyard.

There are people here from the area, we've heard a couple people speak from the area, who are investors and support the program.

Most people in the area don't support it. I'm sure that those people from the coast would support wind power in their backyard along the coast, just as they've supported it here.

I, too, would support wind power in my backyard. I support Senator Scott Cowger's development of wind power in

Hallowell.

I live in Wayne and I work in Hallowell, and I think that's a very appropriate place for it from a social and environmental perspective. I think we do need alternative sources of energy.

Solar is certainly my first choice but it doesn't have the same impacts that wind power does, but wind power is also an important part of the mix.

I don't envy you your decision here with this project. I know if you don't approve the project, it will mean the global warming will overcome us and the earth will be destroyed. And on the other hand, we've got the wilderness of Maine that you'll need to desecrate if you make the other decision, so I don't envy you that decision.

I do invite -- I know that there's been talk about not being effective, not being efficient, not being cost effective to develop wind power in, say, the Augusta, or Portland, or Scarborough areas, Cumberland.

But I -- certainly Scott Cowger found it effective and cost efficient, I hope, to develop his wind power and his solar power there. It's a much smaller turbine certainly. I don't know where the break-even point is. Certainly the tax incentives make a difference.

When the Maine Lung Association did their study for community wind power, I don't know that the State tax

incentives for small wind power projects were in place at that time.

I hope that we can make a difference and provide those incentives. Just as this project requires Federal incentives, I hope we can provides the incentives for the small project in my backyard, which is where I believe that these belong, and not in these wild areas of Maine, which is so important to the --.

This -- we're talking not about just views here, although I can speak about the views in this area. What we're talking about, I believe, is the essence of the LURC jurisdiction and protection of that essence.

For a long time LURC has recognized the importance of protecting not only the back country areas but the high elevation areas, and I hope that you will continue to see the importance of doing that to maintain the character of the Maine woods.

I've seen some of the computer-generated views that the company has provided, and I know it's natural when you're doing something like this to try to minimize the effect visually.

I served eight years with the Maine Forest Service on the top of West Kennebago Mountain, looking towards Redington Pond. My job was to look for things, look for smoke, and I can tell you that not only was Redington Pond Mountain extremely

visible from there, but the fire tower way beyond that was also very visible. It depended on the light. That was a fairly small structure.

The day after that tower burned down, I noticed that it wasn't there and I called in Duluth Wayne and let him know about that, and it was gone. That was something that was visible to the naked eye and apparent that it wasn't there.

I also was a trail maintainer on Crocker Mountain for a number of years, and as director of Maine Conservation Board, supervised projects in the Cirque on Sugarloaf Mountain, in the Carrabassett Valley area.

It is inconceivable to me that the view from those areas will not be highly affected, and I don't believe that those computer-generated models, or photos, can do justice for what the real view would be like.

I've also seen wind power in other areas of the country, and there would be a huge impact there.

But that is not the most important detrimental impact to this project. It is in fact the slide towards the loss of the Maine woods and the LURC jurisdiction.

I would like to say -- what else would I like to say that I have time for.

MR. WRIGHT: 10 seconds.

MR. SPAULDING: I wish I could tell you about the history of the Appalachian Trail and that it was moved off of

Sugarloaf Mountain to get away from the development.

It was a very agonizing decision for the Appalachian Trail Club at the time in the 1970s because -- but the reason for doing it and the reason they finally agreed to it was to get away from the existing, what was at that time, the existing development with the promise that it would be in a more wilderness area and that they would never have to face the fight again that they would have continually with the development of Sugarloaf Mountain over time if it stayed there.

Thank you very much for the opportunity to speak.

THE CHAIR: Thank you. I think you can be assured that we'll hear lots of testimony about that history.

MR. SPALDING: I do hope so.

THE CHAIR: We have volumes.

I have on my list about 16 who still want to speak.

(There was a break in the hearing at 9:56 p.m. and the hearing resumed at 10:06 p.m.)

THE CHAIR: We're going to let Mr. Tierney go ahead here.

MR. TIERNEY: Thank you very much. I stepped out to get a hamburger. I didn't know you would go quite that fast but I'm back.

THE CHAIR: Steve is ruling with an iron hand here.

MR. TIERNEY: My name is James Tierney, I live in Auburn, Maine, and I'm a social worker and I'm an advocate for

wind power.

I would just like to suggest that when we started using oil a long time ago, we drilled some wells in some fairly dumb places, and I think we did that because we didn't have a comprehensive sense of the need or a comprehensive sense of the resource that we were working with.

My sense is we don't have a comprehensive sense right now of the wind resource, and in my opinion if we did, I think we probably would recognize that we need a lot of turbines.

To put them on all the ridges around Maine doesn't make a whole lot of sense to me. It seems to me we ought to find a spot in the ocean and put them out there.

Now, I know that's going to make some people unhappy, but it will give us a comprehensive place in the sense of putting all the turbines we need in a particular place, channeling the energy back to Cousin's Island, which is already ready for transporting the energy to wherever it needs to go.

I would go so far as to give Endless Energy the first 30 sites in that ocean project so that they can make their contribution, the contribution that they would like to make here across the mountain, out in the ocean as a part of a more comprehensive program.

That's my suggestion. Thank you.

THE CHAIR: Thank you, Jim.

I'm on the last page. We've had a few dropouts.

I'm looking for Charles Demere from St. Mary's, Maryland. That's a long ways home tonight, so I don't know if he's still here. Apparently not.

Collis Ames from Farmington. And after him is James, I think it's Labreque, from Bangor.

MR. AMES: Yes, sir.

Thank you for listening to me. I wanted to tell you my name is Collis Willard Ames. I was born in Farmington, Maine in 1931, so that makes me pretty close to 75 years old.

Someone said earlier all the old folks are against it. Well, I am against it but that's not particularly saying I'm against it.

I want to tell you that I was a sergeant in the Marine Corps in Korea. I'm 100 percent disabled, not that that amounts to them, but I want to tell you that I'm speaking from my heart.

When I raise my paper, the Franklin Journal from Farmington, Maine, that gentlemen, is the picture of where you're going to put your windmills.

Look at it, it's beautiful.

Now, let's think about the paper for a second. Farmington, Maine. For back as far as I can remember we've always called it the Franklin County belly ache because they always put controversial things in there. Let's go to the facts here, let's get the big stuff done.

I worked for 35 years for Central Maine Power Company. I was a high line lineman, okay. It almost scares me to think about climbing one of them damn things that high, and I've been up 300 feet and more, some towers that we have in our system.

Okay. Now, I know a little something about electricity. All right, I can tell you that in my opinion -- this is my opinion -- if you went down to New Hampshire and you cut every single one of those power lines right at the box so that no electricity could get out of Maine and none could come back in, we would have such a glut of power that you probably could buy it for 2 cents a kilowatt hour. I really firmly believe that.

Now, I also wanted to say that yes, I think that this windmill business is probably a darn good idea, but not in my paper, not in my Franklin County, and I'll tell you why: Because they don't need the power.

They need it down along the coast, they need it in Portland, they need it in Biddeford, they used to use some of it in Strong, Maine, the world's biggest toothpick mill. Well, that isn't there anymore. The building is, but it's empty, it's gone.

Just like the shoe factory over in Wilton, Maine, it's gone. There's so many things that are gone. I just don't know what's going to become of this. I really don't. I'm

frightened.

But I would like to see this windmill thing. Put it a little closer to the ocean. Want to get a light house put right next to those windmills. Make that -- make them proud of their country down there because I'm surely proud of this country up here.

Okay, I'm going to wrap this up and tell you that I don't envy you, any of you, having to make this decision, but I can also tell you from my heart it doesn't belong up here. It belongs elsewhere.

Thank you very much.

THE CHAIR: James Labreque. I guess he's not here. Tom Eastler. Sheila McMillan. I've got a name, I think it's Terry from Stratton. Anybody from Stratton by the first name of Terry? I'm sorry, I can't read your last name. Lou Ann Clifford. Herb Wilson. There we go.

MR. WILSON: Thank you very much for this chance to speak with you. I'm Herb Wilson. I live in South China, Maine, and I'm a professor of biology at Colby College. My specialty is ornithology, and my comments tonight are going to deal mostly with bird issues. I don't think they've been mentioned very much.

My own research is centered here in this part of the world. I've had a research project going on here for 16 years now. In fact, global warming is driving that project, so

global warming is something of great research interest to me.

I indeed agree that it's a daunting problem that humanity has to solve, and it really is a global problem, and if this proposal were funded, it would be merely a drop in the bucket of what we have to do.

It's certainly not a huge step for the planet, as one of the investors said earlier, but what I want to speak to you tonight about is three items that are dealing with the birds.

The first is the fact that these turbines will be spinning around. The tips of them will be going at speeds of excess of 200 miles an hour. They have a lot of distance to traverse, and they do represent a problem for migrating birds.

We know that some birds migrate mostly at night and they migrate mostly on ridges, so these represent potential mortality sources for these migrating birds, and I suspect you will hear tomorrow about the relatively low mortality of the birds, but I want to suggest that the estimates on mortality caused by rotating turbines is underestimated, for two reasons.

One is that many of the birds once they die fall into vegetation, perhaps even in adjacent trees, and are never found by searchers, and secondly, we know that scavengers find carcasses very quickly and remove them.

So the number of birds killed by turbines is certainly underestimated, and we don't really know by how much at this point, but it's a concern.

Such is one of my three concerns.

The second is just the fact that there are lighted towers, and I just want to give you a couple of examples from the literature of bird mortality and towers.

Now, mostly these lighted towers don't represent a mortality source for birds, particularly if the light is clear during a migratory evening; however, on nights when there's fog, when it's snowing, raining, birds become disoriented by lights, and what they apparently do is to get confused in terms of their navigational cues and they'll fly around and around towers running into guide wires, into the tower itself, or just flying to exhaustion.

So note that these towers have caused huge mortality have in fact many moving parts, they just have lots. So turbines or not, these high towers represent sources.

Let me give you a couple of examples. One night in October in Florida during a very foggy night over 4,000 birds were killed in a single nighttime. That sort of pales in comparison to another tower in Kansas -- only 400 feet, by the way -- that killed over 10,000 birds in one single night.

So mostly these towers don't cause any mortality, but at exceptional times they do. And I can see the same sort of death traps waiting for the lights that are going to be on these wind turbines.

The third issue that I want to talk about is a

specific bird, namely Bicknell's Thrush, and you all are aware of the fact that Bicknell's Thrush is a species of concern. Only about 50,000 pairs exist in the world and they also are birds of high altitude habitat.

In essence we can think about the habitat in Maine as being sky high. They're only found on tops of mountains about 2,500 and 4,700 feet.

What's going to happen with global warming. They will go up and continue the pace no matter what we do over the next 30 or 40 years. We're going to continue to see an increase.

What is going to happen is that vegetation is going to march northward -- slowly but surely. In fact, a study by the U.S. Forest Service last year indicated that if global warming proceeds, the carbon dioxide emissions continue at the same rate now until the year 2100, we will have no balsam firs in Maine. There will be no sugar maple in Maine.

Of course, what this means is that more southerly species can move up mountain sides because it's going to be warmer and warmer, and what's going to happen is those islands of stunted spruce, the vegetation where Bicknell's Thrush nest, is going to diminish and diminish and diminish until perhaps they're gone altogether, and so the species will be extricated in Maine.

I want to end by just saying what a great idea the

2,700-foot mountain protection zone is, and I don't think we need to set a precedent for overriding that for any sort of concern. We need to protect those birds and other animals that can't speak to you tonight. So for the birds, I wish to speak for them.

Thank you.

THE CHAIR: Thank you. Jean Wilkinson. And after that I think it's Jan Carley from Topsham.

MS. WILKINSON: My name is Jane Wilkinson. I am from Eustis, Maine.

I am speaking to you tonight as a citizen, not as a selectman, which I am from Eustis. I am aware that my constituents do not all share my opinions.

I will be brief and address only three points regarding my opposition to the proposed commercial wind power facility at Redington and Wyman Townships.

First, I feel the area involved geographically is a protected wilderness zone that needs to be kept as such. The environmental and visual impacts will be enormous and unnecessary.

The parts of Eustis, Coplin Plantation, and Wyman Township that face the proposed site are known for their great real estate values. This will most likely affect any future of beauty and resale if 30 towers are built within these views. By the way, my home looks directly at this ridge.

Secondly, I feel the area has been inundated with "power promises." Cheaper, more efficient, the usual propaganda.

In 1949 our beautiful Dead River was damned to make a lake that is flowing now less than three months out of each year for power. That same damn is not used for power and actually could be.

In 1988 the Boralex power plant in Stratton was built. There is a smoke stack in my view from this.

And now here we are confronted with yet a third proposal for power.

Enough is enough. We were once a sleepy little community in western Maine that folks thought they could take over. Things are different now. We are an area of recreational opportunity, natural beauty, and we intend to hold onto this. We have given up a lot of our power, but apparently is needed elsewhere. This brings me to my third point.

It is likely that this wind-generated power will be sent to southern areas in New England where the greater population is based, and I feel we do a fantastic job here conserving electricity rather than maxing out this usage.

The amount of actual power produced will not be enough to outweigh the amount of distress caused to our area. The building of roads, placement of utility lines and poles used to transmit the power, flashing lights at over 280 feet

atop a scenic wilderness ridgeline, and a large closed area for hunting, hiking, and habitat.

In conclusion, I am definitely not in favor of this location for the project, and I would rather see these towers constructed closer to an already built up and populated area, such as southern New England.

In other words, not in my backyard and I am proud of it.

Thank you for allowing me to speak.

THE CHAIR: Thank you.

Jan Carley. James Albert. Melissa Shea.

Well, that exhausts my list. Is there somebody -- I hesitate to ask.

MR. WEINGARTEN: Thank you for this opportunity to speak about --

THE CHAIR: Move up to the mic.

MR. WEINGARTEN: Thank you for the opportunity to speak about zoning petition. My name is Bob Weingarten and I'm a resident of Minot, Maine, where I have lived for the past 27 years.

I currently serve as president of the Friends of the Boundary Mountains. The mission of the Friends of the Boundary Mountains is to safeguard the boundary mountains from development and to conserve the area for traditional uses of recreation and forestry.

The group formed in 1995 when Maine's protected mountaintops were threatened by another rezoning proposal for wind development.

I am proud to say that Friends of the Boundary Mountains took the lead back then to oppose industrial desecration of Maine's mountains and fortunately our mountains received a reprieve.

That reprieve was a wake-up call for many of us. Over the past 11 years, I have personally immersed myself in the variables of wind power as it pertains to siting facilities in the boundary mountains and other areas in Maine.

During these years of following wind power, I learned of its many limitations and false promises, always finding myself, based on the data, coming back to the need to protect the mountains from such development.

Our group clearly recognizes that you cannot simply draw arbitrary distinctions or artificial boundaries among Maine's fantastic mountainous terrain and say it's okay to wreck havoc on one mountain while sparing its neighbor; rather we need to focus on protecting and cherishing the entire mountain area of Maine.

For that reason our group has voted to oppose the rezoning of Redington Pond Range and Black Nubble Mountain.

The zoning of mountaintops above 2,700 feet, which was originally 2,500 feet, in the unorganized territory has

been regarded as an important achievement of LURC.

Scientific and environmental testimony from others during this hearing will demonstrate why these mountains must remain as an area of protection subdistricts and will demonstrate how the impact of building a wind power plant -- including the roads, the power lines, the substations, and the turbines themselves -- will forever change the character and the habitat of these mountains.

So the obvious question is: Why would LURC even consider rezoning mountaintops? Is there any public benefit so compelling as to summarily dispense of years and years of this protection?

Upon closer examination I believe that LURC will find that so much of the claims and arguments of Maine Mountain Power are without merit, are greatly exaggerated for the benefit of the corporate profits of Edison Mission Energy, parent of Maine Mountain Power, through reduction tax credits and accelerated depreciation and clearly do not justify changing the rural lifestyle environment of Maine people in the western mountains for the feel-good benefit of others who live away.

One such claim that has been made is the outrageous falsehood being promoted by the Maine Lung Association that industrializing our ridgelines will actually produce cleaner air in Maine.

I would like to take a quick look at why this argument for wind power is so ridiculous and how it actually will tend to do the exact opposite.

First, I must tell you that I have a career of 33 years in health care delivery and public health in Maine, including managing community health centers here in Franklin County, physician practices, and providing health care consulting services for the past nine years.

I have worked on projects for the Maine Center for Disease Control and many nonprofit healthcare organizations and community groups. I have worked to prevent and reduce the incidence of chronic diseases in Maine.

I am very sensitive to that which can be done to enable Mainers to live healthier lives, but putting wind power plants on our mountains is not one of them.

I believe that by examining the specifics of the Maine Mountain proposal you'll see that the only plants that will actually be cut back are our renewable energy sources themselves, and therefore they are not the ones that you want to see cut back, and actually, the fewest emissions are from those plants.

And Maine Mountain Power also claims that they are going to reduce by 860,000 pounds of emissions per day. This is false because it's based on a average plant in New England and not a plant in Maine, which actually produce much less

emissions.

Finally, their plan is so exaggerated because it only encompasses one-half of 1 percent of all emissions in Maine.

So my point is that basically it's not going to amount to anything.

Similarly, what will happen is that we will generate tax credits for Edison Mission Energy, about $50 million to $60 million over the next 10 years.

That tax credit will offset the profits that Edison has from its coal-fired plants, so in effect it will help to subsidize coal-fired plants that Edison has and is doing the actual pollution here in Maine.

They have six plants in Illinois that account for more than 5,000 megawatts of power, and they burn between 16- and 20 million tons of coal per year and we are downwind of that power.

So I would just finally say, I would suggest that if the Maine Lung Association is interested in helping us to clean up the air in Maine, they should make some sort of deal with Edison rather than to destroy the mountaintops of Maine.

That's what I wanted to tell you. I'm sorry if I took too much time.

THE CHAIR: I think with that testimony that concludes tonight's hearing. Somewhere I have a prepared speech I have to read.

Just to remind you that we're going to continue this hearing tomorrow morning starting at 8:30. We will hear testimony from the Applicant, government agencies, and the intervenors; and there will be a second session to hear testimony from the general public tomorrow evening at 6 o'clock.

So if you wish, you may come back again. We certainly would welcome all of you to be here tomorrow. Many of the questions that were posed here will be discussed tomorrow. Whether the answers will be satisfactory to all of you, that's another matter. But I think all of the questions -- many of the questions that have been brought up this evening will be discussed, and you might find it very informative to listen to that discussion.

So I would encourage you to come tomorrow morning at 8:30.

With that, we'll stand adjourned.

* * * * *

(The hearing was suspended at 10:30 p.m. on August 2, 2006.)

* * * * *

(The hearing resumed at 8:29 a.m. on August 3, 2006.)

* * * * *

THE CHAIR: Good morning, everyone. Again, my name is Bart Harvey and I'm chairman of the Commission and I'll be

the presiding officer for today's portion of this public hearing.

Again for the record, I will introduce the Commission and the staff. For the Commission, Steve Schaefer, Jim Nadeau, Steve Wight, Gwen Hilton, Rebecca Kurtz.

For the staff, Catherine Carroll, executive director; Marcia Spencer-Famous; Fred Todd; and Melissa Macaluso.

Again, today the hearing is again being held pursuant to provisions in Title 12 MRSA Section 685 and will be conducted in accordance with Chapter 5 of the Commission's rules.

The hearing is being held to receive testimony in the matter of Zoning Application ZP-702 submitted by Maine Mountain Power to rezone 1,000 acres in Redington Township, Franklin County from a mountain area protection subdistrict to a planned development subdistrict for the purpose of developing a wind power facility.

The purpose of today's hearing is to allow the Applicant, intervenors, and government agencies to present summaries -- and I emphasize summaries -- of their prefiled direct testimony and evidence as to whether the development proposal meets the criteria for amendment to the land use boundaries as specified in 12 MRSA Section 685(8)(a) of the Commission's statute and the relevant provision of the Commission's Land Use Districts and Standards.

We'll first hear from the Commission staff who will present a brief overview of the proposal and the administrative history.

Following that, representatives of the Applicant will then provide a summary of the proposal and their prefiled testimony.

Following the Applicant, witnesses for the National Park Service, LURC, and the intervenors will present summaries of their prefiled testimony.

At the conclusion of the testimony of each witness, cross-examination may be conducted first by the Commission, then by the staff, next by the Applicant and/or by the intervenors; however, Commission members, staff, and counsel, who I failed to introduce to you -- Jeff Pidot, who is our counsel from the attorney general's office -- may ask questions.

As before, all the witnesses must be sworn and will be required to state for the record their name, residence, and business or professional affiliation -- and I think that's particularly important today given the nature of the testimony -- the nature of their interest in the hearing, whether or not they represent another individual, firm, or other legal entity for purposes of the hearing.

As before, everything is being recorded by a court reporter, as well as our own sound system so that there will be

a complete record of everything said today.

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

The record -- and we talked about that last night, and I'm not going to reiterate that now because we'll have to talk about that at the very conclusion of the hearing, we'll talk about how long the hearing record will be open -- at a minimum it's probably two weeks followed by another week of rebuttal and then the record will be closed.

If you wish to receive a copy of the final action taken by the Commission as a result, you need to leave your name and address with the staff.

At this time I would ask that all of you who are planning to testify today to stand and be sworn, please.

(PARTICIPANTS SWORN EN MASSE.)

THE CHAIR: At this time, unless there are any questions about what we're going to do this morning and this afternoon, I'm going to ask Marcia to do the administrative and the staff report on the project and review the administrative history for the record. Thank you.

MS. SPENCER-FAMOUS: This an Exhibit 9, it's a staff statement and administrative history.

In February of 2006 Maine Mountain Power, LLC, which

is jointly owned by Endless Energy Corporation and Edison, LLC, submitted a petition to rezone approximately 1,000 acres contained within two parcels on Redington Pond Range and Black Nubble Mountain in Redington Township, Franklin County.

The two parcels would be rezoned from mountain area protection subdistrict to planned development subdistrict for the purpose of constructing a 30-turbine wind farm.

The matter being considered at this time is rezoning the parcel in a preliminary development plan.

A final development plan and permit to construct a facility will be considered only if the rezoning is approved. At the end of the proposed planned development subdistrict, the Applicant would construct wind turbines on Black Nubble Mountain and Redington Pond Range, gravel access roads, and utility lines.

Outside of the proposed planned development subdistrict but associated with the project in the general management subdistrict, shoreland protection subdistrict, and wetland protection subdistricts in Redington Township and Wyman Township, the facility would include a 34.5 kV and 115 kV utility lines, access roads, a maintenance building, and a substation. The wind farm's utility line would connect to the existing grid at the Bigelow substation.

A portion of the 115 kV utility line associated with the project would be in Carrabassett Valley. The permit

application for this portion of the line is being reviewed by the Maine Department of Environmental Protection for of Town of Carrabassett Valley.

Activities within the proposed planned development subdistrict would include 12 turbines on Redington Pond Range and 18 turbines on Black Nubble Mountain, approximately 12 miles of new gravel road and above- and below-ground 34.5 kV utility lines.

Each turbine tower will be 260 feet tall, with a 30-foot diameter rotor, for a total height of 410 feet.

The area to be cleared within the planned development subdistrict would be 106 acres during construction, which would be reduced to 70 acres when operating after revegetation. The total untouched area within the planned development subdistrict would be 898 acres.

The access roads and utility lines would be both within and outside the planned development subdistrict. The total area to be cleared for the project, including 11 miles for the utility line, would be 307 acres. The total area of wetlands impact would be approximately one-third acre.

The administrative history. Preapplication conference with Applicant, staff, relevant State agencies was held in January of 2002.

The Applicant has consulted LURC staff and other State and Federal agencies since the mid-1990s to assure that

agency's concerns were addressed and that all materials required for the rezoning petition were submitted.

A pre-submission meeting with the Applicant, LURC staff, and Maine Department of Inland Fisheries & Wildlife was held in August of 2005, and then a pre-submission conference was held with relevant agencies and other stakeholders in September of 2005.

A draft petition was submitted to LURC December 19th, 2005. The staff reviewed the petition for completeness and sent a letter to the Applicant describing deficiencies in January of 2006.

The Applicant revised the petition in response to staff comments and submitted Version 1.1 of the petition on February 7, 2006.

Staff sent a letter to the Applicant and notified other interested parties that the petition had been accepted as complete for processing on February 8th, 2006.

A formal review period was established. Petition was sent to State and Federal agencies for stakeholder review, and other interested parties were identified. The deadline for agencies and stakeholders to submit and review comments was April 28th, 2006.

Public comments have been and will continue to be accepted until the close of the record.

The Applicant responded to the agency review comments

on June 2nd, 2006.

LURC engaged the services of a contractor to provide a third-party review of the visual assessment section of the petition.

At the March 2006 Commission meeting, the Commission granted a public hearing, although the date was not set at that time because it was too early in the process to know when the appropriate date would be.

In May of 2006 the Commission granted intervenor status to 15 parties and acknowledged participation in the proceedings by the National Park System as a government agency.

Seven groups voiced opposition to the petition; five for support; and four --

The public hearing was set for the week of July 31st at the Commission' business meeting in June. Several other dates were tentatively scheduled at this time, including June 8th, for the prehearing conference, to receive prefiled testimony, and July 11th for Commission statements.

On July 11 Commission, staff members, several of the intervenors, and others attended a site visit to view the area where the project is proposed.

A prehearing conference was held on June 8th. A prehearing conference order specified the date for submittal of prefiled testimony, witness list, consolidation of intervenors, the hearing schedule, and other procedural matters.

The final date for the public hearing were set for August 2nd through 4th of 2006.

The presiding officer ruled on July 13th, 2006 that in general information regarding transmission as it pertains to the project and is relevant to the proceeding and information on future projects is not.

Prefiled testimony was submitted by the parties on July 14th, except for the testimony from the National Park Service and the testimony prepared by intervenors for service July 25th.

The presiding officer issued a second ruling on July 25th saying that any information that the presiding officer deemed irrelevant to the proceeding will be excluded from the file and while preserving the right to request that the information be submitted.

I would like to submit Exhibit 9 to the record.

THE CHAIR: Very good. Thank you. Any Commission members have any questions of Marcia about this?

MR. WIGHT: Marcia, how many exhibits are we up to now?

MS. SPENCER-FAMOUS: We have a total of 14 exhibits. All the exhibits last night, all the public comments, were in Exhibit 10.

THE CHAIR: With that I think we're going to move into the presentation of the direct testimony by the Applicant,

and I assume that Mr. Thaler is going to at least coordinate all of this for us?

MR. THALER: I'm going to try, Mr. Chairman.

THE CHAIR: You are keeping in mind the time constraints that we have set up?

MR. THALER: We absolutely are.

Thank you. I'm going to ask our first two panels to come up, please.

Mr. Chairman, we're presenting our witnesses. We have 16 witnesses and four panels, so we're going to move people as seamlessly as we can.

We also have copies of the slides that are going to be presented, which are summaries, and we've given to the Commission, and I will now give them to the other parties.

Thank you.

THE CHAIR: Thank you. You're going to have to pass the mic around. Make sure that whoever is speaking please use the microphone so everybody can hear -- can everybody hear in the back? Or are we having trouble back there? Are you all set? Okay, thank you.

So you may proceed when you're ready. The clock is ticking. We have one, too, as a matter of fact over there.

Please go ahead.

MR. MANN: Good morning. My name is Randy Mann. I'm responsible for directing Edison Mission Energy's wind energy

development business, and I've been active in the wind business since 1998.

A project that we want to propose to you today is designed to generate enough clean renewable energy equivalent to meet the needs for 40,000 homes here in Maine. The power will be marketed locally here in the state.

Our project is also designed to reduce Maine's overdependence on fossil fuels, including gas and oil, which currently account for about 70 percent of generation in the state of Maine and contribute to air pollution.

Our project is designed to reduce greenhouse gas and other pollution emitted by fossil fuel generation that contributes to smog, acid rain, and poor air quality. Our project will also generate local economic benefits.

We have a well developed project. From site selection to turbine procurement, financing, and power sales, we've completed or advanced all of the key elements necessary to make a viable wind energy project.

Maine Mountain Power is a partnership between Endless Energy and Edison Mission Energy. This structure is consistent with how Edison has developed its other wind energy projects around the country, combining the long history and track record of Edison in wind energy with the experienced capable local development and local expertise of our partner, Endless Energy.

Edison Mission Energy will be responsible for

managing the construction and operation of the project. Edison has a long and successful track record in wind energy operations and also in other power project operations.

We have about 500 megawatts under construction or operation in the wind sector, and we're developing a substantial pipeline of future projects. Redington will be a key piece of our growth in the renewable sector.

Edison Mission Energy is financially strong, and we're capable of funding this project. We previously stated our commitment to fund the project provided we can complete these permitting processes.

Our project company has assembled a group of industry leaders who are capable of executing a high quality project. In addition to Endless Energy and Edison Mission Energy, these companies include Vestas -- the No. 1 ranked turbine supplier in the world, who will be supplying and delivering turbine equipment -- Mortensen, the No. 1 construction company in the wind energy business, who will be building the project, and Constellation New Energy, who has agreed to buy all of the power output from this project and market it along with their retail energy supplier here in Maine and in New England.

We've listed here a few of the criteria that are necessary to develop a successful wind energy project. In a few minutes Harley is going to describe the site selection process in more detail and how difficult it is to find a place

with all of these criteria, but I want to highlight two of the elements: Wind resource and transmission. These are critical.

If we look at the map of the state of Maine, the first thing you see is that there's a tremendous wind resource offshore.

Edison's policy has been to avoid and turn down offshore wind energy projects because it's difficult to construct, it's risky, it's more expensive, and creates many issues that are complicated and difficult. Instead, we chose to focus onshore.

If you look at the state of Maine, what you see are very few areas of Class 4 or better wind sites.

The brown and white are all Class 1 or 2, which are insufficient for commercial wind energy. The Class 4 through 7 sites are on the ridgelines, and anybody who remembers the site trip from a couple of weeks ago will recall that at the bottom of Sugarloaf there was very little wind. When we got to the top of the ridgeline, it was quite windy. This is consistent with our experience.

The other thing that I want to point out from this chart is that there are very little transmission lines that actually go into the mountain areas, so where we are and where our project is located is really an important intersection between where high winds exist on these ridgelines and where the high voltage transmission system actually enters the

mountain area.

This is one reason why it will be very difficult to build large-scale and numerous wind projects in this area.

It's hard to overstate the importance of getting the wind right when you build a wind energy project.

Our site here has Class 6 or 7 winds, which are really outstanding; but if we moved our site to someplace just slightly less windy, you lose a disproportionate amount of output and in turn you need to charge a disproportionate amount in your power price to make up for that.

So it's really important to get the best wind resource that you can, which is proximate to transmission.

NRCM has asked us to consider whether we could build the project about half the size, 54 megawatts and one mountain only. We've analyzed this issue and concluded that this would kill the project.

The first reason is that a small project truly impairs the economics, and the reason for that is there are a lot of fixed costs in wind energy, including the substation, transmission lines, the main access road, the O and M building, and spreading those costs across fewer wind turbines hurts the economics. It would require us to charge a significantly higher amount for our power.

We've asked Constellation, the power buyer, whether they would be able to amend our power sales contract to

incorporate that higher price, and their conclusion was no, the market will not support that much of a price increase.

So we concluded that that situation will not work.

There's a lot of data on this chart, but what I want to point out is that a project of 90 megawatts is not at all unusual in the wind energy business. In fact, about two-thirds of projects are greater than 50 megawatts and about half of the projects are greater than 90 megawatts, and that's consistent because projects across the country are finding that economy of scale is important to be able to charge a lower amount for your power.

The State of Maine has passed a series of policies, and I want to touch on just a couple of them here.

First, these policies encourage the development of new renewable energy resources; these policies encourage reduction of dependence on fossil fuels; and these policies encourage reduction of emissions and greenhouse gasses. And our project will help to achieve all of these policy goals.

In addition to achieving those policy goals of developing renewable energy, reduction of dependence on fossil fuels, and reduction of emissions, our project will also create other important benefits for the community and the state.

Those include land conservation and new access for recreation, as well as the local jobs and economic benefits that I mentioned earlier.

In terms of recreation, we know that it's important to this region and we're sensitive to it. We plan to support recreation.

One of the things that we've done is reach agreement with the Western Mountain Foundation to provide them with the right to build their new hut and trail system across Black Nubble through our project.

We think this will be an interesting experience for hikers to be able to see renewable energy on these ridgelines. We also plan periodic educational tours and opportunities for school children, just as we have done at our other wind sites across the country.

A couple of months ago we conducted a poll, a statewide poll here in Maine, and we were struck by the support for our project. In fact, supporters outnumbered opponents 9 to 1.

Support was strong across all geographic and demographic areas, and in particular environmental groups were -- members of environmental groups were strongly in support of our project. We also have collected almost 2,000 signatures on petitions supporting our project.

We've also been pleased with the support of many, many organizations here in the state of Maine that have encouraged and supported our project, and I want to point out just one in particular, John Diller, who is the president of

Sugarloaf USA, has been an enthusiastic supporter of our project, he's our host here today, and I think his support indicates his view that development of our project will not have an adverse effect on tourism here in the area.

We've also been encouraged by some very nice editorials in a couple of Maine's leading newspapers, and these editorials, I think, were passed out last night. They are quite interesting reading. They balance the pros and the cons, and in each case they conclude that the benefits of our project are important and should be supported.

In conclusion, we've shown that we have the sufficient financial and technical capability to build, own, operate, and if necessary, to decommission, this project.

We've talked about why this is the best reasonably available site for wind development, and we've talked about the demonstrated need in terms of renewable energy, new renewable capacity, pollution reduction, and the other economic benefits.

I'm going to turn it over to my partner Harley Lee, who will describe these issues in more detail.

MR. LEE: Thanks, Randy. I'm Harley Lee, president of Endless Energy. Before I start I would like to thank the Commission for all the work you've put into wind energy in the last year. You've had a couple panels go on site visits to Vermont and elsewhere. I appreciate it.

I'm going to talk about four areas: Alternative

analysis, what we did to evaluate areas, sites throughout Maine, actually throughout New England; how Redington and Black Nubble ridge is the best reasonably available site; the third area is minimization of impacts once we chose Redington/Black Nubble, the steps we took to reduce our impact as much as possible; and finally, mitigation of the few impacts we had left.

Alternative analysis, as Randy said, the most critical factor in evaluating a wind site is the wind. It's something people tend to forget sometimes, we need very strong winds.

We also look for adjacency, suitable topography, power lines and roads nearby, issues of availability, and as Randy said, elevation plays a key factor. Basically, the higher you go, the stronger the winds are.

Most locations in Maine simply don't have a strong enough wind resource and the coast really is only strong enough offshore.

Site evaluation was conducted throughout Maine and New England. We measured winds at 14 sites in four states. We looked at coastal sites, we looked at mountain sites, and the winds are much, much stronger on the mountains than they are on the coast.

We've met with several Maine landowners, in addition, we negotiated with Seven Islands to measure winds on West

Kennebago and West Twin Mountains, but ultimately we rejected those because they were farther away from power lines than Redington and not as close to adjacent development.

Redington and Black Nubble emerged as the best reasonably available sites. As I mentioned, it's next to existing development, it's between two large ski areas, between Sugarloaf here and Saddleback on the other side. It's near existing power lines, as Randy mentioned.

A lot of you went up to and partially up the mountain, as you saw on the site tour recently. Of course we were concerned about that blazing trail, but after talking to a lot of hikers and environmentalists, it became quite clear that they were as supportive of the project in that location as we were.

We found very strong winds. We measured the winds with ten met towers on the two mountains. Importantly, Georgia-Pacific -- which is the owner of the land -- later on when they sold the whole parcel to Dallas, they were unwilling to sell but eventually did.

Once we chose Redington/Black Nubble as the best available site, we set about trying to do what we could to minimize the impacts.

We selected large turbines to reduce the total number and increase our output, we created narrow road specifications, our power lines would be built underground on the mountain,

we're using smaller transmission lines down the mountain. We moved roads and transmission lines numerous times.

It's something we're very proud of. We got our wetland impact from 20 acres down to 3/10 of an acre, just a tremendous amount of effort went into that over the years, and we have a plan to protect the bog lemming habitat.

We're removing a turbine, which will lose us $10 million in revenue over the next 20 years, and we've routed roads around wetlands.

We've also performed biological studies working with State biologists and circulated our siting plan that shows significant revegetation of the site after construction, and turbine beds and foundations were developed for minimal impacts.

Once we completed minimizing the impact, then we turned to mitigation, both on-site and off-site.

Our on-site mitigation was basically with the 1,000 acres we own, everything that we're not using for the wind farm or for a trail will be protected from future harvesting allowed BMA, and off-site we'll conserve land at least equal to our footprint, and of course the biggest operating impact is to reduce the amount of pollution avoided, and fossil fuels have not been consumed.

In conclusion, we looked at many alternatives. Redington/Black Nubble emerged as the best available site.

They meet DEP rezoning requirements, they have a very large energy benefits, it's a well planned development depending on the wind sources that are located in Redington, it's near an existing infrastructure, and we will not impact resources more than other uses already allowed in the BMA district.

There will be no undue adverse impact of existing uses, scenic values, or natural resources. There will be minimized impact on-site, curbing off-site, we'll have buffer effects or on-site. I'm now going to turn it over to Peter here for construction.

MR. WIGHT: When will the Commission ask questions, after each speaker? Or should we wait for the whole thing?

THE CHAIR: I think we wait.

MR. WIGHT: So the end of one panel?

THE CHAIR: One panel. We've got a couple more.

MR. GOLDBRUNNER: Good morning, my name is Peter Goldbrunner and I'm with Edison, director of construction. I want to give you a brief introduction to Edison's construction experience and our approach to the construction of wind projects.

The next panel up is going to provide more construction details for you.

Over the last 20 years, Edison has successfully constructed thousands of megawatts of electric generated capacity in projects in the United States and around the world,

including wind.

Our construction staff has over 120 years of experience in the power generation field. We found in our experience that the best way to build wind projects and many projects around the world is to use local contractors to the greatest degree possible.

The local contractors have the local knowledge of how to build things in that part of the world; the local engineering consultants also have all the standards and criteria and requirements in order to build projects in that area. So the teaming of those two is essential to getting projects built within regions' requirements.

In addition to that, because wind is somewhat special, we have a nationally recognized wind contractor to oversee the local contractors and manage the entire process.

In addition to that, to ensure quality for our engineering, design, and construction, we also hire a third-party engineering company to watch over them, watch over the contractors, and Edison also has people assigned watching over them as well. Myself and my staff do that.

This project -- I'll mention later as well -- we also have another third party to assist us in making sure that we are environmentally friendly and meet all the environmental regulations.

On the Redington project, the general construction

contractor/wind specialist contractor is Mortenson; the subcontractor for roads, another local contractor, is Sargent; civil engineering consultant is DeLuca-Hoffman; and the geotechnical subcontractor engineer here is S. W. Cole.

Turbine supplier is Vestas, as Randy mentioned, a world renown and No. 1 supplier of turbines in the world; and our environmental oversight is Albert Frick Associates.

The conclusion is that Edison has built thousands of megawatts of power generation, including wind protects. The team we've put together is experienced, a combination of local and nationally recognized contractors, and the team can build the Redington project.

With the NIMBY oversight and the oversight of the parties, we are going to insure that there's minimal -- the impact to the local area is as close to zero as possible.

Thanks.

MR. BULOW: Good morning. My name is Morten Bulow. I've been asked today to speak about the turbine technology that is planned to be used up here.

I've worked for Vestas for the last 10 years, and this is a worldwide company that has installed more than 30,000 turbines throughout the world, others in similar terrain and conditions to the one here, the proposed Redington project.

In North America we have nearly 9.5 thousand turbines; and we have worldwide over 200 turbines, the exact

same model as the one that we're proposing to use here in Rangeley.

That one is the V90 turbine, which is the most common turbine that we have in the field. Next slide. That is an overview of what we have seen at the turbine 60 feet up in the air there. The blue thing in the middle is a generator that actually produces the energy there. In the front is the rotor.

One of the concerns has been icing and how if the turbine is going to withstand icing. The answer is yes to that.

The blades have a very, very smooth surface so when ice tends to build up, it will slide off, and the blade itself if very flexible, so it will bend in the wind and tend to crack off that ice. There are other systems in the turbine that are making sure that the turbine is not damaged by icing.

Vestas has 38 similar locations throughout North America that we propose to set up here in Redington. We have a five-year service and once-a-year contract on the turbine where we do the operation. So we are very familiar with this set up and this is what we do in most cases.

Vestas had a chance to review the site conditions for this, and we find the V90 to be suitable without any problems for this project and giving the proximity, it will be able to operate a minimum the next 20 years.

Thank you.

MR. MUSE: Good morning. My name is Ron Muse, I'm director and vice president of Edison Mission, operation and maintenance.

I have over 25 years of experience in operation and maintenance, otherwise known as O & M, of power plants. I'm here to demonstrate that Edison has the expertise, ability, and experience to successfully operate and maintain the Redington project.

Currently I'm responsible for the operation and maintenance of 11 power plants, totalling 1,861 megawatts. Two of these are wind projects, totalling 233 megawatts; a third project, with 70 turbines, totally 161 megawatts, is currently under construction. We are planning to take over operations of that the first quarter of 2007.

I also have O & M oversight responsibility for 83 megawatts of wind power that Edison does not operate. Some of these wind projects are located in Minnesota, Iowa, where winter climates can be harsh.

The O & M for Redington will be modelled after our San Juan Mesa, New Mexico wind project. Under that arrangement, Edison manages environmental compliance, provides non turbine O & M, and interfaces with the local utility.

Vestas, the turbine manufacturer, will provide specialized turbine operation and maintenance and on-site technicians for immediate response to warranty issues.

The Edison staff will consist of a plant manager and a technician. The Vestas staff will consist of eight technicians and a supervisor. Our preference, as with construction, will be to hire local personnel for our employees.

All employees will be trained in the operation and maintenance of wind farms. When the five-year warranty period is done, Edison will retain the Vestas employees for continued operation and maintenance.

In summary, Edison has successfully operated and maintained many different electrical generating technologies, as it has experience in operating and maintaining wind farms, including ones located in areas where harsh winter climates exist.

Edison can successfully operate and maintain the Redington project without causing undue adverse impact to the area.

Thank you.

MR. THALER: Mr. Chairman, can I just clarify. We thought we were going to go straight through the 90 minutes. If you want to go panel by panel, I assume you'll stop our clock.

MR. WIGHT: We can keep track of our questions.

MR. THALER: Okay.

THE CHAIR: Are you changing panels at this point?

MR. THALER: We have our second panel already at the table.

THE CHAIR: Rather than -- if we do have some questions, let's not go much further so we get lost here.

We'll credit you some of the time that we take from you.

MR. THALER: We do have our 90 minutes?

THE CHAIR: Yes. Rebecca, do you have a question?

MS. KURTZ: Last evening there was a lot of testimony for and against this particular project, and I just -- one of the questions -- or one of the issues -- that was raised was whether or not the power would actually stay in the state.

Randy, you had said that it would create power for 40,000 households and it would stay in the state.

A couple people last night said that that was not true.

How would you address that question?

MR. MANN: Well, a couple of things. First of all, Maine Mountain Power is a wholesaler of power, so what we do is generate power on a wholesale basis and we sell 100 percent of it to Constellation New Energy.

Constellation New Energy is retailing that power to their retail customers, some of whom would be businesses and other institutional organizations.

So I think Bruce McLeish, who's here from

Constellation, will speak in a few minutes and can tell you more about how they're marketing that power locally.

Our agreement with them is to market that power here locally in the state of Maine first and foremost, and that's what they're doing. And I think Phil described that there's been quite a bit of success in terms of marketing power here.

MS. KURTZ: So it's enough power to fuel 40,000 --

MR. MANN: It's equivalent.

MS. KURTZ: -- but it's not actually going to the homes and business?

MR. MANN: It's equivalent.

MS. KURTZ: I had another question about down-sizing, when you said it was not economically feasible, and there was some discussion last night or a comment about subsidies and tax incentives.

How would down-sizing affect those subsidies and incentives?

MR. MANN: The primary subsidy for wind energy projects is the Federal Deduction Tax Credit, which is put in place to encourage development of renewable energy, and the way that tax credit works is it's 1.9 cents per kilowatt hour that's produced and sold.

It encourages efficiency, not if it's generated, if we actually produce and sell.

So if we have a smaller project, obviously we would

get fewer tax incentives. But that's not -- the tax incentives are generated on a per kilowatt hour basis.

MS. KURTZ: I think the last person who testified last night indicated that tax incentives are very important to helping coal-fired plants, and I wasn't absolutely clear on that relationship, and I was wondering if you could address that.

MR. MANN: Sure. The tax incentive, first of all, is available to any qualified wind energy project. Redington would be a qualifying wind energy project, but it's available for other wind energy projects across the country.

As I said, it's generated when we produce and sell electricity. It doesn't guarantee that we make a profit.

In fact, it's there for ten years that we need to operate this project efficiently for many years after that in order to recover our capital and make a profit.

What the tax incentive does is encourage renewable energy by helping to make it more cost competitive; and so with the existence of that tax incentive, what we're able to do is charge less for our power.

If it wasn't there, we'd have to charge 2 or 3 cents more per kilowatt hour in order to pay for the capital costs of the equipment. So really it's doing exactly what it's designed to do: Making renewable energy cheaper so that it can compete in the market on a level playing field with other sources of

energy.

I think the connection to coal -- I'm not quite sure I understood that -- but basically what it does is it reduces Edison's national tax liability and therefore helps us make the economics of this project work, again, by charging less for power because we're getting that Federal tax subsidy just like any other wind project -- charge less for the power. And that obviously benefits customers here in Maine.

MS. KURTZ: Okay, thank you.

MS. HILTON: I think these are probably questions for Harley.

Have you ever had any discussions, or do you have any plans for expansion beyond this project with respect to wind turbines on the mountains?

MR. LEE: Basically with this project we've used up all the available space on the two mountains, so there really is no room for expansion beyond this.

MS. HILTON: How about adjacent mountains?

MR. LEE: We really haven't looked at adjacent mountains. West Kennebego is 10 miles west and is now in conservation. This really completes our project.

MS. HILTON: You also are proposing to protect 900 acres from future harvesting. I'm assuming timber harvesting?

MR. LEE: Correct.

MS. HILTON: Does that include development? You're

protecting other types of development?

MR. LEE: Yes, we plan to basically do nothing with the rest of the property. I'd be perfectly happy to have that as a permitted condition.

MS. HILTON: I'm not sure who to direct this question to, but I'm just wondering, the life of these turbines, the minimal life, I think you stated, was 20 years, and I'm just wondering, what could we envision when somebody decommissions these turbines and what's involved in doing that?

Just a brief description.

MR. LEE: The design life is around 20 years but the technology continues to move forward fairly quickly, so it may very well be before that 20-year time period is up, it may make sense to take those turbines down, sell them, and put newer technology up.

But I think our goal here is to have a sustainable energy system. The technology will come and go and change, but I think the design life is -- they may last longer than that, but I think it's likely that technology will change enough that we replace them before 20 years.

MS. HILTON: That's good. Thank you.

MR. WIGHT: I had a question for Ron.

You talked about overseeing some 1,900 megawatts of power generation, something just under 1,900 I believe, was the number. A little bit of that was wind power. What was the

rest?

MR. MUSE: There's about 80 megawatts of waste coal and about 700 megawatts of cogeneration, gas-powered cogeneration, in California, and about 500 megawatts of gas-powered power generation.

MR. WIGHT: Natural gas?

MR. MUSE: Natural gas, right.

MR. WIGHT: Harley, why is that you would protect the land from harvesting? I'm in the land trust business and we're always trying to preserve land but still preserve the logging operations and wood product operations.

Is there some reason why wood harvesting is not beneficial to wind power?

MR. LEE: We can leave that open. If the Commission feels strongly that we should leave that open for harvesting, it looks like that was a fair trade-off, that we would be using a small portion of our land and preserving the rest.

If there's a better alternative, we'd be open.

MR. WIGHT: It seems to me in the state right now we're not talking about preservation as much as we're talking about conservation easement.

MR. LEE: We're certainly open to suggestion.

MR. WIGHT: Also, Harley, maybe you have the answer to this or maybe it's coming up later, but I'm wondering when you talk about revegetating, you talk about 32-foot wide roads

being needed and I'm sure we'll get into this later, but that doesn't include the shoulders and the site slope easement, and that sort of thing.

How do you revegetate or will you please tell us later? Maybe that's my question.

MR. LEE: I think our biologist will go into that in more detail.

MR. WIGHT: Great.

THE CHAIR: Steve.

MR. SCHAEFER: I have a question. I don't know who to direct it to. It's mostly about the personnel and the corporate culture.

When you're involved with rural Maine and you have people that are representing your company, do you have a policy or a track record of becoming involved with volunteer organizations, fund raising, high school kids, yearbooks, anything that's involved in the local community?

MR. MUSE: Yeah, we encourage our employees to be involved with local activities. We do sponsor sports teams, we provide educational equipment for schools, and donate to various charities in the area.

We do like our employees to be involved with the things that we're donating money to.

MR. SCHAEFER: Thank you.

THE CHAIR: Jeff?

MR. PIDOT: I just had a few questions and I'm not sure if anyone in this panel can address or maybe these questions can be resolved later by other panels.

The issue has already been raised by Commission members about where this power is going to go, and representations have been made that it's going to go to Maine. Maine, I believe, is an exporter of power at this point and a really major one.

There's also some prefiled testimony from other parties that suggest that this power would simply displace other forms of renewable power and in effect will have no benefit in terms of the environmental benefits that you talked about.

Maybe this is a question for you, Harley.

MR. LEE: I think the next, the fourth panel, is going to go into that in some detail.

But just very briefly, Maine does generate a lot of power, and quite a bit of that is from natural gas. I know in the panel discussions, they showed the tremendously high proportion of Maine's electricity from natural gas.

And when our wind farm is producing power, it's primarily shutting off natural gas and oil. Eighty-five percent of the time it will be shut down.

So that's an answer to part of your question. I think there will be quite a bit more detail.

As far as marketing the power, we've made it very clear to Constellation that we will emphasize Maine first and I think we will address that later.

MR. PIDOT: In other words, I interpret your answer to part of my question to be that you believe that the generation of this power will displace generation in Maine, or elsewhere, of power that results in carbon dioxide and other pollutants going up into the air as against displacing other renewable forms?

MR. LEE: That's primarily the case. As you get into any issue like this, it gets far more complicated.

There will be instances, depending on where the load is, where the generation is, where the hydro damns are, that there may be some water kept behind the damns. That will be addressed later.

But primarily it's fossil fuel that will be displaced.

MR. PIDOT: A question for any panelist. There was some suggestion that this type of project using this type of transmission and other equipment, generation equipment, has been used elsewhere in the United States or even around the world in similar types of climates, mountain ridges, and the like.

Is that correct?

MR. BULOW: That is correct. We have turbines

installed in conditions that are similar or even more severe to this here.

MR. PIDOT: Is it time to ask questions about financial capacity? Is this the panel to address that question to? This is my last question.

Issues concerning financial capacity, as you all know, have surfaced, and there is some sort of a letter that indicates that through several corporate structures that one of those corporations is committed in some fashion to inviting the financial capacity to make this project work.

I believe in that letter of commitment there are a number of conditions, some of which perplexed me, like, for instance, the condition that this is all subject to review and approval of the board of directors of the parent corporation, which means that, to me, that's a condition that sort of blows away the commitment.

So is that -- do I have that correctly in terms of there being a condition to the parent corporation or a corporation that its commitment is contingent upon a favorable vote in the future of its board of directors?

MR. MANN: A couple of answers to that. First of all, my company has already established a wind energy program under which we have essentially pre approved a set of parameters and a platform under which we would do wind energy investments, and this project should fall within those

parameters.

Having said that, it is our normal course of business for our company to go get a final board of directors' approval when the project is fully ready to go.

So the answer to that question is, yes, we will go back and get that final approval. This project has been certainly described to the managing committee, and they're quite familiar with our activities.

MR. PIDOT: So it's possible, then, that the board of directors would decline to support the project at some point in the future even if the Commission issues a permit for it for whatever reason they might have in mind?

MR. MANN: I think it's possible. I'm not representing the entire board of directors here, so I have to leave it at their discretion to make their decision.

Having said that, again, this project fits our parameters. We've obviously already extended a significant amount of money developing this project, including ordering the wind turbine equipment that we intend to deploy here.

And so I think for that reason you should have a high degree of confidence that we are serious about building this project and committing to it.

But the way my corporate organization works -- and I think this is consistent with large corporate organizations -- we have to go through that process.

MR. PIDOT: Thank you for your answer.

MS. KURTZ: I have a question. When you define a wind according to a class, what exactly is the definition of class when you're referring to Class 1 versus a Class 7 or 4?

MR. MANN: It primarily has to do with the average wind speed, and the table that I flashed up showed the those average wind speeds.

There probably are some other issues that go into that, including highest gusts and things like that, which Morton from Vestas and his group would look at quite closely to make sure the turbine is suitable for the site and would handle the highest expected gusts, those types of things.

It's basically average wind speed.

MS. KURTZ: The reason I ask is clearly it sounds as though a 4, 5, 6, and 7 would be a higher wind speed and that a 3 perhaps is not as high.

But I'm aware that there are wind farms throughout the country that are operating at Class 3 winds, and I just have to wonder about these -- apparently there are 14 sites in Maine that are appropriate, somewhat appropriate, for wind farms.

Just because you have a wind that's blowing at high gusts and high speeds sometimes, does that make it better than another site that may be having Class 3 winds blowing fairly steadily?

What I'm getting at is, just because it's going faster or there's more force behind the wind, does that necessarily make it a better site?

How is it that these other wind farms around the country are operating with a Class 3 wind speed, where you're saying that only a 6 or a 7 or whatever is appropriate here?

MR. MANN: Two questions in there I think. One is that you're correct, it isn't as simple as just looking at the average wind speed and what your output would be.

You have to look at the distribution of wind speeds over time, and over time there will be times when it is not running because the winds are too low, and there will be times when our project is operating at full output.

And so our analysis and assessment of our output takes into account those distributions.

In terms of whether it's possible to build wind projects at lower wind classes, it is, and other projects have been built at lower wind classes. But you also have to consider the cost of the project and the price of energy.

We can build a wind project in very poor wind regime but because the output would be so small, we'd have to charge an exorbitant amount in order to cover our capital.

So it's really a balance between how much output are you going to get versus the capital costs of the project versus the price of the power that the market can support.

MS. KURTZ: Is it safe to say that the expense, the final expense, of putting something on a ridgeline as opposed to a relatively flatter area is going to be higher on the ridgeline?

MR. MANN: Yes.

MS. KURTZ: Is that valid?

MR. MANN: Yes, it's more costly to build projects on a ridgeline than it would be in a flatter area; however, the wind turbine itself is about 70 percent of the cost of the equipment -- of the cost of the project, and then there are development costs and other things like that, and those costs would be common to any site.

So really the savings that you get is just in that extra 25, 30 percent, the cost of construction.

It's not a seed change in terms of the capital costs to build this project here on the ridgeline versus building it in a more agricultural area, for example.

MS. KURTZ: Do you mean 90 -- do you mean something -- turbine that's as tall and as rugged and able to withstand these wind speeds, do you need a turbine that big or that expensive on a plain or a farm field?

What's the difference in the cost versus something you have to use on a mountain because of the mountain conditions?

Seventy percent is a lot, but if it's the difference

between a smaller, less rugged turbine and a huge turbine is a lot, then you have a cost change.

MR. MANN: The answer to that is, again, two parts maybe. No. 1, the turbine that we're using here is, as you pointed out, specific to this type of site, and it's designed for a robust wind regime.

It's not a turbine that we would deploy in a low wind environment. It's not designed for that.

However, the turbine that we would deploy in a low wind environment and the turbine that we are deploying here, costs very much -- a very similar amount in terms of dollars per installed megawatt. So really there isn't a savings between this turbine versus another turbine.

Wind turbines are expensive on a dollars per megawatt basis, and that's the case whether it's a turbine that's designed for a lower wind versus a turbine that's designed for higher wind.

MS. KURTZ: I'll have to go back to that. Thank you.

THE CHAIR: Okay. I guess that we've exhausted ourselves on this one at this point.

Who are we going to next, Jeff?

MR. THALER: We have our second panel here. We are ready to start off with the construction details, engineering and design.

MR. ANDERSON: Good morning. My name is Dwight

Anderson. I'm with DeLuca-Hoffman Associates. I'm a civil engineer.

DeLuca-Hoffman is a private civil engineering firm with 20 years of experience. We specialize in project permitting and civil engineering design. We have completed several hundred projects which require Maine DEP approvals and a number of projects in LURC jurisdiction, as well as projects with similar road designs to this project.

We have a number of professional engineers on staff, and I'm confident DeLuca-Hoffman has the expertise for the civil engineering design on this project.

We've been involved in this project for the past 12 years, and I, myself, have visited the site on numerous occasions, including a four-day site visit in October of 2004 to familiarize myself with the site.

We've also consulted with environmental and roadway consultants, including a mountain road expert from Colorado.

The design goals for this project are to construct a safe, maintainable roadway, including project-specific erosion and sediment controls, while protecting the subalpine, natural water flows, fragile soils, and vegetation, while maintaining the project's design parameters and limiting the project disturbance.

The preliminary design is to avoid steep terrain to the extent possible, and we have proposed additional field work

related to summer and fall to help support the final design of this project.

We've used a toolbox approach to the details. This will help us fit on-site conditions when encountered. Numerous details will allow us to adjust back slopes and fill slopes, as well as drainage design details to fit into the most appropriate design for the roadway.

I've also used aerial topography and computer-generated slope maps to assist us in developing the preliminary roadway and alignment as shown on Exhibit 3 here.

This is a slope map of Black Nubble. The black lines that you see running through here are actual roadway alignments.

Turbine locations are circled here, and what is represented by the darker shades are areas with very steep terrain, and the lighter colors represent areas with more mild topography, so you can see we've attempted to stay within these lighter colors as much as possible to limit project impacts.

The next slide shows Redington. Similarly, the road alignment stays within the lighter colors as much as possible to limit the project impacts.

We've also minimized blasting, cutting, and filling, and earth works to further limit the project impacts.

This slide here shows representative sections throughout the project area, from areas with the steepest

slopes encountered to areas, again, with more mild topography representing cuts and fills associated with this work.

Preliminary roadway alignment fits the natural topography of the mountains and preserves scenic qualities of the surrounding land to the extent possible.

We've consulted with State authorities throughout this preliminary design process, and we've minimized wetland impacts with our preliminary design. The details included by the maximum flexibility to fit the mountain and also maximize the use of existing roads.

This is a figure showing a portion of the base map. Of interest here is this red line coming down in. You recently had a site visit to the site and actually traveled these roads in from Route 16 in by the maintenance center, split to Black Nubble and split to Redington.

All these areas here represent existing roads to get us as near as possible, and it's not until we reach these points where we have to build new roads on mountaintops and access roads up to the turbine sites.

Roadway design details include a maximum grade of 14 percent, a minimum turning grade is 115 feet. We've included the use of a number of manufactured materials to supplement the roadway section, and also developed a narrow road specification for this project to help minimize the impacts.

Turnouts for construction equipment are proposed every half mile. This is to tie into getting our roads ready for equipment and safety.

Erosion control design details intended for use on this project are listed here on this slide. These are typical Maine DEP best management practices for erosion control and have been reviewed by Al Frick, the project soil scientist, and he agrees they're appropriate for use on this project.

We also intend to use environmentally safe soil stabilizers, and erosion control mix material will be the preferred treatment for revegetation.

This slide shows a typical turbine site. Turbine, dotted line is the foundation, this would be the crane, staging, and pad area here. It's 50 feet by 160 feet.

This area here represents about a half acre of disturbance associated with this site, and it's important to note here that the green shown here -- this is actually post construction -- where we would come in and put down this erosion control mix and allow revegetation to occur over time.

This is also true beyond 12 feet of the roadway line. The dotted line shown here is a 32-foot width. We'll be narrowing that down to 12 feet post construction showing the project sensitivity to the environment.

Storm water design details include frequent culverting, ditch turnouts, inlet and outlet, flow dispersion

grounds, and water bars spaced as needed along the roadway alignment.

We've also included a number of groundwater design details, included stone sandwiched cross drains, piped cross drains, and post construction pipe cross drains. These provisions will result in generalized flow, and do not replace storm water control measures.

The next figure represents what these look like. Where seeps and hydrology occurs here, we'll convey that across the roadway either in a stone sandwich or a pipe.

The design results keep the hydrology intact by maintaining groundwater flow, protects the soils from erosion, and also are appropriate based on water flows on limiting their disturbance.

In conclusion, I would like to note the revegetation of all but a 12-foot width of the access summit roads will be allowed to reduce post construction storm water run-off flows and improve water quality and insure the Redington project has no undue adverse impact.

The project is feasible from a civil engineering standpoint, and I'm confident DeLuca-Hoffman and I can complete the civil engineering design so as there is no undue adverse impact from the project.

Thank you.

MR. BERGLAND: Good morning. My name is Brent

Bergland. I'm a construction executive for M. A. Mortenson Company, a Minneapolis, Minnesota based corporation.

Today I'm going to present our qualifications, our construction methods, and how we will address the road sedimentation controls.

To begin, Mortenson is a North American wind power construction expert. The company's been in business for 52 years and has been involved with wind for nine years.

We've been involved with over 3,000 megawatt wind projects.

We've constructed 35 to 40 percent of the projects in the US and Canada.

We've worked on many projects with mountainous terrain and winter climates. In fact, 60 percent of our projects in 2006 and 2007 will be located in mountainous terrain. Examples would be Hawaii, West Virginia, the state of Washington, and the province of Ontario.

As a construction executive, I have primary responsibility for this project. I have 11 years of construction experience, with the last four and a half years dedicated to wind power. I've been involved in approximately 1,000 wind megawatts.

Mortenson designs and builds their wind projects. That means we're 100 percent responsible for the engineering construction for all facilities. Our 44 projects have been

competed this way. This approach of the project is different than publicly funded projects but consistent with other wind projects.

With Mortenson taking the lead, a significant part of our team is already set. We have DeLuca-Hoffman, our civil engineer, and Sargent Corporation, our road construction subcontractor. Both are local and have mountain and winter experience.

To touch on the design stats, the design is 75 percent complete, which is more than normal at this stage of the project. As Dwight discussed, the toolbox approach allows us to address changing conditions in the field, and we have commenced work on finalizing the design.

Proper erosion and sedimentation controls have been engineered. We are proactively coordinated with the agencies throughout all stages and will continue to do so in the future to alleviate any concerns about engineering or construction methods.

LURC's goals and policies will be followed.

To conclude, we are bringing to this project experience of successful completion of 44 wind projects in 14 states and one province.

Our project team is highly qualified and has significant project experience in mountainous terrain in cold climates.

We'll use the toolbox approach to anticipate, manage, and negate all potential construction issues. Therefore, we're very confident we can design and construct the projects in a manner that will result in no undue adverse impacts.

Thank you.

MR. FRICK: Good morning. My name is Albert Frick. I have over 30 years' experience in the practice of soil science and site evaluation in Maine. I've mapped thousands of acres and designed over 15,000 septic systems.

To date I've worked on 103 LURC projects, both large and small. My clients include on the Federal level the US National Park Service, US Navy, and President Bush.

On the State level I've worked for Maine Audubon, Maine DEP, and Trusts for Public Lands.

And on the local and corporate level I've worked for L. L. Bean, Poland Springs, Tom's of Maine, Sugarloaf, and hundreds of small and large property owners throughout the state.

I have the experience and ability to recognize and identify soil characteristics, and I've assisted the civil engineers in developing erosion and sediment control applications.

I've worked on the field -- I've worked on this project since 1993 and in the field covering a span of 13 years.

During that time we have studied the soils and the site and have found that the following soil characteristics and limitations need to be respected and have been addressed in the soil profile in the project layout and design.

Those are: Short growing season, surface water, and perched groundwater drainage, and the mitigation is deep slopes.

These issues have been addressed by the erosion and sediment control details proposed by the project. The design team has done an in-depth analysis and consultation with civil engineers, engineers experienced in mountain road construction, geologists, excavating contractors, and erosion and sediment control experts.

We have met with LURC and DEP staff and listened to their ideas and concerns. We have incorporated input from the parties in the design of a toolbox of erosion and sediment control techniques.

Contrary to opposing testimony, wetlands and soil resources will be adequately protected through proven erosion and sediment control techniques.

There will be no undue adverse impact to the soil and regarding soil erosion and related soil hydrology.

The access roads, the maintenance buildings, the wind power sites are designed and placed properly for the underlying soils.

The erosion and sediment controls will appropriately address the soil characteristics and suitability. Revegetation techniques have been proven to be successful in similar settings, such as this.

The higher elevations are actually less susceptible to erosion problems because they're higher in the landscape with less up-slope drainage to deal with. They tend to be shallow bedrock soil conditions, which make them more stable, and they also tend to be not as steep.

In those positions it does -- they are beneficial in that regard.

In conclusion, the project design and proposed construction plan is suitable for the underlying soils. The assorted erosion and sediment controls, drainage, and proposed construction techniques will adequately address the soil suitability and soil potential for the proposed undertaking.

It is my professional opinion as a certified soil scientist that the proposed design will not have an undue adverse environmental impact on the surrounding soils and environment.

That concludes this panel.

THE CHAIR: Thank you. Questions from Commission staff? Go ahead, Gwen.

MS. HILTON: I didn't hear any discussion about the transmission lines. I don't know, is there any installation of

those? Is that coming later?

MR. BERGLAND: The transmission lines are part of the Mortenson scope of work, including the 34.5 kV line and the 115 kV line down at the Bigelow substation.

MS. HILTON: Isn't there soil disturbance involved in that as well? It seems -- I don't recall, some of them are going underground. Are they going underground adjacent to roads? Or is this part of the road project?

MR. BERGLAND: To connect the turbines, that power system is underground, and once it leaves the Endless property, it goes overhead to the substation. It's still overhead from the substations to Route 27, and then it transitions to underground.

Then to answer your other question about soil disturbance, the disturbance offered by an overhead line is that there is tree clearing but it's not nearly what -- it can't be spared.

MS. HILTON: But you are putting lines underground, though?

MR. BERGLAND: Yes, but that's within the same footprint of the road.

MS. HILTON: Of the road, okay. So that explains that.

I guess my last question is for Mr. Frick.

With respect to the revegetation aspect of this on a

high mountain area with steep slope and the fact that you do have soils that are shallow, certainly not your normal soils in other areas for revegetating with conservation mix or whatever you're using, how long does it take once you actually lay down the conservation mix or material for that grass -- or any grass -- to be established?

MR. FRICK: It could be -- that's a good question. We looked at this with the LURC regulators and the design team, and we actually took a day field trip and looked at north of Stratton near the Canadian border on some road sites that were up at or slightly below 2,700.

Those areas had been planted down using a local erosion and sedimentation control mix in late August, and the catch was substantial. There's a photograph in the submittal that shows that.

We feel comfortable that if the seeding gets down in the reasonable part of the growing season, that vegetation can take place during that time period; however, the LURC staff and others were concerned about using conservation mix in the upper elevations above 2,700 as far as introducing invasive species.

So then Woodlot Alternatives, plant people, looked at customizing perhaps a selection of mix that would be more in tune with that setting. That would be what might be used in the higher elevations.

As far as answering your question as far as

revegetation, growth can happen in that time period. I feel within one or two seasons you'll have a pretty good coverage for vegetation.

MS. HILTON: So in the interim there's some stabilization of it?

MR. FRICK: Right. Yes. What we're relying on very heavily is protecting those surfaces with a mulch or materials to protect it from erosion.

That would be intrinsic in the plan.

MS. HILTON: Has consideration been given with respect to whatever kind of mulch you're using and the fact that is a very windy area? I have some experience with it on my own.

MR. ANDERSON: Actually, the Maine DEP has specifications for erosion control mix. In these areas we actually add a netting and staple that down. In certain areas it's a very legitimate concern.

MS. HILTON: Okay, thank you.

THE CHAIR: Steve.

MR. WIGHT: I'm also concerned about the revegetation only because that seems to be the answer given whenever any of the public are concerned about the width of the roads that have to be put up. They're going to be 32 feet, but they're going to be revegetated back to 12 feet.

But as I look at the cross sections, they're a lot

more than 32 feet because you've got slope issues, you've got riprap, you have ditches for water runoff.

Can you revegetate those, or will they be open riprap and open stone ditches?

MR. ANDERSON: What we have in the design right now is a toolbox, multiple details, and we do have riprap as an option, as well as seep and embankment slopes.

Also even at 2 to 1, we've proposed to use an erosion control mix stapled into the subgrade so that erosion control mix would be for areas where we can achieve the disturbance that we're looking to maintain for the project, as you note, the sections that were drawn.

We do propose to use a lot of that erosion control mix in areas where we can. In other areas where we want to minimize disturbance, we will be using the riprap.

So it will be selected depending upon the review of the visual assessment team as the project moves forward in the final design.

We certainly have a number of options available and intend to revegetate as much as possible.

MR. WIGHT: Thank you. I'm trying to get some information into the record because it appeared to me there were a lot of misconceptions from the public last night, but some of them may be valid; and I think some of the concerns were the visual impact -- not just of the towers -- but of

areas that have to be harvested and used to create roads and what will happen to them in the future, and the pat answer seems to be, they'll all be revegetated. But my understanding is that you can't revegetate everything.

So I guess we're going to look at what is going to be seen from the ground of these riprap slopes and things like that. Is that going to be adding to the visual problems that we discussed?

MR. ANDERSON: I would just point out that we've coordinated -- spent a lot of time with DeWan, the regrowth consultant, and they'll actually be representing what we intend the project to look like, incorporating the revegetation and other slope measures that also will show.

MR. WIGHT: He's here?

MR. ANDERSON: Yes.

THE CHAIR: Just a point of clarification from Mr. Frick.

You said the comment about the areas at the top of the mountain aren't as much of a concern because they're flatter or something. That doesn't seem to square with what we saw on the map. I'm not sure what you're trying to tell us there.

MR. FRICK: What I'm trying to tell you is that as you get on the shoulders of the mountain, the higher elevations, with the access road that DeLuca-Hoffman has laid

out, you walk the alignment, as you get higher in the elevations, the alignment of that road tends to be more on the drainage divide or right up a ridge, ridges that tend to be convexed.

The higher you go, the less up slope drainage that's coming down intercepting that road you have to deal with.

So it makes some of the erosion and sediment control and stability issues less of a problem because you have less water, you have less speed, less movement, coupled with the fact that some of those soils -- not all -- but some of those soils are also shallow bedrock, so you don't have as much sediments and cuts to erode.

Then as you get on the very tops of the ridges, you have more level plains.

THE CHAIR: Thank you. Jeff, did you have any questions of this group?

Anybody else? Rebecca.

MS. KURTZ: Mr. Frick, I think you said that you were working with Woodlot Alternatives to come up with a mix that is not a standard erosion control mix but something different.

Can you describe the composition in terms of the species in that mix?

MR. FRICK: No, I can't, but I think Woodlots will be on later in the panel. They can address it more. They were looking at that specifically. Dwight can speak to it better.

MR. ANDERSON: Woodlot's going to touch on this when they come up as well, but what I would like to say is we get up to about 2,700, the proposal is to put down erosion control mix, some from a supplier with non evasive species and some that are supposed to be processed right from the site.

And that material put down would be allowed to revegetate. We would be adding some grass seed and a lot of that. We would be looking for the balsam fir and those types of species to come back native to the area.

Steve will add to that in his presentation.

MS. KURTZ: Are you saying you're going to actually harvest some of the plant material that's already up there and then replant it?

MR. ANDERSON: It would actually be processing stump grindings and the materials that come off the mountain, seed and such in it that it would be allowed to revegetate because it would actually be within the mix.

MS. KURTZ: One of the characteristics of this high alpine vegetation is it's extremely slow growing, fairly fragile, so I'm wondering how that fits in with the one- or two-season projection of your revegetation plan.

MR. ANDERSON: I think it's probably best to let Steve weigh in on that.

MS. KURTZ: You indicated that wherever possible you'll revegetate and things like that.

Do you have an estimate though? You must have some feel for how much can be revegetated. This site has been studied for years now. There must be -- it's very easy to say, yes, we'll do it whenever possible. It's certainly a merit, but what is the percentage that you perceive that you'll be able to vegetate with a native -- I'm assuming a native species so that there's not --

MR. ANDERSON: Yep, we've looked at that, and the goal is about 50 percent of what will be able to revegetate on the roadway, as well as a the side slopes.

That could be lowered to 40 percent but we're shooting for 50 on the project.

As you can see in the green here, we've looked for total revegetation on the crane pad sites, as well as the flat surface of the roads and the unknown, if you will, is how much of the side slopes we can pick up, because we are going to need to use a lot of blasted rock in those but we'll also be able to put the erosion control mix in certain areas.

So we are looking at approximately 50 percent. It might be slightly lower or it might be a little bit higher.

MS. KURTZ: So you're losing 50 percent of the vegetation, as a minimum, probably 50 percent of the native vegetation that is in there specific to this habitat?

MR. ANDERSON: Within the disturbed area, you know, up top, which is the disturbed area about 2,500, for instances,

there are 136 acres, so it will be somewhere in the order of 50 percent.

MS. KURTZ: And I think you said you're going up to 27- to look at some revegetation at 2,700 feet. I think the term you used in similar settings and you mentioned 2,700 feet.

How much work have you done? Have you investigated this -- it sounds as though similar doesn't include anything over 2,700 feet. What are you providing for us?

MR. FRICK: We've looked at those sites. They were right at 2,700 feet, and what we're relying on is other types of projects that have been in those areas like ski areas and forestry cuttings that have had disturbance.

If you go back and look at what kind of growth is taking place after that, it does regenerate.

MS. KURTZ: But this project goes up to 4,000 feet, though.

MR. FRICK: Correct.

MS. KURTZ: So there would be another 1,300 feet that we're not sure how successful vegetation will be?

MR. FRICK: The key to revegetation is stability for erosion and sediment control. If you have the area secured, mulch -- and I've used the word augured -- protected either with a soft mulch or with rock fragments, you will get growth that will come, be it in a year or two years or so, but it will regenerate.

But the key for protection is just keeping the area stabilized to allow for regeneration. You have natural growth up there and it will reoccur.

MS. KURTZ: Regeneration of the native species or the erosion control methods?

When you talk about revegetation, it sounds as though you're saying the erosion control mix. I'm concerned that this is a, you know, this is a specific ecosystem with very specific vegetation that grows there, and it sounds as though you're saying, well, we're going to remove it but we're going to replace it with something else.

I'm kind of looking at the undue adverse impacts.

MR. FRICK: The erosion and sediment control mix will include in there a significant amount of organic duff and organic matter that's already around and will be salvaged and reused in that top dressing. It's a perfect material for that. Organic materials, you know, leaf materials and so forth.

And in with that there's spores and roots and regeneration of the natural material that will regenerate, coupled with Woodlot Alternatives -- and I think you'll hear a lot more of the details when Woodlot Alternatives comes up -- has a replanting plan on some of these sites as far as the trees and so forth.

There's soils up there, it's called a mahoosic soil, it's actually fractured bedrock that has slid down the side of

the mountains in certain areas. All it is is basically organic matter on top of fractured bedrock. And this area is highly vegetated.

So even some of the steeper slopes that have been used with riprap and so forth, if you have organic material, organic duff, or in the holes or the pockets with that material, you can get regeneration that will soften some of that, that look, as far as hard rock on the face and also those things will occur.

THE CHAIR: Dave Rocque, is he here somewhere hiding?

Why don't you come down front, Dave. I guess this might be an appropriate time to ask.

Dave is a State soil scientist. Am I saying that right?

(Mr. Rocque was sworn in.)

THE CHAIR: Dave, I think, as I've listened to this discussion, I'd like to try to encapsulate it a little bit.

To me there are two issues here: One is we're getting bogged down in a big discussion of the revegetation, simply the control of erosion along the roadside structures and that sort of thing; and the second question, which is getting merged into the first question, is revegetation, that visual that has some visual impact to soften the roadside, crane pads and that sort of thing.

So there's kind of two questions here.

MR. ROCQUE: Right.

THE CHAIR: Am I saying that correctly?

MR. ROCQUE: Exactly.

THE CHAIR: So maybe you'd like to address them separately so we can try to keep them from being confused here.

MR. ROCQUE: Right, okay. This was a subject that was kind of near and dear to my heart. I started looking at these projects back when it was Kenetech 10 years ago, 15 years ago, I guess, and there was a lot of concern about No. 1, stabilizing the area as soon as possible.

That's a pretty harsh environment, about twice as much precipitation as lower elevations, it's steep, highly erodible, and I got thinking about some of those issues, plus the fact that what was the native vegetation growing there, and it's almost never growing in mineral soil, it's growing in organic matter.

Organic matter accumulates there because of the cool temperatures, so microbial decomposition is slow. So the best solution to encouraging native vegetation would be to simulate what it normally grows in, and that erosion control mix which is highly organic, woody materials, low pH, would be similar to that native material.

As I've looked at those areas through forestry operations and going on site, I've looked at these potential wind power sites, the vegetation that's natural there comes in

very quickly once the site has been disturbed if it has a suitable seed bed.

So the erosion control mix made a lot of sense to me. You put it down and it's immediately effective. If you put down loam, the loam has to be protected and may or may not be protected and may erode, and this erosion control mix is immediately effective.

It simulates the natural condition. It doesn't have the same look. If you had a yellow-ish/green grass growing up there, that would be an aesthetic issue. This is dark colored and it's looks like the dark ones that would blend in.

So it's a great native material, and I think naturally it will reseed itself. So I was not concerned about what was to be used for seed mix; but I personally prefer this to be used in most cases on the mountain.

Once you get off the mountain that's a different story.

MR. WIGHT: Can you define this erosion control?

THE CHAIR: Excuse me, Steve's question was could he describe the erosion control mix.

Is that fair, Steve?

MR. WIGHT: Right.

THE CHAIR: Dave will do that.

MR. ROCQUE: A term that's been used for many years, called erosion control mix that was developed by the Soil

Conservation Service, which is a grass seed mix.

This material is not a grass seed mix. What it is is basically stump grindings. It's elongated wood fibers with a little bit of soil to hold it in place. It's very resistant to erosion. It's woody material that will decompose over time, so that's the material we're talking about and it can be made on site.

It's not wood chips. Wood chips are small and light and they float. This is elongated fibers that intertwine and so they kind of walk in place, and as soon as you put it down, it's immediately effective at preventing erosion, anytime of year -- spring or fall -- you don't have to worry about the grass seed catching and what it looks like.

I also suggested with the Applicants, through this process, that this might be a suitable material to place on riprap faces because riprap faces might be an aesthetic issue, it might provide warming of runoff water just to prevent that from happening, and over time you will get native vegetation of that material because there is a natural soil, I think Albert Frick mentioned it, called mahoosic soil, and that's organic material that becomes established on top of basically rocks and boulders and then vegetation becomes established in it.

So you could end up with a natural type of a soil in an unnatural situation.

So I think it's a -- in my opinion that's the best

solution possible for erosion control that I would suggest, versus loam and seed, particularly the mountains.

THE CHAIR: Thank you.

MR. WIGHT: Thank you, Dave.

THE CHAIR: Rebecca, go ahead. Are you comfortable?

Dave, thank you very much for clearing that up.

THE CHAIR: Are we going to another panel now, Jeff?

MR. THALER: Yes, Mr. Chairman, we are. This is our third panel, which is generally the undue adverse impact panel relating to the wildlife, wetland, and visual impact.

THE CHAIR: Are we going to hear from everybody that was in this prefiled testimony?

MR. THALER: Yes. Yes, in terms of they're summarizing.

THE CHAIR: I understand. I'm kind of confused because you've changed the order of how this book was laid out.

MR. THALER: I understand. You're going to hear from everybody. The only one, Mr. Folster, who is here from Sargent Corporation, gave prefiled.

He was here to respond to any questions. In the interest of our time schedule, he didn't speak.

Go right ahead. It's time to talk about what it looks like.

MR. DeWAN: Thank you, Mr. Chairman.

THE CHAIR: Go right ahead. Please introduce

yourself.

MR. DeWAN: My name is Terry DeWan, I'm a landscape architect. I'm with DeWan Associates in Yarmouth. With me is Amy Bell Segal. She and I are both registered landscape architects. We've been working on this project for the last decade.

We have a long history of working with visual impact assessment projects in the state of Maine. Among our accomplishments is working with the Department of Environmental Protection under current standards, which looks at scenic regulations.

A brief overview. We've looked at a 15-mile study area, investigation of potential impact of this project. We found that within this area less than 5 percent of the visible area may be able to see the project, and most of these areas are within the background of the viewing distance.

We've also found that the planning and design issues that will be used throughout the project that you've heard about so far have minimized the visual impacts to the maximum extent possible.

The wind farm will be visible from portions of the Appalachian Trail; we found that 9 percent of the places that you would see it starting at Bigelow moving down to Saddleback.

In looking at the LURC regulations, we concentrated on a number of key issues: Will the project block or interrupt

scenic views as people travel on ways.

This is a diagram of our 15-mile study area. As you can see, the protective circle is the outer one that goes through Rangeley Lake on the left there, and going to Oquossoc, shows a very large area.

Within that we've looked at all the resources from public waste, from the water bodies, and public lands. As part of our project what we've done is photo simulations or visualizations. We have one of the scenic byway right here, the red to give you sense of what it's going to look like.

A couple of contexts: The United States Forest Service has developed a scenery management system, and they talk about the foreground, the middle ground, and the background landscapes.

There are no public viewpoints within the foreground in the immediate half-mile range. There are some views in the middle ground about four miles away. The background is where you find most of the view.

A concept that we've also developed to give you a sense of how big it is in various places is called relative heighth. You extend your arm out about 24 inches, roughly arm's length. We've used the term relative height.

In other words, 4 miles, the terminal, will be about a little bit less than half an inch high at 4 miles.

A couple of slides to show you the work of our

assessment. Looking up Route 16, for example, this is Black Nubble. Looking at the scenic byway just west of Rangeley, here we're at between 10 miles, where the closest turbine is, to 14 miles away.

Up on Eustis Ridge, 11 miles away, 13 miles away, relative height. Here .16 inches. A little bit less than a quarter -- 1/8 of an inch in height.

It's also interesting to look from this particular viewpoint what other cultural changes are visible in the landscape. For example, 4.3 miles away you can see the biomass plant in the town of Stratton. The stack, by the way -- which you can barely see right there -- is 295 feet tall. As we've heard this morning, the bases for the turbines are 260 feet tall.

Another standard we've looked at, of course, how those structures are located divide the landscape to minimize the visual impact.

Well, let's take a look at some of the components. We've seen the turbines themselves, made, of course, of the base themselves and the blade.

The V90 -- and I have to speak here as a designer -- is what we consider to be a very clean, attractive form. With a tapered base, the blades -- which are highly engineered, is an example of the aerodynamic design.

The color is going to be white, and when you see it

on a day like today, the background sky, they will appear to be a very light shade of gray. We feel it will blend very well into the background.

The other interesting thing about this slide, and we've heard some of the intervenors talk about the amount of clearing that you need around the base for airflow. That may have been true in earlier models of wind power.

The current design will have these turbines emerging right out of the ports. There's not going to be a large amount of clearing underneath the base.

This is a view from Mt. Abrams at about 4.1 miles to the nearest turbine. This is an example of how we've been very sensitive to the landscape looking at ways to minimize any unnecessary extraneous elements.

We looked at ways to establish visual order in the landscape, making sure the turbines are a consistent height and that the cells are also consistent height so they parallel the lines of the mountains that they sit on, that there are minimal views of the infrastructure that can be developed in conjunction with the project.

You see any roads here, they mirror the existing road network that's seen already in the landscape. For most of the views you will see roads and transmission lines in very distant background views. These are repetitious, simple, we feel, very attractive forms.

This view is done by the National Parks. It looks like Eric Crews, who I believe is here today. It's not one of diagrams, and also very importantly, not what we're proposing.

However, this demonstrates the process that we went through. As you've heard other people talk about, an effort to evaluate options for siting of roads by the transmission lines.

In this particular case at one point we did look at a road on the north side of Redington Mountain; however, we felt that it would have resulted in potential visual impact on portions of the Appalachian Trail.

As a result of that, we moved the road on the other side. What does that same view look like? Back in '98 we visited it and then did a photo simulation. This is what you would actually see.

The previous diagram, by the way, was a computer-generated model. This is an actual photograph.

To get to the question of how fast vegetation grows in this area, we went back there a couple of months ago. This is the same view eight years later.

As you can see, there's been substantial amount of vegetation that's grown up. The view that may have occupied your view shed for a couple of seconds, now it's a mere glimpse as you go over the top of North Crocker.

We've heard a lot of talk about the toolbox. This is an enlargement from one of the white slides from before. As

you know, we have an area here that we've cleared for the access road. This shows how revegetation may be put in place.

The key notion here is that yes, we may be clearing 100 feet in width, but visually we're at the same relative horizontal elevation after five to ten years. When revegetation occurs through here, you'll only be seeing 20 feet of the riprap.

Now, as we just heard from Dave Rocque, it may be possible to add the erosion mix on some of the riprap surfaces up here if you get vegetation to be established in some of these areas.

Again, as part of the toolbox -- and these sort of vary -- may be more inclined and can actually go in and do more cutting here and do away with some of these side slope conditions.

Again, these are all part of the toolbox that we have available.

We are burying 2,500 feet of transmission line. It comes down the mountain and goes under Route 27, so people who are embarking on the Appalachian Trail from the parking lot right here will not be able to see it.

There is an opportunity to see it. People are very interested in how wind generates electricity. Some of you saw it in Searsburg.

The Appalachian Trail, of course, commands very

specific examination, indelibly, high quality visual environment. People who hike the trail for varies reasons also experience many other cultural modifications within the area.

In terms of scale, the Appalachian Trail is the purple line that goes through here, 34 miles. It goes from Bigelow down to Saddleback down here.

There are other things within that 4-mile area. About 1,800 acres of land are presently cleared for both Sugarloaf and Saddleback ski areas. The Sugarloaf Golf Course is right here.

Here's our project, Black Nubble and Redington right here. Within 4 miles, within this mid-ground viewing distance, we've made an inventory of some of the things which are present. Timber harvesting, we've talked about the ski areas, you are able to see portions of the Navy facility from the top of Saddleback.

This is the view taken from Sugarloaf Mountain at a distance of less than 3 miles away. It's a simulation. Again, you can see the turbines in the background there.

From the top of Saddleback Mountain you can look down and see the ski area. Through purposes of identification, the base lodge down there is about 1.5 away. Here's some ski lifts and trails up on Saddleback Mountain.

Within this 34 miles we have measured about 3.2 areas where it might be possible to see it from roughly 9 percent of

the distance.

This breaks down about 32 miles. About 1.3 miles I was in the middle viewing distance within 4 miles. Most of the views, about 8 percent, are within the background. I basically did that to demonstrate this of course.

Visibility is tempered by haze, as we saw on July 11th. We did some data collection from the airport in Rangeley and found that during July, August, September are the primary hiking times that you do find the least amount of visibility. That is your average visibility taken from Rangeley Airport.

Types of views that we find. We talked about it in terms of the inventory where you get filtered views. These are places we look through trees, through some brush, see views. These grounds are background.

Focus views. There are a couple of places where we do find focus view, for example, from the Cirque below the Village of Sugarloaf; and finally we find panoramic views. These are 360 degree views. It's important to note that the wind farm itself, 34 percent of the view -- 34 degrees, roughly 9 percent of the view.

We did surveys. We found out that 60 percent felt that the use of wind power will have either no effect or a positive effect on hiking.

We go into a lot of the discussion about lighting,

but the basic thing to understand is that the turbines themselves will have -- half the turbines will have light on top of themselves. The lights themselves will not move. They drops below the horizon.

In conclusion, we felt that there will be no impact on scenic and recreational resources. The impacts have been minimized to the maximum extent possible. There will be no unreasonable interference in scenic or recreational uses, and the project will not result in an undue adverse effect on the scenic character of the area.

Steve Pelletier?

MR. PELLETIER: Hi, good morning, my name is Steve Pelletier, Woodlot Alternatives. My colleague, Bob Roy, is here with me today. Both Bob and I are certified wildlife biologists. Both of us, along with five other people from Woodlot Alternatives, have spent a great deal of time on the mountains since this project began.

Our brief listing of some of our related experience is right here.

Just briefly I'd like to talk about the developments, the survey process. I'd like to talk about some of the resources of the primary concern. The bottom line is going to be that this project, after a great deal of work, the project is not posing an undue adverse impact to these natural resources.

Prior to getting out in the field, we spent time talking with the regional biologist, State biologist, US Fish & Wildlife Service biologist to study a plan and a protocol. Both Maine Audubon and NRCM were involved with that review process.

We conducted both general and targeted surveys of different species. Some of these were year-round, some multi-seasonal, and we were coordinating with all the other project members involved in this.

A brief list of some of the field services that were conducted. Habitat fragmentation is obviously an issue. Terry DeWan just described from the content of the local landscape conditions.

In the late 1970s this area, along with a number of other areas in Maine, were affected by the spruce budworm epidemic.

Subsequent to that we had a lot of activities from industrial-scale forest operations. Some of these harvests are up to 3,200 feet in elevation. They are generally high volume. A lot of the places are clear-cut operations. They involve extensive haul skid roads.

We've also got both Saddleback and Sugarloaf here within 5 miles of the project. One of the reasons why this project is located where it is is because of its proximity to existing roads and existing transmission lines.

The ridgeline itself is where it's a natural area. The Maine Natural Areas Program has classified it as a subalpine, fir, birch habitat. It's not alpine habitat.

It's dominated, it's almost exclusively dominated by thick young small diameter balsam fir. There is limited ecological plant diversity up here.

Just in terms of the designation itself, this is not something that is considered a peril for critically impaired and analogous to being here. We also believe that there's a number of other fishing sites here in Maine that have not been tracked and documented.

Next please. I want to spend just a minute on this slide here. This is -- to help put the fragmentation into context, we've got three areas -- you'll see the same polygon shape on the next slide here -- but you'll notice that the first one to the left is the contiguous acres around the project area above that land mass. It's above 2,700 feet.

You'll see over in the corner here we've got the two -- the footprints of the project area.

Of that contiguous acres -- a little over 21,000 acres -- of that contiguous land block up there, we will be initially impacting .64 percent of that land mass. At the end of the day, .4 percent of that will be permanently altered.

The next slide shows -- no, I'm sorry, would you go back -- the next polygon shows the forested habitat that

remains within that same 2,700-foot elevation.

The green is that that's unfragmented forests. The white areas have been affected by harvesting. It also includes on the Sugarloaf over here.

Of that forested habitat that exists now, .95 percent of that will be impacted and at the end of the day 6/10 of 1 percent will be permanently altered.

Black Nubble -- if I just focus on just the Redington and Black Nubble areas, there's about 4,800 acres of that area itself; 2.83 percent of that will be impacted and permanently, 1.7, 1.8 percent.

I also want to comment on the analysis that was done by AMC. What we've got here is a little busy, but the data layer for the existing road systems in white around the project area and the black lines, which were developed by AMC in their trying to develop an understanding of the roadless areas.

That's what those black lines -- we've taken those areas, and those were from 2000 satellite imaginary.

We've laid those two layers on top of our own analysis that we did, which was a 2003 aerial photo. You can see the differences right away.

Again, you'll see that polygon that I'm talking about. The green represents the forest areas, the yellow are for areas that have been harvested or otherwise affected. And you can see two areas I want to talk about a little bit.

This area right here, you can see the incursion or the cutting that's happened between 2000 and 2003 -- never mind 2006 -- that are on these. We also know there's another area over here that's also been harvested.

Next slide, please. If I focus specifically on the Redington area and I use the same process that AMC used in determining what is a roadless area, there is a block right here that constitutes a bottleneck by their own definition. I've got one here in the north, I've got one here in the south.

Next, please. What that does is it completely eliminates the whole Redington area from the road to this area that has been designated. This is already ready right now for this project being up here. Again, our impacts are less than 1 or 2 percent.

Next, please. Rare species. We targeted specifically on these number surveys that were done.

Next. Just quickly about the Canada lynx, it's something that because of the forest cover conditions, because of what's growing, it's great habitat, and we've got good also regional habitat for lynx in this area if they choose to use it.

Golden eagles, we don't have large oak crops, we don't have some of the areas that they like to forage in. Again, that species we spent a lot of time looking for that.

Bicknell's Thrush, relatively common in this

particular type of habitat. It's not a forest interior species. It focuses a lot of its time on edges. Some studies indicating nest locations within 5 meters of some of these trails.

North bog lemming, we've done a lot of work -- there's a focused area where we spent a lot of time with this. It's a limited habitat. We spent a lot of time in terms of avoiding minimizing this.

A new lease agreement that has just happened in the last week or two announces 15 acres where we can even push this back from the environment from what you've seen.

Next, please. To talk specifically more about Bicknell's Thrush habitat, this is Stratton ski area in Vermont. What it shows is here is the top of the mountain, over here, and a whole series of trails, ski trails, that are going down the mountain in this place in this direction.

These points over here represent marked locations and relocations for Bicknell's Thrush that were radio tagged. Notice the concentration of these birds. Notice that they're all along these edges. Notice they are still existing in this area that is highly fragmented.

Next, please. If we take our project that -- here's a sample segment on Black Nubble -- lay it on top of that, look at the scale, difference of impact related to what exists. I submit that if the Bicknell's Thrush can persist in these kinds

of fragment conditions, that it will continue to persist with this level of alteration.

Next, please. Bog lemming habitat, again, I want to show that the green area represents the direct wetland area where you're going to be finding these bog lemmings. The ones we found are in this particular area.

What we've done, a number of alterations, including taken a road from out between the two over to here, and now with this 15-acre acquisition, we can put it here and probably even move it back beyond that.

Next, please. We've done a lot of resident migratory work while we've been out there. Folks see a lot of native species.

Next please. Some of these surveys, because it's a constantly developing process, we have been working with IF & W in particular and making sure that our assessments are proper.

Some of our ceilometer surveys indicated that there was a greater concentration along the coastal areas than in the inland areas. That was just a starting point to try to figure out what was going on.

The acoustic surveys that we did indicated that there was more focused concentration of birds approaching the mountain at lower levels than the higher levels. It doesn't say that the birds still won't be flying over the top, but what we did show is that there was a -- our radar data documented

that there was a marked preference to avoid high ridgelines.

Birds still will be flying high over, but there's a lot of other studies that are relevant to this -- a lot -- show that these migration levels are typically at 3- to 500 meters, which are well above our 125-meter turbine height.

Next, please. In terms of bats, we did a study in 2005. We documented relatively low activity levels.

The harsh habitat conditions up there -- again, a small band of fir, we don't have nice roosting trees that these things like to particularly forage in, the cold temperatures, the high winds -- will limit the bat population and limit the insect populations up in these areas.

There's a lot of other data that helps to support that, including some post construction mortality surveys. At some of the new facilities, they're showing that all these together, that there's a low risk of mortality. Again, no undue adverse impacts on birds or bats.

Next, please. Wetland stream. We've done quite a bit of work out there over the years on mapping, not only the routes we've got here, but a number of other routes we've investigated.

In response to some intervenor comments, we went back out in the field and took a look specifically at a number of problem areas, and we found that the intervenors themselves did not correctly apply the jurisdictional criteria. We do

recognize there are hydrologically sensitive areas, and we will be protecting those.

Next, please. In terms of LURC's jurisdiction, there are .14 acres of temporary fill -- I'm sorry, permanent fill, 4.5 acres of cutting impact.

We have the use of 500 and 1,500-foot corridors that's going to further reduce wetland and fragmentation impacts. We are going to be treating all sensitive areas as regulated by industry. Our final development plan will be able to show it even in more degrees because of that.

In conclusion, it's not pristine, unfragmented alpine forest habitat. The bog lemming habitat, we've done quite a bit to avoid and minimize; the Bicknell's Thrush, there's a tolerance and frequent use of some of these manmade edges; and the post construction -- cutting since 2000 basically indicates that this right in here is disconnected from adjacent roadless areas.

No undue adverse impacts to natural communities -- wetlands, streams, rare species, or resident wildlife, and migratory wildlife.

Finally, I just want to say that one of the things that some of the most significant threat to high elevation forests and speaking of Bicknell's Thrush, independent climate change and some of these air emissions that we're dealing with, this project represents a clean renewable energy source that

will clearly offset those impacts.

Thank you.

THE CHAIR: Do you have any questions, Steve?

MR. WIGHT: We heard some concern last night about the effect of lighting, the attraction for birds.

Can you speak to that?

MR. PELLETIER: Yes. Lighting has been shown to have an effect on migrating birds. These are usually -- the catastrophic events that have been documented that have been tied to lighting are largely associated with very tall communication towers.

These are towers that are 200, 300, up to -- I think the highest are -- right around 670 meters, it's almost half a mile high.

Those are towers that require multiple sets of lights, both blinking and staying on full-time, and it's also associated with poor weather conditions.

Certainly in an area like this, you can expect some poor weather conditions; but again, the fact that these lights are low, only about 80 meters off the ground, bird migration experts found that a number of New England mountaintop or ridgeline locations to be 3- to 500 meters above these areas. Birds are flying higher than that.

Also, on those nights of poorest weather, there's far fewer birds that are in the air. They just choose not to fly

on those night. It's not good conditions for them. They wait for clear nights with good winds that are carrying them in the direction they want to go.

So lighting can affect bird mortality.

Again, the largest events happened at very tall towers, much taller than what these wind turbines are.

MR. WIGHT: 80 meters is the top of the tower? It would be like on a cell?

MR. PELLETIER: It would be on top of the cell, which is sitting on top of the tower.

The cell height might be a few meters tall as well, 83, 84 meters. Not at the very top of where the blades are.

MR. WIGHT: I think that some of the people last night were under the misconception that these things are going to be flood lit.

We understand that there's one light on each of 15 of the 30 towers?

MR. PELLETIER: Yes, half the towers.

MR. WIGHT: Pulsing red light?

MR. PELLETIER: (Indicates yes.)

THE CHAIR: I assume that perhaps we'll hear a little more about this, and this is particular to Steve, later on.

Obviously you're aware of some of the other intervenor comments and one of them -- one wonders when we read this whether we were looking at the same place on the face of

the earth.

So you've -- I'm assuming that perhaps both of you are going to try to work each other over on this issue, because I think we need some clarification on the huge disparities in what a stream looks like.

I guess I have to express my disappointment in this issue that we would end up so far apart.

It leaves us -- you're making us the experts when you come in with information like this. That's just a comment.

So I'm hoping that your cross-examination, and that as well as the intervenors, will help elucidate us a little bit on this issue.

I assume that your remarks that you made, brief remarks, are addressing this issue.

Do you want to say anything on that?

MR. PELLETIER: No, we'll definitely talk about these issues.

THE CHAIR: Thank you.

MS. KURTZ: I have a question for Mr. DeWan.

If I heard correctly, you were talking about trying to set up the towers so that the towers were all at the same elevation and the towers will sort of minimize, I think, the visual impact; and I'm thinking about the topography of the mountains and wondering what did you have to do to make certain that the mountain makes all these cells line up?

MR. DeWAN: What we're looking at is the end result. From the flood of simulations you can see roughly the surface of the mountains reflected by the cells.

That's not to assume that we're making major modifications to allow that to happen. It's the way that they were sited that they do seem on the ridgeline.

So we are not making changes to cause that to happen.

MS. KURTZ: So it sounded as though you had designed it that way to make them all about the same height; now you're saying that it just happens to be where they're going.

MR. DeWAN: One of the principles in designing wind farms is to make sure that there's a linear relationship between the ridgeline and the height of the cells.

Because these are mostly on the ridges just follows that the cell, which is roughly 80 meters above the ground surface, will follow that same line.

MS. KURTZ: So you didn't have to level parts of the ridgeline or raise part of the ridgeline?

MR. DeWAN: That is correct.

MS. KURTZ: It just happened that way?

MR. DeWAN: That is correct.

MS. KURTZ: I had a question about the Vermont ski area, how trails are cut on a ski area versus how they will be cut for this project.

I assume that ski area trails are cut one at a time,

maybe not all the same place at the same time, to allow past movement for birds from one place to another, whereas this is all going to be done in one fell swoop.

Is that -- is that really a good comparison regarding a ski area that's being cut versus something that's going to be done all at the same time?

MR. PELLETIER: This study was 1994/95, some of the work that's been done, and it's working with what's on the landscape at that time.

The bottom line is that these Bicknell's Thrush are continuing to use that fragmented habitat in all those different areas.

There's some recognition that distances greater than 50 meters may start posing a restriction for Bicknell's to be moving across, but again, that's well above what the openings that we're going to be creating with our project.

My point is that these Bicknell's Thrush are persisting, they're continuing to inhabit and use, reproduce on those areas in Stratton.

Our project represents a much greater or a much less replicated event.

MS. KURTZ: Another bird question. You said that most of the birds are flying at the shoulders of the mountains rather than the ridges, but some of them are flying 300 meters above.

What is it that -- why -- this question except that it's -- for them to get 300 meters above the ridgeline and they're flying through the shoulder, don't they to pass through that area of turbines and blades? You can't get through the shoulders to the ridgeline without passing through something 100 meters.

MR. ROY: Yes, I think I understand your question.

The work that's been done recently in the northeast, forest mountainous areas is indicating that bird migration, nighttime bird migration, is fairly complex in these types of areas.

We've got sites where we've documented from a valley bog and used radar at the same time ridge tops are using radar.

What this information shows is that they're a subset of birds that choose to just get as high as possible and go completely over all landscape features. And that starts wherever they happen to start.

We do know that birds very quickly get to the altitude that they want to fly at. They very quickly go up to that height and they spend the night at that height and they come down in the morning.

Now, there is also that subset that chooses to stay lower. These could be, we don't know. It's dark and they're very small birds. We have no idea what species they are necessarily or how old they are, why they're choosing to fly

like this.

The work that has been done, either on shoulders or on valley bottoms, is indicating that those birds are generally to be below the ridgeline. Even when we're there on site, we can step outside our radar truck or our radar shack, we can see the silhouette of these mountains around us, and the birds' eyesight is far better than ours, and they can see those as well.

A lot of those studies are showing that a predominant proportion of the migrants that are staying low within the confines of these valleys are choosing to follow courses that don't lead towards the ridgeline.

Migration is a very energetically costly procedure for birds, so they choose to migrate at night because it's a more stable medium to fly and it's cooler so they can -- they're flapping their wings, they're generating a lot of body heat. It's cooler, they can stay cool.

It only makes sense that a bird who is choosing to stay down in the valley would not expend the energy to go up to these ridgelines. It's going to get to the height that it wants, either it's over the ridgeline or down in the valley, and it maintains that flight.

Now, of course, there is that subset that if they're just going over the ridgeline, they will pass over the ridgeline.

A lot of radar studies out there do document the percentage of targets -- and we call them targets because they're birds, they're bats, they're even insects -- we document the percentage that are flying below that turbine height, and it's variable between sites, but it's usually just a small proportion, usually between 2 and 12 percent; often as low as zero or 1 percent. On nights where it's really good migration weather, they get up high and they just go all night long.

Other nights, certain sites, there may be as many as 20 percent or maybe even a little bit higher; but over the course of the season it's usually between 2 and 12 percent of those targets, even over ridgelines.

The mean flight height is anywhere between 3-, 4-, 5-, 600 meters above those ridgelines. The overall percentage flying below that tends to be pretty low on a seasonal basis.

MS. KURTZ: I have a question for Mr. Mortenson.

You said there were, I don't know, a lot of misconceptions, a lot of folks were concerned about the visual impacts, and one of the sentiments expressed is this project would literally blow the tops off the mountains.

I just need to know if you can substantiate that, the concern that you're taking the tops off the mountains, you were taking significant volumes of material off the mountain or digging into the mountain to put up these turbines.

There's nothing to counter that, so I'm asking if you could address that contention.

MR. DeWAN: I know that when we were involved in the Kenetech project quite a few years ago, because of the shape of the mountain and the relatively shorter wind turbines, there was a need back then with the shorter turbines to literally take the trees off the top of the mountain, and I don't recall the exact width. It was probably in the neighborhood of a 300-foot width.

I know that in reading one of the intervenor's comments there was a concern that we would have to clear something in the vicinity of 200 feet on either side of the turbines just to account for that level of turbines.

That is not the case of in this design. The Vestas V90 is of sufficient heighth and it's above that turbulence range. You'll have to ask the Vestas engineers to talk about that.

But one of the advantages of using this type of machine is that it does literally protrude out the tree line. There is not the need to blow off the top of the mountain to account for smooth air flow.

THE CHAIR: Jeff, did you have a question?

MR. PIDOT: Terry, this is going to be a long question. What I'm going to do is make a few statements quoting from different parts of the prefiled testimony on

issues that are related to your study, and then at the end I will just say comment as you will.

The first thought that came to my mind -- this is my thought not attributable to anybody else -- was that you indicated that this would only affect, visually, about 9 percent of the AT view shed because the rest of the view shed is in the woods.

So one of the things that you might think about in responding when I'm all done here is isn't that 9 percent the 9 percent that brings the hikers there? People who are hiking the AT are not hiking just in the woods, they're hiking for the view. That view is that 9 percent. That's my thought.

I want to turn now to -- I'm ignoring for the moment because it will be well presented later the views of proponent's project that are NGOs and their studies that conflict with yours, but looking at two things, one being the prefiled testimony of James Palmer, who's independent and was hired by the Commission to evaluate your work, Mr. Palmer has some nice things to say about your work, but he also says these things.

He says, While the visual impact analysis sets the context for scale contrast by noting that the mountains and lakes are large, trees are the proper standard of comparison. By this standard, turbines present the very significant scale contrast.

He also says, While not in itself normative judgment of good or bad, there is no question that turbines offer an extreme scale contrast to other landscape objects.

Those are relevant parts of his prefiled testimony.

Finally he says, The bottom line is that there are several places where the arc, which is the project, turbines are close enough to the AT and the trail's placement as such that many of the turbines will be clearly visible as middle ground objects in the landscape even though they may be on background ridges.

We also have uncommonly powerful prefiled testimony from the Federal government. I'm not used to seeing the Federal government give this kind of testimony. You know what I'm talking about. First from Pamela Underhill on behalf of the National Park Service. She's the superintendent of the entirety of this trail system as you know.

She says, To date seven wind power projects have been proposed within 10 miles of the Appalachian Trail. We have opposed none of them.

So this is the singular event for the National Park Service. She also reflects, of course, upon the independent study of Eric Crews -- hopefully we'll hear from him sometime today -- which concludes using the technology or the methodology of the Park Service, Forest Service that the net effect on the AT is unacceptable, and I believe the term that's

used is it's an unacceptable modification.

Finally, I will reflect upon the Commission's own standards for a change to this zone, which will require, among many other things, that the change reasonably assure that those resources currently designated within protection subdistricts will receive protection that is substantially equivalent of that under that original subdistrict designation, which in this case is high mountain district, as well as the PRR district on the Appalachian Trail.

So it's a very long list of things for you to comment on as you will. They all have question marks at the end of them. I'm not your adversary, but these things need to be responded to, I think.

Thank you.

MR. DeWAN: Do I have a time limit here?

PARTICIPANT: You can take as long as I did.

MR. DeWAN: Thank you, Mr. Pidot.

To address your first question, the 9 percent and what that means, I must agree. As a hiker myself, I go to mountains to enjoy the view. It's part of the experience.

Part of the experience from our perspective is getting up the mountain, looking at the Manushi, looking at the trail, looking at the periodic views, the vista overviews, the open views.

Part of it also is getting a sense of the cultural

landscape. I think that's a term that's used in some of the information from the Appalachian Trail.

One could look at this as an extension of us and the people. This is part of our cultural landscape. We see ski areas, we see roads, we see man-made lakes and Flagstaff Lake. There's a lot of other things that people are aware of.

People will come here, we feel, even though they wouldn't be able to see the wind turbines.

We've heard many people talk about in other parts of the country and other parts of the world people are attracted to these types of installations.

When I was a Searsburg several years ago, I was really awestruck by standing beneath them and being in a place where electricity is generated. We just have to look at other installations throughout the state of Maine -- power plants, Maine Yankee, with their visitor centers -- to know that energy production facilities are very powerful. There is something almost magical about being in a place where electricity is generated.

I don't know if that answers your question, but, yes, you're right, the 9 percent represent the most significant part of the trail but we have to keep in mind that it's not in your face all the time the entire 34 miles. In many of those instances, you're not seeing full open views, you're seeing filtered views.

And lastly, most of the views are what we call in the background viewing distance, Again, using that scale comparison that it's roughly less than half an inch in height as we saw in the photo simulations.

To address Mr. Palmer's comments, the methodology that is used in assessing visual assessment -- the one that Jim has used, the one that Eric Crews has used -- for the most part are designed to look at more plainer, more closer-to-the-ground changes to the landscape: The installation of roads, forest cutting practices, and so forth.

As Jim Palmer says, this is a very large object. We are not denying that, with the top of the turbine over 400 feet.

However, this is a very large and in many places quite a dramatic landscape, and we feel that there is a scale relationship between the size of the objects and the background landscape, that they will be visible. But in terms of their scale, we feel that they will fit.

Now, there's a certain amount of subjectivity, and I certainly don't envy your job here, you being the Commissioners.

The question is: What is that point at which you say this is undue?

We wish that there were some form that you could use, some way of measuring what is an acceptable level of visual

impact.

We've used methodologies that are part of the DEP's regulations right now. We've heard other people use the Forest Service methodologies. We've come up with different opinions. I think probably it's all based upon an observation and what is appropriate? will this overwhelm the landscape? Is it dominant?

There are many ways of looking at it. From the top of Saddleback, for example, we showed that from left to right, looking from Black Nubble over to Redington, the views will be included in, I think it's 34 percent -- 34 degrees, rather, of your field of view. Because that's a 360-degree view up there, that's about 9 percent of your entire view. People are up there, they'll look at that, and they'll look to the left, to the right, and back. There are many other places to look at.

So we can't say that it's destroying the view, and we can't say that it's overwhelming the view because it's going to be in addition -- it's going to be an addition to the view.

The last thing, of course, is rebuttal to the Crews' observation. Again, is it an unacceptable modification? That is your job.

We feel that from our perspective and given the fact that it is a relatively small object when seen from such a distance, there are unbalanced, very few places within the 15-mile study area we've looked at, that it's going to be

visible from.

We've looked at private houses, we've looked at scenic byways, we've looked at lakes, and less than 5 percent of this 15-mile area will see this.

On the other hand, we would also like to say that, you know, we feel that it's a very attractive facility, an attractive way to generate electricity.

There's a certain connotative value, and that's a term that I believe Jim Palmer started to use when he wrote his book that says that people attach certain meaning to certain types of objects or facilities in the landscape.

Many people look at wind farms and say, this represents the future, this represents clean green power, and they have a lot better way of appreciating. They feel it's more appropriate than if they were to say look at the 12,000 nuclear power plants, let's say.

I hope I've kept to my time frame to answer your long question.

THE CHAIR: We can move on to the last panel.

(There was a break in the hearing at 11:01 a.m. and the hearing resumed at 11:08 a.m.)

THE CHAIR: Are you ready?

MR. THALER: Yes, Mr. Chair. This is our final panel relating to the overall energy and economic benefits for the project. Thank you.

THE CHAIR: Thank you. Whoever's first. Who's starting here?

PARTICIPANT: Alison Hagerstrom will be starting for us.

MS. HAGERSTROM: My name is Alison Hagerstrom, and I work for Greater Franklin Development, and our purpose is to create new jobs in Franklin County, and we do that primarily through business attraction but also through fostering existing business relationships.

As we continue in our endeavor to replace the over 1,000 jobs lost, we believe that the Redington Wind Farm will satisfy an economic need in our local area by providing potential of ten permanent jobs and several construction jobs over the course of a year for construction.

Construction wages would be estimated at nearly $5.5 million, which wouldn't include benefits. The pay approximately for the permanent jobs would be $800 a week, which is well above the average wage of $568 in Franklin County. The benefits would include nearly $100 million, which is significant for Franklin County.

As we've already heard today, there is a preference for hiring local people, and we have available adaptive people with good work ethic, wanting to learn about wind farm operations.

Other local benefits would include lease payments to

landowners, property taxes without additional burden for public services on this $150 million private investment.

Wind power will also be available first to the small- to medium-sized businesses in Franklin County and in western Maine. A fixed-price contract would help our small business to stabilize their utility costs.

In addition to this, there will be purchase of goods and services, hotels, restaurants, et cetera. Tourism is the No. 1 industry in Franklin County, and because of that, I researched the effect of a wind farm on tourism in Franklin County, and I couldn't find any adverse effect.

People are interested in this wind farms and they travel to them.

This would also help to foster existing businesses in our area. What I found is that the trend was that local governments tended to work with developers to create signage, so they can find the wind turbines. They all would build pull-outs so that they could few the turbines, and they put pictures of them on their website, and include them in their listings of things to see and do right alongside lodging and restaurants, and boutiques, et cetera.

And also in the prefiled testimony from Mr. Holt, it says that there's a neutral to positive impact on tourism by the installation of wind farms.

And so I welcome good corporate citizens, such as

Maine Mountain Power, to provide these good paying jobs to our area, and I'm going to urge you to consider allowing this project to move forward in Franklin County.

Thank you.

MR. CUTLER: Good morning, my name is Lloyd Cutler. I'm a resident of Carrabassett Valley, selectman of Carrabassett Valley, business owner in Carrabassett Valley. I guess I get the hometown advantage of all this.

Recreation is extremely important to our existence. Our wood mills in the area all have closed, and is the industry in western Maine. We rely on the weather, the climate for snowmobiling, hiking, fishing, and skiing.

We also recognize the fact that as a recreational industry we are basically a discretionary-type activity for people. We also show that we use a tremendous amount of energy in the snow making, in skiing, snowmobiling; and we feel a moral responsibility that we need to become green, that we need to give back, and we need to stop polluting the air.

Last night to me was extremely educational. I listened to five hours of testimony, and what I heard from the most part was that people felt that they agreed there was a problem with the environment, that global warming -- where it was not that familiar to people ten years ago -- is now on everybody's minds, and we need to do something about it.

I'm not going to pretend to be an expert. I can just

tell you that I was extremely pessimistic as to how bad global warming is until I just saw the movie, Inconvenient Truth, a strange name to me. I could not figure out the name until I started thinking about it.

Inconvenient. It's inconvenient to even have to think that we're destroying our environment. It's inconvenient to think that we have to come up with alternative forms of energy, but we have to. There is no magic pill. If a windmill represents less than 1 percent of our energy needs, that's still something. We have to stop what's going on.

I really feel that as an area we need to be green because again, we're using an exorbitant amount of energy that we're not manufacturing, we are really entertaining people.

And I know that my customers in the restaurant in the area feel that they want to become part of that.

The other day in the New York Times, Vail Ski Area, which is probably the biggest in the country, just announced that they were going to take 100 percent of their energy from green sources only. They're buying wind from Minnesota, North Dakota. Basically I think that they feel that same sensitivity that they need to give back.

Again, as I listened last night, I don't think the environmentalists and people against the project really were against the concept of global warming, against the concept of renewable energy; I don't know how they could be.

What they really, in my mind, came down to is it's ugly. Maybe I'm being mean, but to me that's shallow.

I can't help to think that 200 years ago when they built the first light house on the coast of Maine the people that were situated right in front of it said, oh, my God, I have this 200-foot concrete structure, it bellows noise, and flashes lights in front of me. This is horrible.

I firmly believe, because I travel a lot and I see windmills everywhere, that people in this area recreating in this area, the view of these windmills, and realize that we are trying to give back and we are trying to save our earth.

Thank you.

MR. GARWOOD: Good morning, my name is Steve Garwood. I'm a consultant with the firm Garwood Strategies. I'm assisting Redington, principally on how to connect and interface with the transmission system.

I've got about a 21-year career in the industry, much of it with Central Maine Power Company, but you can review my credentials at your leisure.

Next slide, please. Key points I would like you to walk away with after hearing or reviewing my testimony are as follows:

New England and Maine have just allowed themselves to become overdependent on natural gas-fired generation, and that's posing a threat to the reliability of our resource

supply and also this causes electricity prices to be volatile.

Many regulators and stakeholders alike have recognized that wind generation be an important part to resolving these problems.

Redington can and will be able to safely interconnect to the grid, and despite what some have asserted, Redington will not cause or create additional congestion in the local area where it is interconnecting under normal operating conditions.

Further, like any developer proposing to interconnect to the transmission system, it's very important to establish and then maintain your place in line relative to other projects.

Changes -- material changes to a project this late in the development stage of a project, such as Redington, can jeopardize its place in the line and require it to start all over.

Finally, I want to hit home that because of the generation that could be displaced by the operation of Redington, there will be some 134,000 tons of reduction in harmful emissions today emitted by dirtier plants that are operating.

Next slide, please. With regard to the sort of needs and the benefits that we can expect from Redington, by way of reducing the dependence on natural gas, Redington will in fact

decrease the region's reliability. This reliability threat really is in the form of a threat to fuel supply in the winter of natural gas.

Redington will also help lower electricity prices in Maine because its fuel cost is essentially zero.

I have some statistics on this slide that show what's happened to natural gas prices and energy prices. I won't go through those verbally.

Again, as I stated, because Redington will displace gas and oil generation when it operates -- those are the marginal units that operate in this area -- under normal conditions we'll have emission reductions of about 134,000 tons annually here in Maine, and that's based on emission rates published by a report of the Independent System Operator of New England pertaining specifically to Maine.

Next slide, please. With respect to the safe interconnection of Redington, Central Maine Power Company has conducted a system impact study, and they issued a final report for that study in May of '06, and essentially concluded that with the transmission system upgrades identified in that study, Redington will meet the minimum interconnection standards and will have no adverse affect on the reliability on the system.

Thank you.

MR. McLEISCH: My name is Bruce McLeisch, I'm the vice president of wholesale origination, Constellation

NewEnergy.

NewEnergy is the largest supplier of retail electricity to businesses in North America. We're also the largest supplier in Maine. We serve most of the cities and towns, most of the colleges and universities, plus the hospitals, and the lion's share of industrial customers in Maine. We're also the largest supplier of renewable power in Maine currently.

My job is to go into the wholesale market and buy power that we can use to sell to our retail customers, and to that end we have entered into a contract with Maine Mountain Power to buy the output of the Redington mountain project for ten years.

We will be using that power to sell to Maine customers.

What our businesses in Maine, our customers, are telling us today is that they're looking for long-term power. They want it very long term.

We can typically just give them three to five years, but they want it even longer than that. They need it for budget certainty. A typical business profitably is halfway through the year you find out your electricity prices went up 30 percent, especially if it's a pretty significant portion of your operating costs.

The other thing they're telling us is they would like

to buy renewable power, they'd like to help minimize the impact their business has on the environment. They realize that global warming is happening, pollution is occurring, and they want to be good corporate citizens.

The Redington Wind Power project allows both of these goals to be achievable.

If you take a look at this next slide, you can see why it is that they're looking at long-term fixed-priced power. What you see, this is a 12-month strip of power and how that's going forward and how that's changed since the summer of 2003.

What you notice is that it goes up and down all the time, but in general you can see that the trend is up.

And then here, that's a year ago when Hurricane Katrina and Rita came, it went to so much natural gas supply down in the Gulf that we had a tremendous increase in price overlines of gas as referred to earlier. Only the warm winter that we had helped drive the price to go down.

Even after the price came down, you can see that the trend is still upwards.

Because Redington Mountain has no fuel costs, we can offer long-term, ten-year fixed-price deals to customers. Fossil fuel plants are not likely to offer that. It's too risky to do it as you can see by the fuel costs.

Demand for the renewable power from Maine customers far outweigh the supply available from Redington Mountain.

You've heard people say, well, Constellation NewEnergy is going to be trying to sell this power in Maine. We are going to have no problem selling it in Maine. In fact, I wish I had two to three times the supply.

Customers include SAD 58, University of Southern Maine, College of the Atlantic. I've just listed them because they're among the most consistent. We sell to them. There's plenty of other industrial customers, colleges, healthcare facilities.

The last line I have is just to refer to a proposal that was submitted with prefiled testimony by NRCM, which is to reduce the size of the project.

You heard from Randy from Edison Mission earlier that -- well, a couple of things. One is to reduce the output by 45 percent, so that means fewer businesses would be able to benefit from the fixed-price power over the long term.

The other thing is, they'd have to pay a higher price. This is based on NRCM's analysis. Based on Randy, he's telling us that price has to go even higher, and that's 35 percent of our customers are not going to -- they're not going to be willing to lock into that, so that wouldn't work.

The analysis that NRCM submitted is based short-term wholesale prices for energy and renewable energy credits.

The long-term -- just assuming that that would continue -- the long-term price is a different market, it's a

better market, and it's the price the customers would like to sign up for.

Thank you.

MR. HANISCH: Good morning, my name is John Hanisch. I'm the national air quality director of Arcadis, which is a national environmental consulting firm. I've got over 35 -- 30 years, almost 35 years, of experience doing air quality analysis and regulating air quality sources, and I've worked at EPA in Boston. What I would like to do today is talk to you about air quality issues.

If you look at the next slide here, what this shows is Maine's position is either an exporter or importer. I was only to be able to get data up to the year 2000. The blue bar on the left is how much we generate, and the bar on the right of each year is how much we consume.

As you can see, sometimes we generate more, sometimes we consume more; but in no year are we sending out large amounts of energy out of the system. We're sending some energy out, but not a lot.

The reason why we're not sending any more energy out is because we keep -- there's a constraint there that Steve can talk about. We're sending out all we can and it isn't a lot.

If you look here at how we generate our electricity, and I think you've seen this slide before, in 2002 73 percent of the electricity that was generated in Maine was generated

with natural gas, which means by and far the majority of all of the electricity generated is gas.

So when Redington turns on, it will be reducing the amount that's gas because that's the most expensive type of electricity, and since ours is the cheapest price, as Bruce talked about, they will be ratcheting down gas.

Next slide. This is a -- I tried to do a lot on this slide, I'm not sure you can see it all, but you can see down here that this is the renewable portfolio. It's basically very, very low cost -- this is cost over here -- and I've made it green because it's also very clean.

So when you start looking at what's going to come on in a day, you put on your green stuff first, then you put on your coal -- which is next in line there -- because it's more expensive and you want to keep the costs down, so you're getting in at a certain price, then you start to put on gas.

So on a typical day -- which is this bar down here -- you're somewhere in the gas regime where you're running. You've got your renewables on, you've got your coal on -- other places in New England -- and you've got gas on.

If they add Redington, what you would be doing is not necessarily taking a gas plant off. You might take a gas plant that's running at 85 or 90 percent of its capacity and ratcheting it down 5 to 10 percent and adding in the energy on Redington.

So you're not shutting down a plant, you're not holding something in standby; you're just allowing a reduction in the emissions that are coming out.

Because you're ratcheting down a gas plant on a typical day -- and this is a typical gas plant in Maine, not a gas plant somewhere else -- because you're ratcheting down a gas plant, you're causing a reduction in air pollution because once you go on, the pollution that would have been occurring for that same amount of energy isn't occurring. This will usually be a gas or oil plant, and it will be true every hour that we're generating electricity.

How much will be reducing? Well, it's basically 260 million pounds a year, which is the same thing as 134 tons.

What are those reductions equivalent to? It's equivalent to removing 22,000 cars from the roads. It's equivalent to burning 50,000 gallons of oil a day, while you're producing enough electricity to power roughly 43,000 Maine homes.

Why do we need wind? Several people have mentioned it: Global warming. An EPA report talks about it, that there will be significant impacts. NRCM also talks about it, and they recognize the impacts. One of the things that they're saying in the next line is that it's going to create a decline in winter sports.

So it will reduce our dependence, as shown on the

next slide, on natural gas. People have talked about that. It will cause a reduction in air pollution, it will help reduce greenhouse gases, it will harvest a clean, plentiful renewable source, it will be consumed in Maine, it will reduce our dependence on natural gas, and it will have no undue adverse impacts.

I want to thank you very much. That concludes the formal presentation.

THE CHAIR: Thank you. Questions? Steve.

MR. SCHAEFER: Lloyd, I know you're deeply involved with the local community here and have been for a long time.

Last night we heard 50 to 60 people, and according to my little notes, only three of them actually work here and live here.

First of all, two-part question. Does Carrabassett Valley take a position as a Town, and what is your gut feeling as a working individual in this area?

MR. CUTLER: It's interesting about the local people, because what happened is this is the first experience we've had with a formal hearing is that the people that go to these hearings a lot get here early and sign up early.

So I can tell you that I personally talked to probably a dozen local people, but by 9:30 or 10 o'clock they were bailing out. They said, you know, I'm still 40 names away from testifying, I have to work tomorrow.

I feel comfortable telling you that four out of the five selectmen of Carrabassett Valley strongly support this project; however, we don't feel it is our position to take a vote for the Town, the Town has not voted.

It's easy to say when you're amongst friends, friends are very supportive of the project. I think the point I was making was we would rather not have windmills. I think everybody would rather not look at a windmill; however, we really accept windmills because we know we need to do something.

So it's that inconvenient word again that we are thinking about it, and I know from the restaurant, a lot of our customers are from Portland, Massachusetts, and it's become a big topic of conversation, and they all seem to feel, you know, look at the ski area and look at the scars up the side of the mountain. How can we not be supportive of windmills, which are actually generating power, not using power.

MS. KURTZ: I have a question. I was looking at your list of the businesses that are going to purchase or insisting that they purchase the electricity, and I'm just wondering how many of those businesses are in Franklin County?

MR. McLEISCH: I think 58 -- correct?

Sugarloaf has expressed a strong interest. Being from Rhode Island, as I am, I'm not necessarily sure about all the others, which counties they're in. I know there are some

in Somerset County beyond the two that I've listed.

They're scattered throughout the state, but there is a strong interest in this area as well.

MS. KURTZ: Again, a point that keeps coming up is 44,000 homes, energy for 44,000 homes, but it's not going to homeowners, it's going to businesses.

MR. McLEISCH: Correct. We'll be selling to the businesses. That's because that's our main business model.

What we need is -- we need a commitment from those businesses to be able to buy it for ten years, and most homeowners are not able to necessarily do that.

MS. KURTZ: Do you have an estimate of what kind of savings they're going to realize percentage-wise?

MR. McLEISCH: Well, when you talk savings, you have to figure out what you're comparing against, of course.

The price that we can show them today would be a savings compared to the short-term price that Central Maine Power might be offering.

Long-term, as I said, prices go up, they go down. If prices go up a lot, the savings could be significant. They could be 20, 50, 100 percent.

Prices could go down, though. This may not necessarily represent a savings to them, but as a business it represents, you know, the ability to plan for the future and have known costs instead of not have them.

MS. KURTZ: When you propose this to them that you're saying we're going to guarantee 10 percent savings, you're just saying you'll be able to project out what your --

MR. McLEISCH: Right. We'll be saying we're going to guarantee you a fixed price, and even when gas goes up, that price is not going to change.

MS. KURTZ: Alison, I had a couple questions.

Can you clarify or restate again, you said something about the neutral or positive effect on tourism. I don't know where that statement came from. I'm sort of writing things down.

MS. HAGERSTROM: That statement of neutral or maybe positive statement came from prefiled testimony from Ed Holt, president of Ed Holt & Associates, who did some studies on tourism.

MS. KURTZ: That is nationwide, or throughout Maine, or throughout the world.

MS. HAGERSTROM: He did some of all of that.

MS. KURTZ: How do those places where there's tourism, how do those reflect the recreation-based tourism?

MS. HAGERSTROM: They were similar situations. Some of them were coastal but also some of them were in Vermont, Searsburg. That may not be referenced specifically in this particular one, although it may. I've read several so I'm not really sure which one it came from.

But they did compare various --

MS. KURTZ: I was just --

MS. HAGERSTROM: -- mountains and oceans as well.

MS. KURTZ: In other words, similar to us?

MS. HAGERSTROM: Hm-hmm.

MS. KURTZ: I'm trying to compare how it might affect tourism in this area.

Have you done a study that shows the effect on tourism in this area?

MS. HAGERSTROM: Have we personally, frankly, no we of not.

MS. KURTZ: Have you done any kind of study that indicates real estate prices?

MS. HAGERSTROM: We have not but I did do a little bit of research on that as well, and again, part of that was with this testimony.

Again, there's not much documentation there, but it doesn't seem to have an adverse effect. Values increase at the same rate as other properties whether they have a view or not; and again, the most information I have from that came from the prefiled testimony from Mr. Holt.

MS. KURTZ: I was hoping, as we mentioned before, there was a lot of testimony last night for and against, and there was very little testimony, information, you know, data, to support anything that anybody was saying, but one person did

indicate that a view probably might be worth twice as much as a property with no view, and a property with a bad view was worth even less.

I was just wondering if there was any way that you could address that particular statement and how that would effect realtors and people who depend on a second home market -- building houses, cleaning houses, or adding services that are for people that buy the houses.

I think that's a significant financial or economic issue. It would be helpful to have something to go on other than just what we told last night.

MS. HAGERSTROM: I'm not a real estate person, so I don't know that I can answer that question with any integrity.

But the things -- again, the things that I have read that it didn't seem to affect whether they had a view of a turbine or whether they didn't have a view of a turbine on the mountains, it didn't seem to affect that it was negative based on the report -- and I also found some information on the America Wind Energy Association website that also states that that does not have an adverse affect on property values.

But I can't speak to it any more intelligently than that because I'm not in the real estate business. I don't know if there's someone else that might be able to.

THE CHAIR: Does anybody else have any questions? Gwen? Steve?

Just, Mr. McLeisch, in your prefiled testimony there's apparently something that I would like to know about and may or may not bear on this whole issue.

You talk about -- it appears that your function that you have purchased all the power and also whatever these renewable energy credits are.

Would you explain what a renewable energy credit is and who buys it and why do they have value.

MR. McLEISCH: Renewable energy credit is a little bit of an abstract concept. It basically represents the fact that the power was generated from a renewable power resource.

They were created some years ago to allow people to buy green power, basically to allow owners of a renewable plant, such as Redington, to sell their energy electricity to one entity and to sell renewable energy credits to another.

It allows people to evenly match up the usage by those customers who want to buy renewable power with the supply that they bought.

So -- it's also used today to demonstrate compliance with the renewable portfolio standards, which the states of New England and many across the country have.

So for instance, Maine has a 30 percent requirement right now, and in order to demonstrate that, we need to buy renewable energy credits that meet the main RPS definitions, and these things are tracked via an electronic web-based

system.

So that's what they are. And the reason they have value is because there are people who are willing to pay for renewable energy power, but also the renewable portfolio standards were designed to encourage the development of more renewable resources.

So to the extent that there's a shortage, that price rises, and as more gets built, the price of those credits goes down.

I know it's a difficult concept.

THE CHAIR: I'm just saying who buys -- are the customers for renewable energy credits the same people, SAD 58 or Franklin County Hospital and all that, are they the same people that buy -- are they paying for those credits, or is somebody separate?

Are there two different customer lists, that's what I guess I'm interested in knowing.

MR. McLEISCH: When a customer says they want to buy renewable power, they are also interested in the buying those renewable energy credits.

One of the things that we're doing right now, because there is such a great interest in buying power from Redington Mountain, I'm trying to figure out a way to spread it out to keep all of our customers that have in interest happy, frankly.

So some of those people will be selling just a

portion of their needs for ten years -- renewable energy credits, as well as energy.

We're entertaining interest in people who just want to buy the energy and maybe some other people who want to buy the renewable energy credits.

THE CHAIR: Who would want to buy the credits? Why would they buy them?

MR. McLEISCH: Why would they buy renewable energy credits?

THE CHAIR: To me the person who buys the energy is the person who needs the renewable standards. That's the way I understand it.

Now, if somebody -- why would somebody buy the credits without buying the energy?

MR. McLEISCH: Businesses buy renewable energy credits right now to represent their commitment to just renewable power, frankly.

We have Tom's of Maine as a customer, and they made a commitment to buy renewable power. But they wanted to buy wind, and there's no wind in New England to buy from.

So we arranged for them to buy renewable energy credits from a project in Iowa.

Holsbooth Market bought renewable energy credits for all their usage -- equivalent credits -- for their usage across the country, but they, again, bought them from a wind resource

in the middle of the country.

So it's --

THE CHAIR: So I guess my conclusion in this is that this is a voluntary tax on my business so I can say that I am supporting, somewhere in the country, I am supporting a renewable generation source?

MR. McLEISCH: I wouldn't use the term tax but as a voluntary payment.

THE CHAIR: A voluntary payment.

MR. McLEISCH: Yes.

THE CHAIR: To support renewable energy somewhere in the United States.

MR. McLEISCH: That's correct. And we also have, you know, large multi-national corporations -- like Citigroup is a customer of ours -- they had bought credits elsewhere.

A lot of these companies are I people looking into the future to see that -- you know, this is the responsible thing that corporations are going to need to do. They do business with companies in Europe who are under HUGO protocols. It's people being proactive right now and later on maybe this will be mandated.

MR. WIGHT: If I buy credits, what do I get?

MR. McLEISCH: You mean what do you physically get?

MR. WIGHT: Right.

MR. McLEISCH: You won't physically -- your

electricity, you've still got the same electrons flowing through here, your business operations.

Some customers, you know, get actual physical pieces of paper, certificates.

MR. WIGHT: Does it do me any good on my taxes?

MR. McLEISCH: No, it's not -- it doesn't help taxes.

MR. WIGHT: What good does it do?

MR. McLEISCH: It helps -- as I said, it's a commitment by the business to reduce global warming, to reduce pollution. It's part of their corporate goal. It could be any number of reasons, I think, they might have internally for doing that.

One of our largest sort of industry groups that buys renewable power from us is universities. We have a lot of them in Maine that do that currently.

You know, it's part of the student body's objective, it's part of the people that work there. This is something they think is important.

MR. WIGHT: We had testimony last night that indicated that there was a concern that EME was buying credits or was somehow garnering credits in order to offset something that had it do with their coal-fired plants.

Is there anything to that?

MR. McLEISCH: EME will not own any of their own renewable energy credits. Constellation will own all of them

and we will be selling them to our customers.

MR. WIGHT: I'm still confused but thank you.

MR. McLEISCH: I'm sorry.

MR. SCHAEFER: The caps and trades, the people that asked about, I think that's --

MR. McLEISCH: Renewable energy credits from Redington Mountain have nothing to do with the cap and trades, it's just on emissions.

As a matter of fact, wind projects do not generate emissions offsets, so it's not currently part of that.

That being said, a wind project would help regions probably meet their greenhouse gas initiative objectives.

THE CHAIR: I think to state this clearly as I can, my concern is that we are -- that this project would somehow allow somebody else to continue operating a coal plant somewhere that's going to offset all of the claimed benefits of the wind power project in terms of this reduction in emissions.

I think that's as simple as I can say it, and that's all. We'd like to hear a statement from somebody saying that's either true or it's not true, in those terms.

MR. HANISCH: Let me talk about it in general, and I tried to in my testimony; and if I didn't explain well enough, I apologize.

When Redington is on, some other unit goes down. And those emission reductions that occur because some other unit

went down will reduce air pollution going into the air during every hour that Redington is operating.

THE CHAIR: I think we accept and understand that.

MR. HANISCH: That unit that went down has got allowances presumably to have emitted those emissions, and what you're asking is, will those allowances go somewhere else so that the net reduction over all time is that there's no change, that it still will be the same amount of emissions.

My personal opinion as a professional that's been doing this for 30-something years -- I don't want to say for how many years -- is that that won't happen.

I've looked at, over my years as a consultant, I've permitted power plants, and I've also got a lot of clients that want me to buy power plants for them.

So I'm looking into doing the due diligence on whether they'll be able to operate.

The allowances that are required to run are not an issue. There's enough allowances out there at a reasonable price that if someone wants to buy a power plant, they can run that power plant, and the amount that we're changing here is going to be really not making a difference.

MR. WIGHT: Are there emission allowances?

MR. HANISCH: These are emission allowances. These are not oxide or nitrogen allowance. This is sulfur dioxide allowance, which is separate from the energy credits that we're

talking about here.

So that's not -- every hour we operate, we're going to cause a reduction. There are going to be more allowances and they won't be used.

Basically the more energy, clean energy we produce, the more allowances that can be retired and they'll be able to be retired at a cheaper price.

I think it's a shell game to say, well, you know, because you've got more allowances, someone's going to generate electricity.

They're only going to generate electricity if there's a need. If need is being fulfilled with wind, it's not going to be generated.

And it's not like there are plants on December 31st when -- nobody's seen this anywhere in the country -- where on December 31st a plant goes down because there weren't enough allowances for them to run that year. The electricity is still there, which means there are enough allowances in the system.

MR. WIGHT: Allowances and tax credits have nothing to do with it; is that correct.

MR. HANISCH: No, not that I'm aware of.

MR. MANN: Let me touch on this for a second.

The only "credit" that Edison Mission Energy will get from owning and operating this plant is the Federal production tax credit that I described before, which accrues to the owner

of any qualifying wind energy project that generates wind energy.

And what that does is it allows us to sell the wind energy for a cheaper price, because we're getting not just cash revenues from our customer, Constellation, but we're also getting a Federal tax credit.

All of the rest of the environmental attributes of the project, including renewable energy credits that we described before, are being sold so Constellation, and Constellation in turn is selling those to their customers -- the colleges, the universities, the schools, the businesses -- who have an interest and desire to buy green energy as opposed to brown energy.

MS. KURTZ: I tried to take notes about what was said last night and it didn't make any sense to me and it still doesn't, but this is what I wrote down.

The person indicated that 50- to $60 million in tax credits will offset Edison's pond, thereby subsidizing their coal-fired plant allowing them to burn 16- to 20 million tons of coal per year. That's what I wrote down. I didn't understand it last night.

How would you address that? I think that's what we're all getting at here.

MR. MANN: Right.

MS. KURTZ: That simple statement was sort of like a

bomb dropped in our lap.

MR. MANN: There are some parts of that statement that I think I agree with.

The Redington Wind Farm project will generate about 50- to $60 million of production tax credits, Federal production tax credits, over the first ten years of its operation.

Every time we generate a kilowatt hour, we'll generate 1.9 cents of Federal production tax credit.

That tax credit will accrue to Edison, as the owner of the project, and also to Endless Energy, as a minority owner of the property.

We'll be able to use those Federal reduction tax credits to reduce the income taxes that we pay the Federal government. That's how the subsidy works, and we intend that subsidy, again, to allow us to charge less for renewable energy so that renewable energy can compete in the market and more renewable energy projects will be developed and built.

There's no connection to our coal-fired operations whatsoever other than that they're all owned -- Edison owns some coal, we own some nuclear, we own some hydro, we own some gas, we own some wind, we own some transmission systems and distribution systems.

All of those things generate net income and taxable income, and the Federal production tax credit helps us to

reduce our taxes and thereby allow us to develop more renewable energy projects and sell those green kilowatt hours for a lower price.

MS. KURTZ: I know you can't speak for him. Where did he -- how is he making that relationship? Where did he come up with the 16 million to 20 million tons of coal?

MR. MANN: I don't know.

THE CHAIR: I would point out in the Applicant's direct testimony on Page 8 there's a very detailed footnote on both perhaps the tax credit and accelerated depreciation and the dollars associated with that. It's all on the record.

I guess that we'd have to -- I don't know how we're going to answer what Mr. Weingarten said last night. It may come out later.

Do we have anybody else on the Commission, questions?

I'll tell you what, I'm sure the intervenors are just waiting to ask at least one or two questions here, but it's close to 12 o'clock and rather that start this -- get all organized and start this process and break it up, I guess I would rather break for lunch and come back.

I would like to get -- we're obviously -- the Commission, exercising some prerogatives, has asked a lot of questions here today, and we've delayed the process, of course.

I'd like to start about quarter of one if I could and try to gain a little of that time back. We'll begin with the

cross-examination right after lunch, quarter of one.

For those of you -- the first people, according to my matrix, I think we're planning to start with whoever the spokesman is for the ATC, the MATC. I assume that Mr. Plouffe.

He has a long list of witnesses he wants to cross-examine. So I want all the Applicant's witnesses here at quarter of one.

Thank you.

MR. WIGHT: I don't know if my numbers agree with Melissa's, but it looks like the 90 minutes allowed to use came in at 88.

(There was a break in the hearing at 11:54 a.m. and the hearing resumed at 12:48 p.m. on August 3, 2006.)

THE CHAIR: We're going to begin this afternoon with the cross-examination of the Applicant by the intervenor groups, and the first one is going to be done by Mr. Plouffe, who's going to explain how they're going to do their intervenor questioning for us.

Mr. Plouffe.

MR. PLOUFFE: I'm Bill Plouffe. I'm with the Portland law firm of Drummond, Woodsum, and McMahon. With me here today is Hope Jacobson, who is with the firm of Perkins Coie in Portland.

Hope and I are representing one of the intervenor cohorts. Just for the members of the Commission at a

prehearing conference, I explained that our cohort is the Maine Appalachian Trail Club, the Appalachian Trail Conservancy, the Maine Audubon Society, and the Appalachian Mountain Club, all separate organizations, which were joined together for purposes of these hearings to do intervenor cross-examination.

What our plan is here is to call on various panel members that you heard this morning, cross-examination. Either Hope or I will do one person. We're not allowed to split one witness between two lawyers, if you will.

We hope to move this along. We've been allotted an amount of time, which makes it difficult, but we will abide by the chair's ruling, obviously.

I would just say this at the beginning. People that we will be cross-examining, neither one of us intends to be curt, abrupt, discourteous, or anything like that, but we do have to move along quickly.

So our questioning may come across that way to you but that's not how it's intended, we are simply pressed for time. And I hope the Commission will keep that in mind, too, when listening to our cross-examination of these folks.

Hope Jacobson is going to start off by calling Steve Pelletier.

MS. JACOBSON: Good afternoon, Mr. Pelletier.

MR. PELLETIER: Good afternoon.

CROSS-EXAMINATION

BY MS. JACOBSON:

Q. I'd like to start with the wetlands issue. It seems like some of the Commission members have questions on that.

Now, in review Bud Brown's prefiled testimony, I'm accurate in saying, aren't I, that he found a 165 resources, whereas in your report your Woodlot located 78; is that correct?

A. I understand that's what was reported.

Q. Which is roughly twice the amount.

To go back to your work with the DEP in your NERPA process, Bud Brown, as you know, submitted some work criticizing your analysis of the wetland impacts for the DEP portion of the project; is that correct?

A. Yes.

Q. Initially your intent was to apply for a permit by rule or PBR; is that correct?

A. That was one component of the process.

Q. As of result of Bud Brown's report, are you now in the process of filing additional information with DEP?

A. Yes.

Q. And also to clarify, DEP is requiring that wetlands, streams, and seeps all be mapped or identified since they all have functional value to the hydrology of the area; is that right?

A. We've agreed that's the most appropriate process.

Q. Now, in terms of the wetlands work you did, you said in your testimony that it was mostly recognizance level survey; is that correct?
A. Let me explain what I mean by that.
Q. Yes, that would be great. I would like to know what recognizance level surveys are.
A. We covered a lot of ground over a number of years, and we looked a number of different routes and options trying to determine which of those offers the least environmentally damaging in terms of fragmentation, in terms of the natural resources, not just streams and wetlands.

Our process was to -- we have a quarter, and our quarters -- and this is an important point -- that our quarters are that we can actually locate this route. In some places the roads can be as much as 500 to 1,000 feet from the transmission lines, from 1,000, 1500 feet.

What we did is we worked with essentially -- the person working navigating through the centerline with people on either side of us and walking the length of these routes.

During the course of this, we would be stopping at wetlands and going through the process of actually identifying, this is a wetland, and looking at soils, looking at vegetation, and then with our GPS units actually locating those boundaries.

What we did not do is flag boundaries, create notes. What we're trying to do is understand what is the level of

wetlands, and so when we come back at the end, at the end of the process, start evaluating.

It just wouldn't make sense.

Q. Okay. So you did not use, for example, the 1987 Army Corps of Engineers Wetlands Manual for truly sort of delineating a wetlands out to its outermost edge?

A. No, we did use that process.

Q. You did?

A. By what you're doing, you're looking at dominance of hydrologic vegetation, and you're looking at whether not you have hydric soils, you're looking at if you have evidence of hydrology.

Q. Did you do a formal alternatives analysis?

A. The alternatives analyses are ongoing all the time. As a matter of fact, there were a number of routes throughout after only a couple of days of viewing the fields.

Q. I don't mean to interrupt, but it's just because I have so many questions over a short period of time.

I want to know if you submitted a formal alternatives analysis.

A. No, a formal has not been submitted.

Q. And you do concede that Bud Brown found certain wetlands that you failed to find?

A. Let me explain the process.

Q. I'm sorry --

A. No, I can dispute it. I will stand by it.
Q. So you don't think that Bud Brown found any wetlands that you did not find?
A. I would say that over the course of the miles that we walked, there are opportunities for other streams and/or wetlands to be out there.
Q. So just to go over a couple of examples, there's a wetland, a stagnant wetland, on the top of Black Nubble. It's identified in Bud Brown's testimony as EA-061. It's also Exhibit C to John Albright's testimony. John Albright is the Maine Audubon, if anyone wants to look at photographs of it, it's a photo that Bud Brown took.

That was the particular wetland that you did not identify in your survey; is that right?
A. Excuse me, was that of Black Nubble?
Q. Yes.
A. Could you show me that, please?
Q. Sure. This is in Appendix 2 to Bud Brown's testimony, it's Sheet 2 of 4, and it shows the turbines in the road on the top of Black Nubble, and it shows EA-061.
A. And can Commission members have a chance to see this as well?
Q. They have to have Bud Brown's testimony in front of them.
A. I would like to make sure they get a chance to see this.
Q. It's in Appendix 2 to Bud Brown's testimony, and it's

Sheet 2 of 4. It shows Turbines 18, 19, 20, 21, and 22 with the road configuration.

On that map above Turbine 22 is EA-061; is that correct?

A. Yes.

Q. That was not a wetland that you identified during your survey?

A. I don't see it on the mapping that we've got here.

Q. Okay, thank you.

Also on the centerline of the Redington transmission line, Bud Brown identified a vernal pool. It's EA-093.

This is on Page 26 of Bud Brown's testimony?

A. Again, I would like to see that, please.

Q. Sure. This vernal pool is in the centerline. It's Photograph 7 on Page 27, Bud Brown's testimony, and he testifies that he found 22 wood frog egg masses in that vernal pool.

A. I recall this and I think it's important to be able understand -- to explain how this process went about.

Q. Well, I really would just like to confirm whether or not you found that during your survey?

A. The significance of these findings -- and let me point out that what we have are small isolated pockets that are scattered here and there, it's a relatively dry ridgeline in very many places, but most importantly while we were out there, we were

there in early May when. The first 11 days of that month, we were there from May 19 --
Q. I understand that. I understand there is a difference of opinion over some of these wetlands, but just for purposes of the Commission's understanding, I would just like to highlight a few of the areas where Bud Brown located something and Woodlot did not?
A. I would note that I'm not -- I wouldn't necessarily agree in every and all of these cases that they are regulated as jurisdictional wetlands.
Q. Yes, and that's not my point either.

Now, I've just shown you that picture of the vernal pool in the centerline of the transmission line, and is it your understanding that the Redington transmission line and the Redington Access Road from the point where the Black Nubble transmission line and the Redington transmission line merge into the 115kV line, from that point of the earth, to the base of the Redington wind power parcel, that is approximately two miles or so; is that correct?
A. That sounds reasonable.
Q. And the Redington transmission line and the Redington Access Road, however, they are parallel to each other and they sort of intersect each other as they both meander in a sort of separate from each other way from that first point where the end of the 115kV line is until the base of the Redington wind

tower project; is that right?
A. That's a fair description.
Q. If you were able to co-locate those to lines, in other words, put them in the same corridor, wouldn't that in fact potentially reduce the amount of wetland impact that you would have?
A. If you could. I don't believe that --
Q. I know, I'm assuming there may be some engineering reasons.
Assume you could.
A. It's a big assumption.
Q. Yep, but you agree that there would be potential wetland impact?
A. I'm not sure that it could be done but if it could, yes.
Q. Thank you. I would like to know, prior to your site visit with Bud Brown in May, had you or members of the team walked the centerline as its shown on the existing plans of all linear portions of the project?
A. We walked -- there was one segment that we walked near to that was not part of the -- the actual walk we did with Bud in early May -- but we walked in an area just up slope of that by only a couple hundred feet.
Otherwise than that, we pretty much walked every line that you see that we have walked every one of those lines, including a number of other lines.

Q. Can you explain to us the definition of a seep?
A. A seep is a groundwater discharge.
Q. Okay. Does it include -- well, have you read the testimony of Dr. Calhoun?
A. Yes, I have.
Q. Are you familiar with her use of the term variable source areas?
A. No, I can't say that I am.
Q. So you didn't --
A. I read it. Can you explain to me --
Q. No, I'm wondering -- well, she talks about the existence of variable source areas that tend to feed into a seep, and I'm wondering if your definition then includes those variable source areas, or are you just talking about the breakout, the groundwater breakout?
A. I guess I'd ask for her to explain what she means by that term.
Q. Well, I'm telling you right now that she's talking about different areas located away from the breakout of the groundwater, so it could be just sort of an area upstream a little.
A. I think I understand the concept.
Q. So when you -- I just need to be clear, when you're referring to the term seep whether you're referring to those areas -- the variable source areas, as she calls them -- or are

you only referring to the groundwater breakout that you see?
A. I think groundwater breakout is the most apparent, but there's other areas that you can walk that are sound outlets but you can actually hear water flowing. So I think that's sort of what she's referring to. We recognize that as well.
Q. So you would then map those areas, too?
A. Our purpose for mapping areas to determine wetlands is jurisdictional wetlands and streams. During the course of this we also identify.

And subsequent to our meeting with the agencies later on in direct response to these intervenor comments, we agreed that we will be noting where these locations are, and we've agreed that we'll be treating them just like as though we were regulating.
Q. So you have not identified all of them yet?
A. We have final development plan that we will be in the field working off a defined centerline, a defined centerline. Right now it's just a large corridor, but actually being able to thread our way, which for the road system, for the transmission lines -- which are going to be 75 feet or 150 feet -- we now have as much of 1,500 feet to thread those corridors through that to avoid fragmentation and to avoid wetlands --
Q. But you're not --
A. -- and during that process we will be able to quantify the specific locations and the amount of areas that will impact it,

and we believe at the end of the day we significantly dropped the amount of impact that we have now.
Q. My point is you just haven't done that work yet; correct?
A. A grand portion of that work is done. There's fine tuning to be --
Q. Where are the maps -- where are the maps that show the seeps, because those are not in the application?
A. We have -- one of the exhibits that we have shows our locations of wetlands and streams and some of the intermittent discharges that are out there.
Q. I'm sorry to interrupt, that's Exhibit 1 to your testimony, isn't it?
A. That's correct.
Q. And there are no seeps listed in the legend of that exhibit?
A. In some areas -- I would submit that some of the areas that we've defined as wetlands will not be wetlands but will also be considered seeps.

So they are a part of that universe of wetlands.

Q. So every seep you've located is on Exhibit 1?
A. Absolutely not. A good portion of them are.
Q. I'd like to move to your comments on the Bicknell's Thrush.

The article you cite by Rimmer states that among neotropical migrant birds in the northeastern United States,

Bicknell's Thrush is ranked as the species most at risk of extinction.

Is that what that study says?

A. I have to believe that you're reading it.

Q. You were essentially contending this morning that if the Bicknell's Thrush can survive in a ski area, that it will do okay in a wind power project; is that right?

A. My point is that there's a lot of conservation issues in this species, as there should be. There's been a lot of work being done -- and focused work, some of the best work being done by Vince right now -- most of these people are doing that are local, and what we have is -- and what is right in line with our observations, that this species was relatively common.

While we were out on our project here, we frequently found it alongside the clearcut edges --

Q. Right.

A. --and when we look at their research, we're finding that their -- some of their specifics -- and it's interesting because they're -- if you look at the beginning of their testimony, the first parts of these things -- and it should -- the conservation issues and a lot of these things are threats.

Q. Now, that Rimmer study concerned 40-year-old ski trails; is that right?

A. I'm not sure that all of them are 40. That goes back to the question we had this morning from a Commissioner about

when.
Q. The study concerned existing trails, some which were at least 40 years old?
A. That's correct.
Q. So it did not deal with the effect of new construction on an otherwise intact habitat?
A. New construction would probably go through the course of a single year --
Q. I'm sorry, I'm saying the study did not deal with new construction; isn't that right?
A. As far as I understand it, yes.
Q. And the study also did not compare densities of the bird before the building of the ski trails or ski facility and densities afterwards; is that correct?
A. What it does show is that --
Q. I just want a yes or no.
A. You're correct.
Q. Okay, thank you. Doesn't Rimmer in fact caution that his scientific data does not enable him to predict the impact the creation of these trails may have on Bicknell's Thrush habitat?
A. He does caution that. He also cautions that openings created of 50 meters may be a problem.
Q. Right. There have not been any studies that do evaluate the effects of constructing a wind power project on Bicknell's habitat; is that correct?

A. Again, the conservation interest in this species has only just in the last few years become something that a lot of folks are working on.

So there has not been -- there's been very limited universal studies done. Those studies that have been done are showing that there is nesting near edges and these are created edges.

Q. I understand that. But my point is, there's no literature to support the proposition that the effect of an older ski facility would be the same as of effect of the construction of a new wind power facility on the habitat?

A. Conversely, there's no literature that states that new construction would be.

Q. Right. Okay, so you agree that there is no --

A. I agree with your statement. I agree with mine.

Q. Moving on to bog lemming. The bog lemming is a Maine state threatened species?

A. That's correct.

Q. And when the Commission of IF & W designates a species as threatened, it may mean that the present or threatened destruction, modification, or curtailment of its habitat or range, is how it's characterized.

Sorry. I retract that.

The northern bog lemming is found only in five places in Maine; is that right?

A. Five that have been documented.
Q. Even within its entire range, the northern bog lemming is not found in great numbers?
A. That's correct.
Q. And you discovered one bog lemming; is that right?
A. We had little over 1,000 trap nights, we put a lot of effort all around Redington and Black Nubble, and specifically looking at areas where we expected this to occur and yes, we did find only one of those.
Q. Where was the trap site?
A. It was in that wetland that you --
Q. The stagnant wetland on top of Redington?
A. Yes.
Q. And would you say that that stagnant wetland is similar to the stagnant wetland that Bud Brown found on the top of Black Nubble?
A. Somewhat. This one --
Q. Okay, thank you, that's great.
A. There is a difference, though. If you're going to ask the question, it begs for the proper answer.

It's not as specific as that. There was a lot greater --

Q. Let me ask it this way then: Is that a stagnant moss wetland on the top of Black Nubble?
A. It also has other characteristics that are not found in

the other wetlands that we were in.
Q. Okay. But I just want to establish that they have that in common.
A. Yes.
Q. Thanks. So as far as the bog lemming on the top of Redington, that is what you scientists refer to as one data point; is that right?
A. Yes.
Q. Is it accurate to characterize a data point in terms of if you're trying to evaluate the life cycle or the annual cycle of an animal, you're only getting a snapshot of where that animal was at one point in time versus sort of a moving picture of its entire sort of daily habits and how it uses its habitat; is that correct?
A. That's correct.
Q. The northern bog lemming is a habitat specialist; is that correct?
A. Yes.
Q. In 2001 Woodlot Alternatives trapped two small mammals on Black Nubble, and although it was later determined that those were not bog lemming, you initially identified one of them as a northern bog lemming; is that right?
A. That's questionable. You're looking at some pretty obscure features, and we did have it sent to the Smithsonian. The Smithsonian said, no, it's not -- I believe it was an

e-mail. The bottom line is I have it and it's been in my office in a box since that time.
Q. Right. But was there some question as to whether it could have been a bog lemming?
A. That's right.
Q. Because the bog lemming is a habitat specialist, it's more likely to be displaced and more likely to be subject to credation if a roadway or an opening is placed nearby than a species that is not a habitat specialist.
That's what you testified in your testimony; is that right?
A. Which is the reason why great efforts were made to avoid any direct impacts to that habitat that is going to be particularly relying on -- not just at that point in time -- but in the rest of its life cycle and also a buffer that extends beyond, and again why we've gone through --
Q. Okay. All right, I'm sorry.
A. I'm sorry, too.
Q. I did want to talk about that, that you did move the road away from the buffer area; is that right?
A. At least three road placements, and I believe in talking to our engineer we can move it even farther now.
Q. In the newly leased area, have you delineated the wetlands in that particular physical area?
A. That will, again, be part of the --

Q. Sorry --
A. No.
Q. Can you tell me the definition of habitat?
A. For what?
Q. Well, just generally for -- just generally -- what I'm getting at is I would like you to talk a little bit about what the definition of home range is versus the definition of habitat for a species.
A. I think it's fair to say that you want something -- a particular -- those parts of the environment around it that support all of its necessary life events: Breeding, nesting, foraging, resting.

All of those and the range, the amount of cover that it needs to support itself. It depends on diet, the number of males and females.

Q. So that's the definition of home range, sort of everywhere an animal may move in its annual cycle or its life?
A. Home range, yes. It's --
Q. Okay. Can you map an animal's home range from one data point?
A. We -- if you go back to the point that you made a while ago about the habitat specialist, this is something that requires and provides a feed time -- carrots and grass seeds and --
Q. Yes.

A. They like those things. Within that wetland area.
Q. Right. But my point is, my question is: Can you map an animal's home range from one data point?
A. Absolutely not.
Q. Thank you.
A. We know enough about the species, though, to predict where we're going to find it, which is the reason why we found them in that location when we did our tracking.
Q. Moving on to the radar surveys that you all did, you conducted radar surveys both in the fall of 2002 and the spring of 2004; is that correct? For nocturnally migrating birds and bats.
A. That's right.
Q. In your fall 2002 study, where was the equipment placed? Where was the radar equipment placed?
A. It was on the approach on -- our discussions with IF & W --
Q. Just, I'm sorry. You know what? I've got like 5 minutes left.
A. I'm sorry. It was down on the northern slopes of Black Nubble Mountain.
Q. Okay, great.

So it was not directly on top of the mountain where the turbines will be placed; is that correct?
A. The radar was not but the acoustic detectors were.

Q. I'm just talking about the radar. I'm only interested in the radar right now.

So the radar was not up there?

A. No.

Q. In both the fall study and the spring 2004 study you placed the radar in the horizontal position; is that correct?

A. And that was in accordance with IF & W -- yes.

Q. What type of data can be collected when the radar is in a horizontal position?

A. The number of -- the frequency of targets that are moving through an area, the direction.

Q. Great. And what is insect contamination when you are taking surveys of nocturnally migrating birds and bats?

A. The radar, depending on the settings of how you configure and operate your radar, can pick up insect -- insect data as a target.

Q. Okay. And to account for the relatively high passage rate at Redington, in your testimony you have said that part of that may be due to the insects that may have been picked up by the horizontal radar; is that correct?

A. That's correct.

Q. And then in order to get altitude so you know exactly how high they're flying over the mountain, the only way to do that is to place the radar in the vertical position; is that right?

A. That's how it's typically done.

One quick point here. Bob Roy's with me here. Bob's our division director for wind services. He has spent a lot of time on that. I'm going to actually let him handle most of these.

MS. JACOBSON: Okay, that's fine.

EXAMINATION

BY MS. JACOBSON:

Q. So, Bob, if you want to measure, by radar, the activity that's occurring directly over the turbine site and you want to know the altitude, then you have to place the radar in the vertical position; is that correct?

A. For the type of antenna that we use, yes, you do.

Q. Okay. Great. And part of the reason it's important to get the altitude, isn't it, is because that's really the only way if you're looking at a site-specific analysis to determine how -- what percentage of birds are going to be flying in the road swept area; isn't that right?

A. On a site-specific basis, yes.

Q. Right. The surveys that you guys list on Page 11 and 12 of your testimony, how many of those was the altitudinal data not taken?

And I believe there are 19 which Woodlot did of all the surveys in different states; is that right?

A. There were 19 listed, yes. There were two seasonal studies at Redington, Black Nubble, and there were 1994 study

at Kibby, and then there was some previous work conducted by another company.

Q. So take the study since 1998, all the surveys, of those the only two that don't have altitudinal data is Redington; isn't that correct?

A. No, that's incorrect.

Q. What other one?

A. I think it's perfectly appropriate to include Kibby --

Q. 1998. I said from 1998 on.

A. From 1998 on, yes, that's correct.

Q. Okay, thank you. Right now -- or I should say relatively recently Woodlot performed some studies for TransCanada for it's Kibby Mountain project; is that right?

A. That's correct.

Q. For those bird and bat avian studies, you were also looking for nocturnally migrating birds and bats; is that right?

A. Yes.

Q. And you placed the radar actually on top of the mountain for that study, is that correct, for the fall? I'm talking about the fall of 2005 report.

A. Yes.

Q. And you were able to take the altitude of the flying birds and bats?

A. Yes.

Q. And therefore you were able to calculate the percentage of birds that would be flying within the road swept areas; is that correct?
A. Yes.
Q. And you were also able to adjust for what Steve just described, the insect contamination, so in other words, you have a good idea of what's a bird or a bat versus an insect?
A. Yes.
Q. Isn't it your opinion that typical avian studies now require horizontal and vertical radar?
A. Currently, yes. As Steve had mentioned earlier, there was an evolutionary process. He uses this type of technology for this documenting nighttime numbers.
Q. But also haven't you recently testified that if a bird survey does not account for insect contamination, that it's essentially invalid, that it's critical that you be able to differentiate insects from birds and bats?
A. It is important to differentiate between insects and birds and bats if you're going to compare those results apples to apples with other surveys that use the same techniques and the same equipment.
Q. I'm referring to the testimony that you gave to the Vermont Public Service Board criticizing the Applicant's bird survey that they had done for the project.
In fact, you said that you cannot make a valid

assessment of the number of birds on a site if you don't differentiate the insects from the birds; isn't that correct?
A. That's correct --
Q. Okay, thanks.
A. There was a significant --
Q. I know --
A. -- difference on how that study was conducted.
Q. I don't want to get into that. I just want to make that point that it needs to be done.

MS. JACOBSON: Thank you, I have nothing further.

MR. PLOUFFE: I'd like to call Dwight Anderson.

EXAMINATION

BY MR. PLOUFFE:
Q. Hi, Dwight.
A. Hi there.
Q. Has DeLuca-Hoffman ever designed roads at elevations above 2,700 feet?
A. Not that I'm aware of.
Q. Did DeLuca-Hoffman design the transmission line for this project?
A. No, but we did put an erosion plan together to help with the permitting.
Q. Who did design the transmission lines, the routes for the transmission lines?
A. I would defer to someone else to answer.

Q. You don't know? Do you know who designed the transmission --
A. I think the design's ongoing. I don't think the final design is complete.
Q. What about the transmission lines routes shown on the DeLuca-Hoffman sheets that are part of the application?
A. We worked with the Applicant to come up with these routes over the past three years.
Q. So are what are in front of the Commission at this time; right?
A. That's correct.
Q. Who designed those, the Applicant?
A. Again, I would let someone else answer that question.
Q. Who told you where to put them on the plans?
A. We worked with the Applicant on that.
Q. Harley Lee?
A. And staff.
Q. Staff of Endless Energy?
A. Correct.
Q. What are the maximum weights for which the roads, access roads, will be built?
A. The access roads need to be able to convey a 15-ton axle equivalent.
Q. What's the maximum weight on the Maine turnpike for trucks?

A. I believe it's --
Q. Expressed in terms of tons per axle equivalent.
A. Well, it's 80,000 pounds, I believe, without a special permit, and you would have to take that and divide it by the number of axles.
I'm not prepared to do that calculation in my head.
Q. Do you happen to know whether type of axles? Do you know what I mean, the hubs for the turbines, do you know what they weigh?
A. Yes, I believe they're 70 tons.
Q. Would they be able to go over the Maine turnpike?
A. I believe they would need special permitting.
Q. There's been significant testimony from you and others to the effect that after construction the summer roads will be constructed to 32 feet, as I understand it, plus the crane operating areas will be revegetated so that summer roads would be narrow; is that right?
A. That's correct.
Q. My question is with respect to both the width of the roads and with respect to the crane operating areas, if a turbine breaks down after this project is constructed and the area has been revegetated, how are the cranes going to get up the roads to fix the turbines?
A. The vegetation would need to be cleared to access them again.

Q. So you would bring it back to 32 feet and whatever the width was of the crane area?
A. Let me clarify that. I think -- according to how they were dismantled, I think you would probably use different equipment to dismantle them than they were erecting them with, so that would depend on what type of equipment is used in the future.
Q. It would depend of the type of repair needed? If you needed to replace a nacelle, I guess I would have to have the same type of equipment that I in the first place?
A. Well, understanding that there's always specialty equipment coming on line, people do things in different ways on different projects.
Q. Your testimony says that you're proposing construction of these roads in the wintertime; is that right?
A. That's correct.
Q. And that's -- you need to do this in the winter to meet time deadlines; is that it?
A. It's my understanding.
Q. Your testimony also says that after the project is constructed that the only access to the summit and therefore the turbines during the wintertime will be by small ATVs -- is what you said in part of the application -- and then in your prefiled testimony you added that the turbine sites might be accessed by track snowmobiles; correct?

A. Correct.
Q. So these roads are not going to be maintained so that large trucks can go up them in the wintertime?
A. In the event they needed to be accessed, they could be.
Q. How would that happen?
A. Well, you need to bring in equipment and remove the snow so that you could travel up to the peak.
Q. How deep does the snow get on the summit of Redington in January/February?
A. Actually, I've snow mobiled most of the way to the top of Black Nubble in January, and it was probably on the order of 3 to 4 feet.
Q. Have you personally walked over the access road centerlines that are shown on your plans?
A. I have not; however, Woodlot has testified --
Q. All right, I hear Mr. Pelletier's testimony.

So you have not. How did you prepare the road layouts?
A. I did walk a significant portion of the access road and also walked up portions of the summit road to familiarize myself with the site and anticipate conditions.

That, supplemented with aerial topography, 5-foot contours, putting together slope maps, we were able to pick the best route, you know, to have the least impact on the mountain.
Q. If I may interrupt, then you used aerial photography and

some available data to design the roads essentially in your office?
A. I would -- no, I would not agree with that because I did walk a significant portion of the routes, including other routes that weren't selected, to evaluate the mountain and pick the best route that we feel is most appropriate, best suited, to cause the most -- the least undue adverse impact.
Q. But you haven't personally -- you already testified, you haven't personally walked all the routes?
A. Not every inch.
Q. You haven't walked the transmission lines at all, I take it?
A. Actually, I have walked out to a number of points along the transmission lines just to see how we would access them.
Q. But you haven't walked them all?
A. No, I have not walked the entire --
Q. Throughout your sheets, the C series sheets, that show the transmission lines and the roads, they're peppered, if you will, with the note, ground obscured?
A. Yeah, I'm familiar -- yes.
Q. What's that mean?
A. Essentially what that means is the aerial photography that was taken when they're looking down through there's vegetation, and they can't ascertain the exact elevation because they can't actually see to the ground.

Therefore, that note's on there to advise us that the actual spots vary a given amount in those areas.

Q. So if I look at those roads and the transmission lines, certainly I should assume that the actual may differ than what's on those plans?

A. To a minimal degree compared to the size of the project that we're working on here, yes.

Q. Relatively speaking, you said?

A. Relatively speaking it could differ.

Q. I heard the testimony of Mr. Pelletier, so he gave you Mr. Pelletier and one of the attorneys -- gave you the information on the location of wetlands and other protected natural resources; is that correct?

A. That is correct. He shared files throughout the process.

Q. Did you put it on your sheets -- your C series sheets to show the transmission lines and the roads?

A. Wetlands --

Q. I know wetlands are on there.

So what Mr. Pelletier gave you is on those sheets?

A. I do not believe the wetlands actually show up on that base map behind you, because that information is all shown on his mapping.

On our C series sheets, which show the --

Q. Which I have here if you want to see. I have them blown up.

A. Yes, and on those C series, those wetlands do show up.
Q. That's what Woodlot Alternatives gave you. So if it's not on your sheet, they didn't give it to you; is that right?
A. Yeah, for the C series mapping it's not on there. They didn't give us --
Q. Did you do the storm water and erosion control portion of the application?
A. Yes.
Q. What did you use for precipitation data for Redington and Black Nubble?
A. I believe we pulled the appropriate county SCS intensity curves. I can't give you the exact number we grabbed in the report for the storm events. We then used the 25-year storm event.
Q. Did you use snow pack melt in your computations?
A. They're not included in the computations; however, there is a factor of 2, at least, in the design.
Q. With respect to blasting, I have a series of questions for you.

With respect to blasting -- a question from a Commissioner -- as I read the application, each turbine will have a footing that will be 30 feet deep?
A. I believe the application actually has a series of options for the foundation in its current place.
Q. Yesterday the application, unamended by subsequent

comments, that is, footings 30 feet deep by 10 to 15 feet wide.
That's one of the options?
A. Okay, there is an option. I do understand there is an option with a foundation 30 feet deep.
Q. So you would blast holes 30 feet deep on top of Redington peak to make these footings for the turbines?
A. For that particular design, if it was chosen you would.
Q. Just quickly, you made reference in your testimony this morning the fact that you had talked to someone in Colorado about mountain road building?
A. That's correct.
Q. When was that?
A. We've actually been in communication with that person over the past several months.
Q. Several months, since January 1st?
A. I don't know the exact date.
Q. After your application was submitted, you called them; right?
A. Again, I would have to look.
Q. After your application was submitted, you called them, correct, because you were concerned about your experience in building mountain roads after you saw the intervenor comments?
A. I believe it was after.
MR. PLOUFFE: Thank you very much. That's all I have.

I would like to call Terry DeWan.

Again, I'm not trying to be rude and curt or anything.

EXAMINATION

(Of Mr. DeWan)

BY MR. PLOUFFE:

Q. Terry, you say in your prefiled that you had worked in the Kenetech project.

Have you worked in any other wind farm projects in the country other than Kenetech and this one?

A. We've done some photo simulation for another project in Vermont since then. I was also a consultant -- I was also asked by the National Park Service as part of their countryside stewardship exchange to go to England to look at wind power development in England.

Q. Are either of those engagements in your vitae?

A. I believe the England experience is. The other one in Vermont is a very recent application.

Q. Page 66 of your report you said there was substantial input from State and Federal agencies in the design and the way you do projects.

What advice did you receive from the State agencies regarding seeping impact issues?

A. Are you talking about my prefiled testimony here?

Q. No, of your visual impact assessment, VIA.

A. That referred to the project as a whole, not specifically to our involvement. I think that in light of all the discussion, people like Dave Rocque, for example, at IF & W --
Q. I'm sorry, but did you receive any advice from State, Federal agencies regarding visual impacts on this project?
A. I personally didn't receive any advice, but I think the message was to minimize the visual impacts wherever possible.
Q. Were you aware of any National Park Service concerns about this project because of the proximity of the Appalachian Trail?
A. Not until we saw the comments for Pam Underhill and other people from the National Park Service.
Q. So Harley Lee never told you that the National Park Service was opposed to this project?
A. I don't believe I ever had that conversation.
Q. On Page 6-32 of your visual impact assessment, you say, there are no national parks within the view shed of the proposed RWF, acronym for Redington Wind Farm --
A. Yes --
Q. -- from earlier iterations of this application before it was filed; is that right?
A. Part of the evolutionary process, yes, sir.
Q. And it goes on and says, Acadia National Park, which is over 100 miles to the southeast, will not be affected by the project.
If this project, Redington Wind Farm, were within a

mile of Acadia National Park, would your conclusions about visual impacts be different than the conclusions in your report?

A. I guess it would depend upon where in Acadia National Park. It's a very large, multi-propertied --

Q. If I could see this wind farm within a mile of Cadillac Mountain, would your conclusions be different?

A. Probably would.

Q. I'm going to show you what I've marked --

MR. PLOUFFE: Marcia, I'm just going to call my exhibits ATC 1 and so forth.

BY MR. PLOUFFE:

Q. -- which is a brochure --

MR. PIDOT: Can we get copies of the exhibits?

MR. PLOUFFE: That particular exhibit is already in the record, Jeff. It's the MPS brochure on the AT.

MR. PIDOT: Thank you.

BY MR. PLOUFFE:

Q. Are you familiar with those brochures?

A. I am. Not this particular one.

Q. Are you now aware that the Appalachian Trail is a unit of the National Park System?

A. We have always felt it was a unit of the National Park System.

Q. Sometimes you treated it differently because you didn't

think it was a national park?
A. We were responding to the DEP criteria for scenic impacts.
The specific questions that was asked in the DEP 315 regulations was is it within a certain distance of a national park.
We went to the National Park Service website. We asked, you know, what are the various components of the national park. The national parks, per se, like Acadia and Yellowstone, are listed separately from scenic trails.
Our conclusion from that is that there are different units within the National Park Service. The Appalachian Trail is a scenic trail.
We did go on, of course, in our VIA, to describe the Appalachian Scenic Trail.
Q. I'm looking at Chapter 315, Terry. You apparently helped write Chapter 315, and I'm looking at that -- that's, by the way for the Commission members, the NRPA standards adopted by Maine DEP for visual assessment -- I'm sure you're familiar with this.
Section 10 talks about scenic resources and lists a number of them. It may be national, state, or local significance, A, B, C, D; E is national or State parks.
Is that what you're telling me about?
A. That is correct. And it goes to ask under C, is it within a certain distance of a State or Federal trail. I consider it

to be a Federal trail.
Q. Is it your position that a Federal trail, if you want to make that distinction, should be treated differently from a national park even though the regulation doesn't state that?
A. I didn't say that. Just in terms of filling out this particular form, we made the distinction.
Q. The specific words, national park, you might have treated differently just as you told me you would have for Acadia.
I'll go on to another question.
When you did your VIA, did you know that the Appalachian Trail was designated by the Maine legislature as part of the Maine Trail System and specifically as a primitive trail in the Maine Trail System Act?
A. I was not aware of that.
Q. When you did your VIA -- where in the VIA would I find the discussion of the values of the Appalachian Trail?
A. I don't know if we could point to -- I don't know if I could address that specific concern without going through my VIA.
Q. Did you consult the Appalachian Trail Management Comprehensive Plan that the Federal government has?
A. No, we did not.
Q. Mount Abraham is located off the AT corridor but is connected by a side trail about 1.7 miles. You must know that because I saw your photos taken from the summit of Mount

Abraham.

Were you aware that Mount Abraham is owned by the State of Maine when you wrote your VIA?

A. I was not then, and we discovered it afterwards.

Q. I'm going to show you what I've marked as ATC 2.

THE CHAIR: Are these in the record?

MR. PLOUFFE: This one is not.

BY MR. PLOUFFE:

Q. Terry, that's the website for Land for Maine's Future; are you familiar with that?

A. Yes, I've seen it.

Q. Okay. But you're now aware that Mount Abraham is owned by the State of Maine?

A. I am.

Q. Named as an ecological reserve?

A. Yes.

Q. What's the first thing that the description on the website says?

A. 1409 feet, the summit of Mt. Abrams offers panoramic views of Maine's western mountains.

Q. Under Chapter 314, wouldn't Mount Abraham deserve special attention as a scenic view area?

A. It certainly would require recognition, that is there, in terms of doing inventory.

That doesn't necessarily mean -- it's also within the

view shed.
Q. I understand. But you didn't consider it as such because you didn't know it was State owned when you did your VIA; correct?
A. Correct.
Q. I want to show you ATC 3.
MR. PLOUFFE: Jeff, that's part of Terry's report.
BY MR. PLOUFFE:
Q. And that's your 2003 Hiker Survey, Page 20 of the Vermont decision report. The scenic value of existing view from Mount Abraham was rated very high, and then you have a bar graph; do you see where I am?
A. Yes.
Q. If I read this correctly, 7 is the best rating that the viewer could give Mount Abraham, 6 would be the next best, and so forth?
A. That is correct.
Q. So you showed them -- or Market Decisions showed them, this is part of your report -- showed them a picture of Mount Abraham without the windmills; correct?
A. That's right.
Q. And 82 percent of the people rated it at either a 6 or a 7, I'm going to call it, a knock your socks off view -- my personal opinion, the best in the state of Maine.
Am I right?

A. It was rated 6.3.
Q. When you showed them the simulations with the windmills there, what percentage of the people rated it as a 6 or a 7?
A. The rating dropped to 4, 4.04.
Q. In total the combined people who rated it as a 6 or 7 in terms of percentage, 14 percent versus 82 percent.

Doesn't that suggest to you a significant visual impact?
A. We do recognize and we stated so in our testimony that there was a diminishment of the scenic value of some viewpoints.

We would also like to point out, though, that the majority of the people still considered it to be 27 percent, 6 percent, 8 percent, you know, roughly 40 percent still rated it 5, 6, or 7.
Q. It wasn't knock your socks off, was it?
A. People felt that it was a different view.
Q. I'm going to show you ATC 4. Again, this is from the Market Decisions survey. This is from North Crocker Mountain, a view of Redington from North Crocker Mountain.

The preconstruction numbers are a 6 or a 7; 32 percent, 58 percent, 90 percent of the people thought it was a 6 or a 7?
A. Before you get into that, let me just point out that there is no view from the Appalachian Trail to North Crocker Mountain

except for that little tiny bit over the tops of the trees that we saw on my second slide.

Q. What were they looking at here?

A. What we looked at, as we've said in our prefiled testimony and on our website, that there is what we call a surveyor's cut.

On the top of North Crocker Mountain there's a pathway that goes down to an overlook. If somebody wanted to see the full extent, they would be able to go down there.

Q. Is that within the Appalachian Trail corridor even thought it's on the footpath?

A. I'm not sure.

Q. Do hikers often go to the lookout trails?

A. It's not an identified overlook like the one at Saddleback.

Q. Would they?

A. Well, if people -- yeah, we think people here would be very interested to see this facility and this will be one place where they could go to see it.

Q. 90 percent said that it was 6 or 7 before and after the wind farm developed, 13 percent said it was a 6 or 7.

So Mount Abraham and Crocker Mountain, both viewpoints from areas listed in Chapter 315 as being special, probably national significance, and it was a large impact on the viewer appreciation of the area?

A. Keeping in mind, of course, that North Crocker is off the Appalachian Trail and there is no view from the top of North Crocker Mountain.
Q. On Page 25 of your prefiled testimony you discuss form and you make note that the turbines are very tall.
We know that they're 410 feet.
A. That's to the top of the blade at full extension.
Q. And you later on note that they're not indigenous elements, that they will attract the eye; correct?
A. That's right.
Q. Isn't it also true of Vestas 90s, the turbine that you're going to put up?
A. Can you repeat that.
Q. That it's true?
A. Which is true?
Q. That they will attract the eye?
A. Yes.
Q. The motion of the windmill make it even more so; right?
A. That's right. The Vestas 90 -- you know, I've seen windmills all over the country, and one of the things that attracts the eye a lot, especially in the earlier model, is the rate that the blade turn.
These turn fairly slowly, once every 1 to 2 seconds past the aperture. You'll still see the blades.
Q. Your report, your visual impact assessment, did not take

into account the effects of the required lighting on the turbines; correct?
A. Well, we discussed the lighting. We discussed the lighting this morning.
Q. The prefiled you didn't?
A. Yes, correct.
Q. Your visual assessment did not really go to like Misuzu, for example, how many lights would be required?
A. That was an evolving discussion with the FAA at that point.
Q. In fact, it wound up that how many turbines would be lighted?
A. There are 15 of the 30.
Q. And each will have two lights on them; correct?
A. Yes. And we should make a correction from what was stated this morning -- thank you for bringing it up -- according to FAA regulations is to prevent one of the lights from being rendered invisible by the action of two side by side of the tunnel itself.
Q. You stated this morning that part of your visual assessment used methodology of the US Forest Service?
A. Yes, it's a methodology we've used this on countless occasions in dealing with DEP and other applications throughout the state of Maine.
Q. How do you explain the fact that Eric Crews -- he's going

to talk to us later this afternoon -- came to a completely different conclusion from you using Forest Service methodology?

A. Well, part of the methodology is to look at your diagrams that are created.

In this case he chose not to use photo simulations. As you can see by his illustrations behind you, those are computer-generated illustrations.

If you look at his statement of criteria, it's very interesting. I have never met Mr. Crews before, I have a great deal of respect for his work. He used -- any assessment is based on certain assumptions, for example, he assumed the tree height above 3,400 feet are 10 to 25 feet. We know with talking to Woodlot Alternatives, they're probably in vicinity of 25 to 50 feet.

That has a great deal of bearing in terms of visibility of roads and transmission lines, things that will determine the visual quality.

He also says -- when he says to the computer to generate the illustration that above 3,400 feet he assumes that the trees are at a density of 300 stems per acre.

This works out to be about one tree every 13 feet on the grid. Well, we saw in some of the photographs this morning, the trees in some places are almost impenetrable. There are a lot more than that.

The lighting issues aren't there. The color of the

turbines are not right. We've used a white turbine now, he's using a gray turbine. That will have a difference when you see it up against the light sky.

Q. I'm sorry, I thought you started with white being moved to gray?

A. We are at gray right now. We're at white right now. I'm talking about this.

Q. Okay, I thought you were telling me that you are using white now?

A. We are.

Q. So you dispute --

A. The other thing, too, is that when you do an assessment, you take into account not only what is being proposed but the content. In this particular case, the simulations that we had done, it's a photograph. You see what's out there.

When Mr. Crews did his, he did not show any ski areas, any transmission lines, any of the roads, any of the clearcuts, and harvesting operations that are in the landscape already.

It looks like it's an undisturbed landscape. As we know from the photographs this morning, that is not the case.

Q. If you're hiking from Route 4 to Route 27, after you get over to the Horn, do you know where that is?

A. Yes.

Q. Can you see the Sugarloaf ski area?

A. Which Horn are you talking about? The Horn at Bigelow or the --
Q. The Horn on Bigelow. From the Horn on Bigelow, can you see the Sugarloaf ski area? Can you see the Saddleback development?
A. There are a couple of places where you're probably not going to see any other development.
The majority places, though, along this 24 miles -- 34 miles where you do see views, you are also seeing other forms of cultural modification.
Q. But not the skiers?
A. Up on Bigelow you're looking -- to Sugarloaf.
Q. I understand that, but from Route 4 to Route 27, you don't see the Sugarloaf ski area; is that correct?
A. That is correct.
MR. PLOUFFE: Thanks for the conversation.
Mr. Mann, next, please.
How are you?
MR. MANN: Good, thank you.
MR. PLOUFFE: Do you mind if I call you Randy?
MR. MANN: That's fine.

EXAMINATION

BY MR. PLOUFFE:
Q. The Applicant here is Maine Mountain Power, LLC; correct?
A. Yes.

Q. It is not Edison Mission Energy; correct?
A. That's correct.
Q. My understanding of an LLC is that the members of the LLC -- which in this case would be Mission Wind Maine, LLC and Endless Energy -- it's my understanding that the members of the LLC are not legally responsible for the obligations of the LLC, it is a limited liability company, much the same as shareholders of corporations are not personally liable for the obligations of the corporation; correct?
A. That's correct.
Q. So we have Maine Mountain Power, LLC as the Applicant, we have Mission Wind Maine, LLC as one of the members.

Now, both of those LLCs are Delaware LLCs formed in the fall of 2005; correct?
A. I can't recall if they're Delaware LLCs.
Q. Were they formed in the fall of 2005?
A. Probably about that date, I'm not sure.
Q. Is Mission Wind Maine, LLC a subsidiary of Edison Mission Energy?
A. One moment. Edison Mission Wind is a subsidiary of Edison Mission Energy.
Q. So then the thread from you, you're Edison Mission Energy, I take it, goes from Edison Mission Energy to Edison Mission Wind -- I'm sorry, Mission Wind Maine, LLC to Maine Mountain Power, LLC?

A. Which is a very typical way of corporation structures their investments.
Q. And limits their exposure, obviously?
A. Yes, it can.
Q. If I look at the application, can I find any information on the financial position of Maine Mountain Power, LLC, the Applicant?
A. What we've provided is a letter that describes Edison Mission Energy's commitment to fund the capital contributions necessary to -- Mission Wind Maine to fund Maine Mountain Power.
Q. Will I find anything about the Applicant's financial position other than what you've just told me?
A. The key fact about the Applicant's financial position is that the capital contributions will be funded by Edison Mission Energy through Mission Maine. That's the most important piece.
Q. And I asked your attorney to provide information on MMP, LLC, and Maine Mountain Power and I was denied; correct?
A. I don't know whether you were denied.
Q. The deputy attorney general asked this morning about the final decision on whether or not go with this project or not.

It would be up to the board of directors of Edison Mission Energy; is that right?
A. Actually in this case it would be the managing committee of Edison Mission Energy.

Q. They look at a number of things, I'm sure, I suspect, including whether or not this project will meet their internal rate of return that they look for in all their projects? In other words, when they invest capital, they want a certain rate of return?
A. Clearly.
Q. Do you know that I went on the website of Edison Mission Energy, and I see that you have to file a Notice of Affiliates with the State of California; do you know anything about that?
A. No, I don't think so.
Q. Do you know whether or not either Mission Wind Maine or Maine Mountain Power, LLC is considered to be an affiliate?
A. I don't know for what purpose these filings are that you're referring to are made.
Q. That even though you are listed as a principal officer of certain other affiliates, like Lucky Wind Maine, LLC, you and Rebecca Walters?
A. Yes, there are certain regulations when we have power generating facilities, and we're required to notify government authorities of that, so that's probably the issue there.
Q. If I told you that neither Mission Wind Maine or Maine Mountain Power was listed as an affiliate, can you explain why?
A. Yes; I believe that the projects that you're referring to are in operation, and so the filings are made after we've commenced operations.

Q. Have you ever made an estimate of the cost for decommissioning this project?
A. We have reviewed it, not in a great amount of detail, but we have reviewed it.
Q. So in today's dollars what would it cost?
A. I'm not sure of the exact answer. We have committed to decommissioning these turbines if and when necessary.
Q. Will you commit to having a third party guarantee those costs?
A. We're open to consider any permit conditions, but we don't believe that's necessary. Generally speaking, the salvage value is greater than the decommissioning costs.
Q. But you don't know what the decommissions costs are?
A. We can provide estimates of those costs.
Q. You don't know?
A. Not right now, no.
Q. The wind data on Page 90 in the prefiled you mentioned that you have wind data. That was --

MR. THALER: Mr. Chairman, I don't mean to interrupt. Can I just ask for a clarification? I think his 70 minutes are up. Are all parties going to be going over or allowed to go over?

We made a big effort to stay within our time this morning.

THE CHAIR: Where are you?

I'll give him two minutes and I'll give you the same courtesy on the other end when you do your cross, how's that?

MR. THALER: Thank you.

BY MR. PLOUFFE:

Q. You've engaged in a number of projects related to the wind industry since 1991?

A. 1998.

Q. In the Vestas 90s, is the lubricating oil in the nacelle?

A. You'll have to ask that of Vestas.

Q. Can Vestas Maine answer that question for me?

EXAMINATION

MR. BULOW: I can't say this off the top of my head.

BY MR. PLOUFFE:

Q. Give me an estimate if you could.

A. I would need the type number.

Q. In your experience around the world, do these wind turbines get struck by lightening or occasionally? Do they catch fire occasionally?

THE CHAIR: Let him come down to the microphone so we can all hear the answer, please.

THE BULOW: The answer is yes.

BY MR. PLOUFFE:

Q. So they do catch fire occasionally?

A. Yes.

Q. Through lightening or other causes, for example, brakes

heating up?
A. Yes.
Q. How do you fight those fires?
A. You normally don't.
MR. PLOUFFE: I guess I'm out of time. Thank you, Mr. Chairman.
MR. PIDOT: Bill -- Bill Plouffe, could you make sure that the exhibits that you handed out are also given to Marcia.
Just to remind you, you indicated that you wished to have more time. Obviously other points that you might want to make can be made during the comment period just as effectively as cross-examination.
MR. PLOUFFE: Thank you.
THE CHAIR: We're going to continue right along with the other intervenors.
The next group of intervenors is the Conservation Law Foundation. Steve Hinchman's going to do that. Very good.
MR. HINCHMAN: I'd like to ask John Hanisch and Steve Garwood.
THE CHAIR: Excuse me, who was the first name?
MR. HINCHMAN: John Hanisch. If I could ask the Commissioners to pick up the PALCOR sheet and turn to the page headlined, Redington Will Usually Displace Gas, and it's got a bar chart with price per megawatt hour of different fuel types.
THE CHAIR: Excuse me, Steve, who's testimony is that

in PALCOR.

MR. HINCHMAN: It would be John Hanisch's primarily.

Thank you, Mr. Chairman, Commissioners. I'm Steve Hinchman, I'm an attorney for the Conservation Law Foundation.

I'd like to ask a couple questions that relate to one of the issues last night extensively, which is will this actually avoid emission, displacement of fossil fuel generated pollution if this plan is construction.

EXAMINATION

(Of Mr. Hanisch)

BY MR. HINCHMAN:

Q. Your analysis, Mr. Hanisch, concludes that there will be 134,000 tons per year of CO2 displaced; is that correct?

A. 134,000 tons total of all pollutants.

Q. All pollutants, not just CO2?

A. I think I added them up.

Q. And that figure assumes that the Redington Wind Farm will displace or back down a natural gas-fired power plant primarily; is that correct?

A. Yes, a natural gas powered power plant in the state of Maine.

Q. And the average emissions for that plant was supplied by who?

A. It was a report that was generated by ISO New England in 2004.

Q. That figure, 134,000 total tons per year, assumes just that single marginal emissions rate from a natural gas plant, not from any other type of plant?
A. That's correct.
Q. If we're looking at the bar chart from your testimony, you can see that on a typical day that would be the gray bar, the horizontal gray bar at the bottom lines up directly under new gas.
A. That's correct. There's a picture behind you, in fact, that shows right there.
Q. And the inference is on a typical day the only nuclear, hydro, wind, coal, and new gas would be operating, and that the fuel sources to the right -- old gas, old oil, and peakers will -- will not be operating.

Is that the way I understand that chart?

A. That's the assumption in that chart, yes.
Q. On an atypical day if you have, let's say it's a mild winter day and we have lower than expected demand, you would still pretty much be in the new gas column or perhaps leading over to coal?
A. In most cases I think you would be in the new gas here in Maine because it's 72 percent of all generation.

So you would really have to be down at about less than 28 percent to impact any other areas.

Q. So on an atypical day your avoided emissions rate would be

unchanged.
A. It would be unchanged.
Q. On a lower than normal consumption day?
A. Yes.
Q. For an atypical day where you have increased consumption, what happens? According to your bar chart, you would move to old gas as the next most cost effective fuel, so just a marginal increase above new gas you would start to displace old gas?
A. That's correct.
Q. Old gas is dirtier or cleaner than new gas?
A. It's dirtier. The older turbines have higher permitted emission rates, and they aren't as efficient, so the emissions per megawatt hour produced is higher than for new gas.
Q. So on days when we have higher than average energy demand and the wind is blowing, the Redington Wind Farm would displace a higher amount than your 134,000 ton total figure?
A. That's correct.
Q. Can you just tell me, peakers, what categories of tower are in peakers?
A. Peakers are basically a generator of gas or an oil or a diesel-fired unit. It would be like a generator that you might have in your home where if your lights go out and you turn on your generator almost instantaneously, you have electricity.
And all over the grid -- not only here in Maine, but

throughout New England -- there are units that we refer to as peaker units. They're not controlled. Basically a lot of them are either diesel engine.

The only difference between that and what you put in your is it will probably fill up your dining room or your living room if you were going to put it there.

So they're much bigger, but they're basically units that just come on, they provide electricity into the grid where it's needed. They're strategically placed and they're the highest types of sources that we have.

Q. In a day like the cold snap in 2003 when everything's running, if we added Redington Wind Farm to that scenario, you would be an able to back down the peakers first?

A. That's correct. You would back down the peakers first and it would reduce the price as well as the pollution.

Q. Thank you. Yesterday we heard a lot of testimony that this project would not displace these sort of fossil fuel plants but in fact displace the neighboring plants, which are the Stratton Biomass Plant and the two hydro plants at Flagstaff if they all go to Flagstaff Lake.

Ignoring the question of line congestion just for a moment, just looking at the market, under this -- using the same chart here, why will the market never displace hydro?

Take that question first.

A. I think the answer to that is the market is required to

displace the most expensive unit that's on line, and that most expensive that's on line is the gas plant.

It will displace the gas plant; it won't displace the hydro, which is basically free.

Q. Same question relative to Stratton Biomass. They must buy wood chips, so they have a higher operating cost than hydro?

A. They have a higher operating cost, and we're kind of getting out of my area of expertise, but my understanding is that a wood plant, once it's running, would prefer to stay running because the costs associated with shutting it down are very high.

So they would bid on a low price if they're running. If they're not running, they wouldn't want to start up.

Q. Could they bid in lower than new gas, for example?

A. They definitely would. They would because they have to or else the new gas would come on before they did. That's what happens as I understand it.

Q. So your conclusion that the market will prefer a higher cost fossil fuel power generation in almost scenario as opposed to hydro or wood fired biomass?

A. Let me make sure I understand your question.

THE CHAIR: Would you restate that, please.

THE WITNESS: I wasn't sure I understood either.

BY MR. HINCHMAN:

Q. Your conclusion is the market would prefer to back down

the more expensive power sources, those being fossil fuel power sources, rather than hydro or wood fired biomass?
A. That's my understanding of what happens, yes.
Q. And there's so much existing natural gas and other fossil fuel, that the size of Redington Wind Farm is such that these other renewable resources would not be affected with a market-based approach?
A. That's my understanding, yes.
Q. Thank you. Quickly turning to line congestion.

EXAMINATION (of Steve Garwood)

BY MR. HINCHMAN:
Q. As I understand it, there are three places where line congestion is a factor, the first being the conveyance of power from the Bigelow substation to the Wyman substation, and in reading the prefiled direct, I believe it's your testimony, Mr. Garwood, the Applicants have elected to expand that line, eliminating most congestion scenarios?
A. That's correct.
Q. Between Wyman and the rest of the CMP grid -- let me back up for a minute.

On Bigelow and Wyman there's two competing facilities there, there's right now just the Stratton Biomass, and if your project were built, there would also be a wind project?
A. Correct.
Q. If you go from the point of connection Wyman to the rest

of the grid, your testimony says there's currently 350 kV lines and the competition for that transmission at that point in the grid would be the two hydro plants, one biomass plant, and then if built, Redington Wind Farm?

A. Correct.

Q. And your conclusion is that those three 150-kV lines are sufficient to carry most of, if not all of, the production of all those plants that are operating simultaneously?

A. Correct.

Q. That brings us then to the question of the third point of line congestion, which as I understand it would be between the CMP part of the grid, which is Maine, and New Hampshire going into southern New England?

A. That is another potential place, yes.

Q. If you Commissioners would turn to the chart a few pages prior to the one you just looked at, which says, Maine is not always the exporter of electricity.

In that chart I believe your testimony was that the limitation on Maine's exported electricity in most years is the bottleneck between Maine and the rest of the NEPOOL grid?

A. Correct.

Q. So just from a perspective of aborted missions of the Redington Wind Farm, right now we're assuming the plant that would be displaced would be a Maine natural gas plant; is that correct?

A. That's correct, yes.
Q. Generally the Maine natural gas plants are newer, more efficient natural gas plants?
A. That's right.
Q. If that bottleneck was removed to southern New England, would the typical marginal plant change from a new natural gas plant to something else?
A. The system study that was done in 2004 included not only what would be the marginal unit in Maine, but it also included what would be the marginal unit, that unit we would be displacing for all of New England to the average of New England, and the emissions from the marginal unit in New England was higher than the emissions for the unit in Maine.

So if you got rid of the congestion point so that more power could get into southern New England, you would actually avoid more emission. You would be displacing more emissions by turning on Redington than you would if you just had the congestion and you were ratcheting down a plant in Maine.

Did that answer your question?

MR. HINCHMAN: Yes, thank you. That concludes my questions at this time.

THE CHAIR: I don't want to intrude on the time of our intervenors, but it just begs one question.

In reading the testimony, in your testimony, the included PUC testimony, which suggested that Maine benefited from the fact that it couldn't export all of its power because we -- to the extent that we excess power, it drove the price down because of lower costs; is that true?

MR. HANISCH: I'm not really the price expert in our group, so I really shouldn't answer that question.

THE CHAIR: It was just a point of interest.

MR. GARWOOD: In general it's true that the bottleneck at Maine may face has a -- have bottled generation in Maine does depress the price of electricity in the state as compared to what it would be if it leads to bottleneck.

THE CHAIR: Thank you. The next intervenor with 15 minutes is Natural Resources Council. Go ahead, Peter.

MR. DIDISHEIM: I would like to request Terry DeWan, Randy Mann, and Harley Lee come forward.

I'll be starting with Terry.

EXAMINATION (Of Mr. DeWan)

BY MR. DIDISHEIM:

Q. My name is Peter Didisheim, I'm the executive director of the Natural Resources Council of Maine.

Terry, just for clarification, in your testimony this morning, you said -- and I wrote it down -- there will be no impacts on scenic and recreational resources is what you said in your verbal.

Your statement in the printed actually says, there will be impacts on scenic and recreational resources.
A. I stand corrected. I was told after I made it, I should have added that one word.
Q. So there will be impacts?
A. We all agree with that, yes.
Q. Were you involved in the selection of this project site?
A. I was not.
Q. In 1994 you were part of a consultant team that was in support of the Kenetech project, and you testified in direct testimony to the Commission on June 1st, 1994, "The construction of that project was called News, should have no visual impact on the view from the Appalachian Trail."
You went on to say that it was 16 miles from the AT at the nearest point, and you commended the process that they went through that used proximity to AT -- the Appalachian Trail -- as a relevant screening criteria.
This project would be 1 mile away from the Appalachian Trail.
Is proximity to the Appalachian Trail a relevant screening criteria?
A. That raises a much bigger issue of whether or not the State should actually have a scene criteria.
Q. You thought it was an important criteria then?
A. In looking at it back then --

Q. Okay.
A. It was back then.
Q. The turbines, then, at that time as we saw from the chart from Vestas this morning, were substantially smaller; is that correct?
A. That is correct.
Q. And they generally were low enough that didn't require FAA lighting; is that correct?
A. I don't recall. That could be correct.
Q. So it was relevant then with smaller turbines that weren't lit. The project we're looking at now has much larger turbines.

Are those larger turbines more visible or less than the turbines that were used in the early 1990s?
A. For the lost part they would be more visible.
Q. One of the photo simulations that you have used, and it's frequently -- the second one down over here, looking over on that far one, it's in the winter from the top of Sugarloaf ski area.
A. Right.
Q. That's a 1993 photo and there are very substantial clearcuts in the foreground.

Is it standard practice for photo simulations to use 13-year-old images that have quite a bit of clear cutting?
A. Ideally we should have more updated photographs.

Q. So potentially that's a misleading image?
A. Well, I think what it shows is evolution of the landscape. The landscape gets cut, the landscape grows back.
It's part of the commercial --
Q. Even in the permitting process where the public is trying to visualize what it would look like, would that be misleading?
A. We were given that photograph to do before we got involved in the project.
Q. Is it true that there are some significant changes in the micro siding of turbines that can effect people's sense of the visual impact? You move a turbine here, and you move a road elsewhere, and that there's value to that?
A. Yes, there is.
Q. What would be the benefit of removing all of the turbines if the project was reconfigured benefitting -- what would the visual impact be of removing the turbines that are currently proposed for Redington?
A. That's one of those "what if" questions.
Q. Let me refer you to this image right here, the one all the way to the right, which is a view from Sugarloaf Cirque?
A. That's correct.
Q. You can only see the 12 turbines on Redington and none of the turbines on Black Nubble?
A. That's correct.
Q. Would it there be a significant benefit in terms of

reducing initial impact from removing those turbines?
A. In that particular viewpoint.
Q. How about the one next to it, where you can see all 12 turbines on Redington and only five or Black Nubble? Would there be a significant benefit in terms of visual impact?
A. By losing those views, the turbines in the foreground, the immediate mid ground, yes.
Q. Last week Randy Mann said, let me quote, "The Black Nubble-only option would have almost the same visual and environmental impact associated with the full project."
What you just said, I would say you're contradicting that, at least for some views. There's a significant reduction in visual impact if you eliminated the turbines on the top of Redington; is that correct?
A. In some places you would still --
Q. You would still see it, but there would be a reduction to impact?
A. That's correct.
Q. If you did not do the construction -- the roads, the transmission lines, setting the turbines in there -- wouldn't there be a reduction in environmental impact on the top of Redington if you eliminated those turbines?
I think the answer would be of course because there's nothing there, there's no impact now --
A. There's nothing there right now.

Q. Right. So again, that would contradict the statement they're virtually the same environmental impacts if you wanted the Black Nubble-only option?
A. I'm not an environmental scientist. I can't address the environmental issues.
Q. But you're landscape design architect and you're quite experienced in that.
MR. DIDISHEIM: I would like to now a few questions of Harley.

EXAMINATION

(Of Mr. Harley Lee)

BY MR. DIDISHEIM:
Q. Harley, in 1998 you announced that Endless Energy would be pursuing a 20 megawatt wind farm on Redington; is that correct?
A. I don't recall.
Q. I will submit for the record there were multiple announcements.
In a January 17th, 2002 prehearing conference with LURC, you announced you would be pursuing a 50 megawatt project involving 15 turbines on Redington and 14 towers on Black Nubble; is that correct?
A. That sounds right. That was with the V80s, maybe?
Q. The record of LURC will show a prehearing, yes.
So at both of times, you were very supportive of projects that are smaller than what we're proposing, the

Black Nubble project, which would be 54 megawatts; correct?
A. What we did --
Q. That's just a yes or no. You supported smaller projects and announced that you would be pursuing smaller projects?
A. We were pursuing projects based on the technology available at that time and what our cost estimates were at that time.
Q. During the 1990s you attempted to purchase the assets of the Kenetech project, including the permit and the land rights; is that correct?
A. I think the permits may have expired at the time. There was a lease at that time, yes.
Q. So you concluded that the Kenetech site was attractive?
A. At that time the Redington site was not available to us. The landowner didn't want to sell it, and the Kenetech site had been permitted and was available for less than 1 cent on the dollar, so it looked like an interesting business opportunity.
Q. Would you say that one of the benefits of that site was that it was 16 miles away from the Appalachian Trail and would not invite significant concerns about visual impacts from AT organizations?
A. That was one of the benefits, yes.
Q. That was one of the benefits?
A. Yes.
Q. Has the increase in turbine since the early 1990s when you

selected the Redington site for exploration enabled wind farms to succeed at lower wind power regimes?

A. Yes and no. Turbine costs have gone down for many years and the turbine sizes have gone up and which has generally allowed you to go to lower elevations.

But unfortunately the last few years that trend has reversed, so it's actually headed in the other direction. Turbine costs have gone up and concrete, construction, so much that it's actually reversed that trend significantly.

Q. But there are projects that are in lower elevations, lower wind regimes, than there was in 1992 or 1993?

A. I don't understand the question.

Q. I'll move on.

One of the charts presented this morning by Randy Mann makes a statement that two-thirds of modern wind farms are bigger than the Black Nubble-only scenario.

How big is the Searsburg project?

A. The Searsburg project, which was built I think in 1997 or 1996, is composed of eleven 550 kilowatt machines for a total of 6 megawatts.

Q. How big is the project, in capacity, that you're pursuing at Little Equinox?

A. 9 to 15 megawatts.

Q. How large was the East Haven project that was rejected two weeks ago?

A. That proposed project was using four 1.5 megawatt machines.
Q. So it was a total of 6?
A. 6 megawatts, yes.
Q. How big was the proposed Lee Mountain Project, also withdrawn by developers?
A. I think it was on the order of 50 megawatts.
Q. It was less than that, 40 or less.

Can you identify a single project in New England that is bigger than 54 megawatts that is currently operating that's been permitted?
A. There's only 10 megawatts in total. There's the Searsburg Project, there's the Hull turbine, there's Hull 2 -- or H-2 as we affectionately call it -- which is about 1.8 megawatt; and there's the Princeton Farm, which is eight 40-kilowatt machines.

But there's only 9 or 10 megawatts operating all over New England.
Q. So would you say that it's potentially misleading to say that two-thirds of modern wind projects are bigger than a Black Nubble-only scenario by lumping in all of the projects that occur on farm land, range land, flat land, where there's no site concerns? Is it misleading to say that two-thirds --
A. I don't think it's misleading. The facts are the facts.
Q. And the facts also show that in New England those sort of

projects of that scale have not been permitted; right?
A. Yeah, there's only three wind projects operating all over New England as I mentioned.
MR. DIDISHEIM: I would like to now ask some questions of Randy Mann.
EXAMINATION
(Of Mr. Mann)
BY MR. DIDISHEIM:
Q. In your prefiled testimony you state that Edison's investments included ten wind farm projects accounting for 500 megawatts.
Are any of those near a national park?
A. No.
Q. Are any of them in mountains?
A. No.
Q. Are any of -- have you needed to get rezoning for any of those projects because the land was in a protected mountain zone or protected zone because of scenic or natural resource values?
A. Projects generally require permits but permits are different in every environment.
Q. All of those 10 wind farms that you've had experience with, is it accurate to say that they are farm land or flat land? Minnesota, Iowa, New Mexico, Texas.
A. The topography differs in each area. The New Mexico

project is more like ranch land.
Q. But it's all relatively flat?
A. San Juan Mesa is an elevated mesa. It has undulation quite significant. Loredo is flat but has a cliff face.
So, no, it's not pure farm land.
Q. Would you say that any of those projects have anything like the sort of scenic values that are in the mountains right behind us?
A. I think it's a different location with different scenic values.
Q. Were people showing up to express deep concerns about the impacts on the landscape of those projects?
A. People in those locations have generally supported the development and construction of wind projects.
Q. Of the ten projects that Edison's been involved with, which ones did Edison Mission Energy participate in the site selection process? Or did you finance --
A. Finance, primarily.
Our typical model has been to come in similar to the arrangement here where the site selection has been done, and then we help to finish the project.
Q. So you were not involved in any of the site selection process for this project, were you?
A. No.
Q. As it was pointed out, your application said that this

project is not near a national park.

Were you aware that this project site was near a component of the National Park Service?

A. I knew that it was near the Appalachian Trail.

Q. Do you believe that proximity to a national park known for its scenic resources should be a relevant criteria for selecting a site?

A. I think that really our visual experts have addressed that question adequately.

Q. When did Maine Mountain Power sign its contract with Constellation Energy?

A. It was in the first or second quarter of 2006, either March/April, that time frame.

Q. March or April of this year?

A. Approximately.

Q. I would like to point you to this site all the way on the right.

Do you believe that there would be essentially the same visual and environmental impacts whether or not those turbines were built?

A. Again, I'm not a visual or environmental specialist. My visual specialist has answered the questions.

Q. I'm asking for your opinion. You said that --

A. If the turbine was not there, you would not see it.

Q. Those 12 turbines, if they weren't there and the

construction that occurred didn't happen, there actually would be a significant reduction in visual and environmental impacts?
A. From this particular viewpoint, if you couldn't see the turbine, then you couldn't see the turbine. I agree.
Q. That does contradict what you said last week, that there would be virtually the same visual and environmental impact of a Black Nubble-only project versus the full project?
A. I think that my statement was referring to the project as a whole, from the entire 15-mile radius, not from one particular viewpoint.
Q. So in aggregate, elimination of the 12 turbines on Redington, you believe has essentially no impact, no reduction, no significant reduction in the visual or environmental impacts, the project as a whole?
A. It reduces the number of turbines and those turbines --
Q. And the impact associated --
A. -- each are visible from certain places.
Q. Right. I would say that is a contradiction of what you said last week?
A. I think I clarified my statement.
MR. DIDISHEIM: That's all the questions I have.
THE CHAIR: Thank you, Pete.
The next intervenor is IEPM, et al.
MR. HOLT: I'll ask Mr. Garwood to come to the table and I'll introduce myself.

EXAMINATION

(Of Mr. Garwood)

BY MR. HOLT:

Q. My name is Ed Holt. I'm a private independent consultant here in Maine, and I'm one of a group that was formed by the Commission to consolidate Maine Interfaith Power and Lights, Maine Energy Investment Corporation, and Independent Energy Producers of Maine.

My questions for you, Mr. Garwood, relate to the larger operation of ISO New England and the regional electrical grid and goes to the question of in part the need for power.

First, would you explain what a control area is?

A. A control area is an area of the grid that is operated under a single entity with the authority to issue dispatch orders to that area.

Q. How does the -- in the system integration study there was reference to western and central Maine subregions. How does a subregion relate to the overall regional grid in operational terms, and does ISO New England operate those subregions as separate control areas or do they operate the entire NEPOOL area as one control area?

A. They operate the entire region as one control area to the extent the area you're speaking to is part of a utility system where that utility is a member of what's now referred to as the Regional Transmission Organization of New England under the

authority of ISO New England.
Q. And similarly, is Maine operated as an electrical system separate -- is New England operated as a single unit?
A. I'm sorry, repeat that question.
Q. Similarly to my previous question, is Maine operating as an electrical system separate from the rest of New England, or does ISO New England operate the electric grid in Maine as part of an overall regional grid?
A. The systems owned by Bangor Hydroelectric Company and Central Maine Power Company are operated under the direction of ISO New England because both of those utilities are members of that region.
Q. Now, you included in your testimony data about how many generation is varied with respect to its own use in state.

I guess my question here is, does each state have a responsibility to generate an amount equal to its own use of electricity, or is there a legal responsibility? Or is the response determined primarily by market forces? Or is there some other basis to make decisions to build or not build generation?
A. Today that's decided principally on market forces because of the restructuring that has occurred throughout New England and most notably here in Maine as well.
Q. So then finally, with the introduction of electric industry restructuring and introducing greater wholesale

competition than we did in 1997, what effect would that have on the perspective of electric industry participants?

Would they tend to be more likely to have a regional perspective on whether there's a need for power, or would it be more a state-only perspective?

A. I'm not sure you distinguished -- I'm not sure I can distinguish the two in every instance of every entity owning generation.

For instance, we heard Bruce McLeish speak this morning to how part of his marketing plan is tailored to specifically marketing power of, generations such as Redington, to customers here in Maine.

Likewise, I'm sure that part of the business plan of other markets and suppliers would be a more reasonable perspective.

So it's a mixed bag.

MR. HOLT: Thank you. That's all I questions I have. I'll give my time back to the Commission.

(There was a break in the hearing at 2:39 p.m. and the hearing resumed at 2:47 p.m.)

THE CHAIR: We're going to start. This will be TransCanada cross. Do you have the folks here you need?

MS. BROWN: Julia Brown on behalf of TransCanada.

Just a preliminary housekeeping matter, Mr. Chairman, for the record I would like to renew our objection to the

relevance of transmission capacity issues to the criteria at issue here.

When I say transmission capacity, I'm talking about both the presence or absence of what we refer to as transmission congestion.

We previously filed a request for and evidentiary ruling on that and I respect the presiding officer's decision, but just want to have that objection on the record going forward.

Our participation -- our prefiled testimony all relates to transmission issues, and I just want to be clear that our cross-examination, which is also focused on transmission-related issues, is not intended to waive that general objection.

EXAMINATION

(Of Mr. Mann)

BY MS. BROWN:

Q. With that, my first series of questions are directed to you, Randy. It relates to Page 9 of your prefiled testimony, you refer to a report or an analysis done by a Ron -- I'm going to mispronounce his last name -- Nirenberg; is that correct?

A. Yes.

Q. What was he asked to do?

A. He was asked to look at the wind data from the project

from the various towers on the project site and provide an estimate of output.

Q. Did he prepare a report?

A. Yes.

Q. What was the date of his report or analysis?

A. He's provided numerous reports over many years for Endless Energy.

Q. What are the approximate dates of those reports?

A. Again, many analyses, some in 2006, some in earlier years.

Q. So some as recent as 2006?

A. Yes.

Q. And what was -- the purpose of his analysis was to determine the anticipated output of this project; correct?

A. Correct.

Q. And there's been a couple of references to either 260,000 kilowatt hours per year or 265,000.

Which is his latest and greatest estimate?

A. 260,000. We have continued to work on this project over the last six months and had occasion to refine numbers since our preliminary application was filed about six months ago.

Q. I assume -- the only reference to his work, there's a footnote in the application referencing his conclusion, and there's the paragraph of Page 9 of your prefiled testimony.

Is that the basis for your conclusion as to the projected output of the project as the work that he's done?

A. Yes.
Q. Is there anything else you're relying on with respect to that conclusion?
A. We have also had Vestas look at the wind data in their capacity of determining site suitability for wind turbines, and while we are not relying on Vestas for our wind data forecast, they have looked at the climate data and concluded that they also believe our numbers are reasonable in the 260- range.
Q. Who at Vestas did that work?
MR. BULOW: That would be Michael [inaudible] at Vestas.
MS. BROWN: We'll come back to that in a minute but I want to follow up.
BY MS. BROWN:
Q. Anything else other than the analysis done by Ron Nirenberg and the Vestas work that supports that you're relying on for your output numbers?
A. Yes.
Q. Are you willing to provide a copy of the report that Mr. Nirenberg prepared to the Commission?
MR. THALER: Excuse me, Mr. Chairman, as Ms. Brown knows, we previously objected to that because it's proprietary and also not relevant; and so we had previously done that.
So that was the basis. I'm just speaking as a lawyer since I was the one who filed that objection.

MS. BROWN: If I could just respond to that, Mr. Chair, I don't think there was a formal response in the record on not producing that. I have heard indirectly that's the case.

But certainly with respect to relevance it's hard for me to understand how the information that forms the basis for the output of this project and the output of the project has been the basis for testimony we've heard all morning, how that could possibly be considered not relevant to the issues before the Commission.

MR. THALER: The objection was TransCanada did not make a request for it. Had it done so, we would have not provided it because it's clearly a business competitor, but it was a request made by I think Bill Plouffe, to which I objected.

We sent a document request that we responded mostly to, and secondly, in terms of relevance to the proceeding, LURC rules talks about information that a reasonable person would rely upon.

You can certainly question Mr. Mann and his business as to the type of information that they in their experience rely upon and make decisions, investment decisions, on and ultimately it's a little different than if somebody is seeking to build a house or a subdivision or something else.

The Commission and its criteria goals generally don't

go into the question of whether something's going to be 20 units versus 10 units or 12 units.

MR. PIDOT: I think, Julia, the answer to your question is no.

MS. BROWN: Does that count towards my 15 minutes?

MR. PIDOT: All of this is outside of your 15 minutes.

I would add that the relevance of the wind data to this Commission making this decision is highly personable and there's certainly a reasonable case that Jeff Thaler has made for that data to be proprietary.

I would expect you to say the same thing about TransCanada's wind data. Maybe you are more generous than Mr. Thaler.

MS. BROWN: Let me respond. There are two issues: There's one, the raw wind data, which is arguably not necessary here, but to the extent that the person with expertise has reviewed that data and reached their conclusion and that person is not here as a witness to testify, his reports have not been provided, I think it is a problem because there's no way for anybody to evaluate the validity of the core piece of information here, which is what is the expect output of the project.

We fully expect to provide a similar report by a similar independent expert, which is one of the reasons we're

just a little bit puzzled on the reluctance, quite frankly, to provide either to make the witness available to provide the analysis of the raw data.

I would agree, I don't think the raw data is the key, but you need to have either the raw data or the report of an independent expert for the witness who's prepared to testify and be cross-examined.

MR. PIDOT: I think we stand packed with this one. The answer to your question is no, they're not willing to provide information.

And whether the Commission ultimately finds that to be an impediment to its decision making will be decided later.

Thank you for your comment.

BY MS. BROWN:

Q. Mr. Mann, do you know, is the analysis that Vestas conducted specific to the turbine model proposed here?

A. There's been analyses conducted, as I said, over many, many years, and the initial analysis would have dated back to before the V90 was the turbine of choice, so we have looked at many years of wind data. We described that in my testimony.

Now the information and the assessment is based on the V90 and the currently layout of the projects as you've seen proposed.

Q. How many days of loss of operation does the analysis reflect due to cold temperature?

A. I don't know the answer to that.

MS. BROWN: Let me just ask you a question. Probably this is to Mr. Bulow.

EXAMINATION

(Of Mr. Bulow)

BY MS. BROWN:

Q. What is the temperature rating for the turbines proposed here?

A. They would be down to -80 degrees Celsius.

Q. Help me out.

A. Roughly about the same. I can't calculate on the top of my head.

Q. Is it fair to say that there are a significant number of days in this region where the turbines -- well, let me back up.

If the temperature falls below the temperature rating for the turbine, the turbine stops operating; correct?

A. That's correct.

Q. So there will be a certain number of days, particularly in this region, where the turbines are expected not to operate due to cold temperature; correct?

A. Again, if the condition is so that it drops below that temperature, then the turbine will stop if that condition that you have, you have wind.

Q. Have you done -- can you answer the question of the analysis of the output of this project how many days --

A. That is proprietary information between our customer and us that I don't want to disclose here.

MR. MANN: I will just say that our analysis is considered, as any normal windmill would, those types of factors in coming up with our conclusion.

EXAMINATION

(Of Mr. Mann)

BY MS. BROWN:

Q. We'll just have to take your word for that; correct?

A. I've testified.

Q. There's no actual data that anybody here can provide so that we can look at that; right?

A. We've discussed the issue providing you with proprietary data.

Q. Okay, we'll move on.

Did the analysis reflect the spacing between the turbines and the specific turbine layout that's proposed here?

A. Yes.

Q. What are the assumptions about how many turbines can operate at the same time and given wind conditions due to sheering and proximity of turbines to one another?

A. I'm going to turn that one over to Vestas because again, they've done some site suitability analyses for us with respect to layout.

MR. BULOW: We do not believe there's going to be

universal constraints due to any [inaudible] as we described it.

EXAMINATION

(Of Mr. Bulow)

BY MS. BROWN:

Q. Is the package, the Vestas turbines that you're selling, is that an arctic package that currently certified?

A. That one is in the certified process right now.

Q. So it's not currently certified?

A. No, but --

Q. Thank you.

A. Down to -20 degrees is fully certified. It's not Vestas seen as any problem in reaching it.

Q. I hate to cut you off except that I've got somebody flashing a sign at me on how much time I have.

So it's not currently certified? It's currently certified to -20 degrees; correct?

A. That is correct.

Q. Thank you.

A. At the time of installation I'm expected it to be certified.

MS. BROWN: We're going to move on.

Mr. Garwood, I have a few questions for you.

EXAMINATION

(Of Mr. Garwood)

BY MS. BROWN:

Q. I appreciate your prefiled testimony, which is very clear on issues that are not necessarily easily accessible to the lay persons among us.

I was a little bit puzzled on the discussion about the significance of the position in the queue, the so-called ISO queue.

There were a number of references to the significance of the position in the queue, and I just want to make sure that we're clear here that the generator's position in the queue in ISO doesn't have any bearing on the generator's right to transmission capacity; correct?

A. That's correct, the queue position --

Q. Go ahead.

A. I'll stop.

Q. What is the relevance of the queue position?

A. It determines the order in which the proposed generator connection will be evaluated by the interconnecting utility and the ISO, as well as cost responsibility for upgrades that may be determined based on the transmission upgrades that are identified during the study in order for the proposed unit to satisfy the interconnection standards.

Q. And those are all upgrades that related to the reliability and stability of the transmission system; correct?

A. Correct.

Q. And I think that you have delineated those in your testimony and they are approximately in the order of $3 million; correct?
A. Approximately $3.2 million has been identified as cautious liability.
Q. So that's, you know, more or less than 3 percent of the profit costs; correct?
A. I believe that's correct.
Q. If it you lose your place in a queue, those minimum interconnection costs could go up or they could go down; correct?
A. Correct.
Q. So the position in the queue is really most critical probably to the schedule; correct?
A. Schedule and cost.
MS. BROWN: Mr. Chairman, could I, with the Commission's permission, have another just three minutes, which I think will go over my 15 because of the back and forth on the evidentiary issue?
THE CHAIR: Jeff said you could have his three minutes back.
MS. BROWN: Thank you, Mr. Pidot.
BY MS. BROWN:
Q. I just also want to be clear that in the ISO review process, ISO doesn't require a generator to resolve

transmission congestion issues; correct?
A. That's correct.
Q. Instead, transmission congestion issues are resolved through market mechanisms; correct?
A. That is correct.
Q. If there is congestion -- and I understand your testimony is that you don't believe that there will be congestion -- but if there is congestion, then essentially multiple generators are competing for limited transmission capacity; correct?
A. That's correct.
Q. And I believe your testimony is also that in those circumstances your expectation is that the entities that will benefit from an expansion of transmission capacity -- or an increase in transmission capacity -- would participate in a resolution of the transmission congestion issues?
MR. THALER: Excuse me, Mr. Chairman, I think we're now getting into the area that you had had as a ruling as to what might happen in the future, speculative of generators that could come on.
MS. BROWN: Could I respond, Mr. Chairman?
Much of his testimony, and some of the other witnesses' testimony, relates to their prediction about what will happen in the future on the grid, including whether there will be congestion, including the testimony of this witness.
So I'm not asking him about a specific future project

to evaluate what a future project is going to have; but I think if we're going to talk about congestion, it's just important to understand the general rules of the road and what happens when there is congestion and what happens when there isn't.

MR. PIDOT: It seems to me, Julia, you have about 90 seconds left and you understand the limits.

MS. BROWN: I sure do?

BY MS. BROWN:

Q. So can you answer the question?

A. I'd like you to repeat it.

Q. Absolutely. If there's congestion and the multiple generators are essentially competing for electrical transmission capacity; correct?

A. Correct.

Q. Your testimony earlier about expected output of the project and then also including the pollution benefits that result from this project assume no congestion in the future; correct?

A. I don't believe congestion -- my analysis for the potential for congestion had any merit to or relevance to my estimation of emission reductions.

Q. You're assuming all of the power gets out; correct?

A. Of Redington.

Q. Correct.

A. Correct.

MS. BROWN: I have nothing further. Thank you.

THE CHAIR: Very good. Next group of questioners is the Friends of Western Maine -- I'm sorry, Friends of the Western Mountains.

Are you going to be the questioner?

MR. TRAFTON: I am.

THE CHAIR: Okay, thank you, Dain.

MR. TRAFTON: I'm Dain Trafton representing Friends of the Western Mountains.

THE CHAIR: Speak into the microphone, please.

I'd like to have Randy Mann, I'd like to have Ron Muse come up, and Alison Hagerstrom.

Alison, I'm going to start with you. We've never met and I admire the goals of your work, which creates economic activity and jobs in this area.

EXAMINATION

(Of Ms. Hagerstrom)

BY MR. TRAFTON:

Q. You say in your testimony that you're not aware of any study or report indicating that wind plants adversely affect tourism. You repeated that this morning, so I assume that's correct; is that right?

A. That's correct.

Q. Well, I want to let you know about one and a rather important one and rather well done.

It's called, Blowing in the Wind: Offshore Wind and the Cape Cod Economy. It's an academic study. It was done at the Beacon Hill Institute, which is part of Suffolk University in Boston, and the lead author is a man named Jonathan Haughton, who has a Ph.D. from Harvard and is on the economics faculty there.

MR. PIDOT: Is this a question?

MR. TRAFTON: Yes, there is a question coming.

MR. PIDOT: You will have an opportunity, I think, tomorrow to say what you want about that.

BY MR. TRAFTON:

Q. I take it this is when you said you're not aware of any studies, you're not aware of this study; is that right?

A. I am not.

Q. You're not.

Now, let me ask you this: I'm curious to know how serious any economic impact study that you or anyone else that you're aware of has carried out in connection with the Redington project.

I think this morning you said that basically you hadn't carried any such study out, and you weren't aware that anybody else had; is that right?

A. That's right.

Q. Okay. This study, which I just referred to, estimates that there would be in a six-area -- a six-town area close to

where the Nantucket Sound Wind Project be installed would lead to rather large losses in tourists spending and in real estate values and general economic decline.

Do you think there's some similarity in terms of its dependence on scenic, recreational tourism between the Cape Cod area and this area, just in that particular way?

A. There is scenic beauty in both places.

Q. In both places. And people come here for that reason?

A. Yes.

Q. I take it that you have read the study of -- the economic study of the wind farm in Oregon, which was part of the application; is that correct?

A. I did review that.

Q. You did review that. Would you say that that area in Oregon was very comparable in its geography, economy, and so on, to this area?

A. Referring to that, it's farm lands versus mountains.

I think that farm lands in the midwest and in the west have some scenic value to the portion of the country. It's part of the American landscape as well.

Q. That's true. But there was nothing at all in that study of Oregon which referred to tourism as being an important part of the economy. They grow winter wheat there, am I correct?

A. That's correct.

Q. So it might have been, would you agree, that it might have

been more useful to have a close look at this academic study done in connection with the potential wind farm down in Cape Cod -- it might have been more useful to look at that than at a study of a rural, sparsely populated rural farming community in Oregon.

Would you agree?

A. Yes, but I did look at some other studies.

Q. But none which showed a negative impact?

A. That's right.

MR. TRAFTON: Thank you.

EXAMINATION

(Of Mr. Muse)

BY MR. TRAFTON:

Q. Mr. Muse, on Page 5 of your testimony you describe a typical operation and maintenance at wind plants as including routine biannual mechanical and electrical inspections of turbines and foundations, periodic inspection of various things, but you mention only one daily task which is daily inspection of the turbines.

Then you go on to tell us that it's normal for Edison Mission Operation, which is the branch of Edison that you work for, to employ a single two-man -- two-person crew for each 30 to 40 turbines; is that correct?

A. That's correct.

Q. Are you familiar with the testimony of Mr. Mann, Mr. Lee,

and others which states that the project will create about ten well paying management and operation jobs in this region?
A. Yes, I am.
Q. From your testimony I see two jobs that look like permanent, full-time jobs that might go to local people.
Do you intend to locate a manager for these two jobs in, say, Stratton and Coplin Plantation in this area, the person who manages that two-man crew be located up here?
A. Well, Vestas, the turbine manufacturer, would be supplying the operation and maintenance personnel for the turbines for the first five years, and they stated that they would hire approximately eight people.
Edison Mission Operation and Maintenance would hire two people: A site manager and technician, who would handle non turbine maintenance.
Q. So Vestas is committed to hiring many more, and then you judge it necessary to deal with 30 to 40 turbines?
A. That's what they've stated.
In my testimony I said typically, it's typical.
Q. Can you guess at what might be atypical about the situation here that would require this larger staffing?
A. I think the -- probably the turbines may have something to do with that. I'm not familiar with the V90 and Vestas obviously is the expert on that.
MR. TRAFTON: Morten Bulow, could I summons him.

EXAMINATION

(Of Mr. Bulow)

BY MR. TRAFTON:

Q. Can you tell us, Morten, is Vestas committed, that is, really determined to hire five to ten local people, have them situated full time in this area during the time warranty?

A. With the first turbine, the V-90s set up, you need to have a 100 megawatt wind, a 90 megawatt wind farm; and a wind farm that size requires that eight people. As you said, 60 men, three crew that will be working on many issues, making sure that turbine simply performs optimal, including the service and the things that run.

And then we'll have a site supervisor, manager, and also an office and coordinator, so that makes our eight.

And as I stated in my earlier testimony, we have done this on right now 38 other locations throughout U.S.

We do come in and set up, yes.

Q. Thank you. Why do you need six when two will suffice?

A. No, no. If you see after the five-year period, Ron is planning on taking these in Operation and Maintenance and turns over to Edison.

Q. So after the five-year period, the permanent number of full-time jobs may well decline?

A. I don't believe so because Edison is going to do the job that Vestas did before, and they need hands to do that as well.

EXAMINATION

(Of Mr. Muse)

BY MR. TRAFTON:

Q. Mr. Muse's testimony indicates that Edison gets along with two-man, two-man crew -- what would the reason be that you would want more than a two-man crew in this case?

A. I think it's because of the size and the type of the machine.

MR. TRAFTON: Thank you.

Mr. Mann, I would like to question you.

EXAMINATION

(Of Mr. Mann)

BY MR. TRAFTON:

Q. Last night during public testimony we heard a number of people say that there's a desperate need for the plant that you propose to build because of the threat of global warming.

What these people seem to expect from your plant will produce a significant reduction in emissions, $CO_2$, from fossil fuel fired plants.

But your own claims about emissions seem to be changing and diminishing. In your application filed about six months ago, you stated the plant will reduce emissions by 860,000 pounds daily; is that correct?

A. I think that if you want to talk about emission reductions, you need to talk to Mr. Hanisch, who is the expert

on emission reductions.
Q. All right. Well, you have a statement in your testimony which says that you expect the plant to lead to a voided emissions of 732,000 pounds per day; is that correct?
A. Yes.
Q. So you -- I say your team -- has come down by 128,000 pounds per day, that's 50 percent reduction?
A. Again, if you would like that analysis, you need to talk to Mr. Hanisch. I know that he can explain to you as we have continued to work on this project over the past six months -- from preliminary application until today -- we have collected new data, including new data from the ISO and therefore have the most up-to-date numbers we use today.
Q. What is the new data from the ISO?
A. You'll have to ask Mr. Hanisch.
MR. TRAFTON: Mr. Hanisch, would you answer that, please.
MR. HANISCH: I would be happy to try.
The new data -- the original application used 2003 report from the New England system operator, and when they came out with the 2004 report, which became available to us just before prefiled, we looked at that data.
That data for the first time had the Maine marginal unit information in it, which wasn't available before, and we felt that since we thought pollution avoided would be from a

Maine plant -- at least now with this system rather than the New England plant -- we used the Maine figures.

That along with the reduced output is how it came down.

BY MR. TRAFTON:

Q. So the Maine figures are significantly lower than the New England figures?

A. I wouldn't say significantly but they're low, and we felt it was appropriate to give a lower number rather than a higher number. In fact, we thought the lower number was the right number.

Q. And these are based on average emission figures; is that right? The average emission figures in Maine are lower?

A. As we discussed, it's based on the average day rather than some other day. It isn't inflated, that's correct.

Q. You have not done a specific modelling of the way in which the Redington plant might in fact act in connection with the system grid in Maine? You haven't actually tried to show day-by-day, hour-by-hour, which plants are likely to be backed down?

A. No, that's --

Q. Yes, it can be difficult but it can be done.

One last question -- well, another question.

THE CHAIR: You have one minute. Use it wisely.

MR. TRAFTON: This is to Mr. Mann.

EXAMINATION

(Of Mr. Mann)

BY MR. TRAFTON:

Q. In your testimony you state that production tax credits are very important to make this project attractive to you financially.

Now, the purpose of production tax credits is to shelter the profits from taxes. Edison is a very profitable company. I believe that in 2005 your profits were over a billion; is that correct?

A. It sounds approximately right.

Q. It is right. What are the largest types of generation in the Edison portfolio? Which of the ones are the biggest?

A. Edison owns, like many other power generation companies, a mix of generation.

Q. Yeah; coal?

A. We own coal, we own nuclear, we own hydro, we own natural gas, and we own wind.

Q. What are the biggest of those five? It's not wind?

A. I don't know off the top of my head. It's probably between coal, nuclear, and hydro.

Q. It is. This relates to a point made last night, which people were asking about earlier today.

The person who spoke at the end of the session last night was making the point that the interest in wind power is

largely driven by an interest in production tax credits.

And the production tax credits are used to shelter profits from -- I think coal is your largest generation source, it may be nuclear -- but wind power production tax credits are used to shelter profits from those, and so would you -- isn't that not true?

A. No, I think you're drawing an inference that's incorrect.

For one thing, the existence or lack of existence of the Redington Wind Farm will not cause Edison Mission or any of our companies to burn one more pound or one less pound of coal. It's totally irrelevant and totally unrelated.

What is true is that the Redington Wind Farm will regenerate production tax credits, and those will help us charge a lower price for energy from the Federal tax subsidy.

In order to benefit from those production tax credits, yes, you have to be a profitable company and we are.

Q. And your profits largely come from another source of generation?

THE CHAIR: We have to call it quits.

MR. TRAFTON: Thank you.

THE CHAIR: Now, I owe Mr. Thaler 2 minutes. He had a couple of redirects he wanted to make, so I'm going to give him his 2 minutes right now.

Are you ready to go, Jeff?

MR. THALER: I understand that we were talking, some

of us, that the Commission will not have redirect from any party and that anybody who wants to do that, I guess, will just make comments after the hearing.

EXAMINATION

(Of Mr. Bulow)

BY MR. THALER:

Q. Mr. Bulow, there was a question just asked a little while ago about fire.

Has there been any experience of fire with the Vestas V90 turbines that will be used here?

A. No. As a clear rule, the extent of the fires were winter ones in the early 80s when, as Randy mentioned, the brakes on the turbine. That is only a parking brake on these turbines. It's all aerodynamic rates. They do not catch fire for that reason.

Even the fact that you let the oil run out, when you see lightning, yes, lightning can strike and it is likely to hit an obstacle 400 feet high.

But what people tend to forget is all the surrounding areas where the lightning otherwise would have struck on top of the mountains, it will not hit that and the turbine height has sufficient ground system to take that away.

That will not be an potential fire on the ground.

MR. THALER: I will stop there, and you'll yield you back my minute.

THE CHAIR: We're going to continue now that we've done the cross of the Applicant.

We're going to begin the direct testimony of the intervenors, their summary of their direct testimony, and I emphasize that word again.

To help some of these folks out, we have some people here who can't be here tomorrow, we're going to rearrange the schedule just a wee bit with everybody's indulgence.

I think we've talked to most everybody about this, so I hope this isn't a surprise everybody, and we're going to ask -- we're going to let the NRCM and the CLF group do their direct testimony at this time.

Obviously, there's two different groups here. We'll let them go at this point.

MR. THALER: Mr. Chairman, I guess I had been told it would be NRCS, CLF, and then depending on the time, National Park.

THE CHAIR: We'll do as much as we can this afternoon. I haven't looked at my watch in a while. It's 3:30, so we've got an hour and a half before we kind of have to finish here today, and then we go into this evening.

I think our plan is if there's no public testimony tonight or very little, we're going to continue right on until 10, 11 o'clock tonight with the direct testimony of some of the other intervenors so we can get as many done tonight as

possible.

MS. JACOBSON: Mr. Chair, can I make a request here on behalf of Audubon.

Our understanding is that certain folks from IF & W are only available today, and we have specific questions for Karen Morris and Tom Hodgman and also for Dave Rocque, and I just want to be sure that we have an opportunity to be able to ask some questions.

THE CHAIR: I'm sorry, I did discuss that with Marcia, and it was my plan to allow that, and I forgot about it; so I appreciate your reminding me. We'll allow a limited amount of time for this.

If those three -- these are all -- for those of you who don't know -- these are all State employees who have been consulted over many of the years on this project, so they need to -- and they've made comments on the record, so I guess they're certainly eligible to be examined.

Those three parties would present themselves to the table to be examined, we'd appreciate it.

MS. JACOBSON: Just another point of order, Mr. Chairman. I think the Applicant also wanted to cross-examine these same witnesses, I'm not sure.

THE CHAIR: That's fine. We'll give everybody a shot.

MS. JACOBSON: Okay. I think the order is that the

Applicant goes first and then --

THE CHAIR: I've got so many lawyers around me.

Jeff tells me that I should let my Commissioners also ask questions of these folks here if they have any at this point.

I don't see any. I'm going to give the Applicant his due.

MR. TIMPANEAU: Steve Timpaneau, environmental coordinator. I work for the Maine Department of Inland Fisheries & Wildlife.

MR. HODGMAN: Tom Hodgman, wildlife biologist, Maine Department of Inland Fisheries & Wildlife.

MS. MORRIS: Karen Morris, wildlife biologist withe Inland Fisheries & Wildlife.

MR. ROCQUE: I seem to be the odd man out. I'm not with Inland Fisheries & Wildlife. I'm Dave Rocque, the State soil scientists.

MR. CHAIR: Thank you. Are you ready, Jeff?

MR. THALER: Yes. I'll just have a couple questions for IF & W, and I'll try to identify the person, but is somebody else can respond.

EXAMINATION

(Of Mr. Hodgman)

BY MR. THALER:

Q. There have been comments filed on behalf of IF & W April

27 -- roughly April 27 to May 4, 2006, so I'm just going to refer briefly to some of those.

I think, Mr. Hodgman, in terms of the some of the comments that you filed, you had also referenced the Stratton Mountain study related to Bicknell's Thrush that I think Mr. Roy talked about earlier today.

Do you recall that generally? Are you generally familiar with the study?

A. I'm very familiar with it. I read the -- I'm very familiar with the study. I read the paper in some detail yesterday; however, I don't know that I read it in time for my comments back in the spring.

Q. One of your comments says, These document a higher test -- highest nest densities near ski trail edges and have determined these edges not exert "an important influence" of raising nest degration, citing Rimmer, and then, Study of two ski mountain areas between Mt. Abraham and Stratton documented 57 percent of all nests within 10 meters of a ski trail edge, with 45 percent of these less than 2 meters from the edge.

Is that the same general study on Stratton that was talked about earlier?

A. I believe so. Prepared for the Olympic Regional Development Authority.

Q. Did you find that to be generally a reliable study in your review?

A. Yes, in fact I spoke with the second author of that paper on Tuesday to ask him some questions regarding this project at Redington and just wind power and Bicknell's Thrush in general.
Q. Also, in your comments that were filed early May 2006 with respect to this project, you indicated that you were not requesting further field studies be conducted prior to construction; is that correct?
A. That's correct.
MR. THALER: If I could just ask a couple of questions of Ms. Morris.

EXAMINATION

(Of Ms. Morris)

BY MR. THALER:
Q. You also filed some comments in I think late April, early May; correct?
A. Yes, I believe so.
Q. In one set of the comments in late April I think concerning a particular species of bats and eastern small footed myotis -- I pronounced that correctly, I hope -- you felt that in regard to potential project impacts on this species, none are anticipated; is that correct?
A. Yes, that's correct.
Q. In part that has to do with the limited roosting habitats and higher elevations, as well as the general high wind conditions?

A. Yes.
Q. Also, in your May comments with respect to -- generally speaking with respect to the species of bats, roughly seven or eight, you said that, I guess again with respect to the same bat, there was not a lot of bat activity. Most activity appears to occur well below the rotor swept area. There does not appear to be any reason to suggest any changes in the development, is that correct?
A. That's correct, yes.
Q. Also, with respect to the northern bog lemming, you wrote that you thought that they, meaning the Applicant, have addressed issues related to northern bog lemmings pretty well in the revised plan.

They've moved towers out of the lemming habitat, and the rotors have been moved out as much as possible to the edge of their ownership.

Do you remember generally that comment?
A. Yes.
Q. Were you here today when there was testimony that there appears that they are going to be able to move the road even further away from the buffer area around the habitat?
A. Yes.
Q. Would that be an even greater security for ensuring no undue adverse impact?
A. Yes.

Q. I guess Mr. -- well, actually one more question for Mr. Hodgman.

EXAMINATION

(Of Mr. Hodgman)

BY MR. THALER:

Q. There's been some testimony earlier today about the type or radar studies you've done for birds on this Redington project over a number of years, as well as more recent studies done on the -- not file -- the Kibby project for TransCanada; is that generally correct?

A. Yes, as far as I'm aware.

Q. Is it true that in your opinion that the studies that this Applicant was asked to do at the time, you asked them to do it was done appropriately?

A. Yes, in fact I was the one to ask Woodlot Alternatives to do initial radar studies, and it's my understanding that at the time the options for determining vertical distribution of migrating birds was not on antenna array, a vertical mode, but from ceilometer studies, which I have very little faith in.

In a nutshell, simply using a large spotlight shined directly into the sky and counting them, essentially birds and bats, slash through that little cone of light as they're flying at night.

It's a needle in a haystack approach to counting and estimating height of migrating birds, and I didn't feel it was

worth the effort.

At the time, I guess having read the testimony from Maine Audubon, that there had been people somewhere doing vertically arranged radar to do that, but it was clear -- it was not clear to me that that technique had been -- had been developed.

It's clearly been an evolution, a strong evolution, over time of radar studies.

And now vertically arranged radar is state of the art, where at the time it never occurred to me -- and I'm confident that it never occurred to Mr. Roy or Mr. Pelletier.

MR. THALER: I just have one question for Mr. Rocque.

EXAMINATION

(Of Mr. Rocque)

BY MR. THALER:

Q. Mr. Rocque, I know you've answered some questions earlier and you've sort of been involved in your capacity as the State soil scientist with respect to this project for a number of years.

You've been up on site I assume?

A. Yes, I have.

Q. Based on your professional judgment and your experience with the site, all the work that you've seen and reviewed, to you feel that what the Applicant is proposing at this point will -- is the best and most feasible approach to minimizing

possible adverse impacts so that there won't be undue adverse impacts?

A. To the best of my ability, everything I've suggested has been agreed to by the Applicant, and it's the best that I know of that can be done in that terrain and environment.

MR. THALER: I have no further questions. Thank you Mr. Chair.

MS. SPENCER-FAMOUS: Just to clarify one point specific on that last question to you, Dave, specific to wetlands, do you feel like the Applicant has for the most part represented the wetlands adequately in balance or do you feel like there's a lot missing?

MR. ROCQUE: One of the major issues in my opinion with work in the mountains had to do with the hydrology, for those of you who have ready my comments of March 10th, you've seen that.

On the actual mountains themselves, I think other than the tops, it's going to be pretty unusual to find actually the wetlands, because in order for an area to be a wetland, there has to be stagnant water where the soil temperature's above the logic zero, which is 21 degrees Fahrenheit, so there's biologic activity, the oxygen is reduced, and then you get those chemical changes.

On mountainsides there's such a slope that there's water moving through that, and so it's generally oxygenated.

There are borings and some of the groundwater seeps where water was coming up in July and should have been a reduced condition in the soil and it wasn't.

So that's one of the issues with the actual wetlands.

At the base of the mountains where the topography flattens out can get restored, but on the mountains themselves, I don't think there's going to be a lot of true wetlands.

So I -- from what I've seen, I think that that was the biggest, reasonably well, but I can't say I walked all of the transmission lines, so I can't say that for certain.

MS. JACOBSON: Good afternoon. Maybe, Dave, I will pick up with you since you were talking about wetlands and road construction.

EXAMINATION

(Of Mr. Rocque)

BY MS. JACOBSON:

Q. You wrote a memo in May about your concerns about winter construction saying you would oppose winter construction; is that right?

A. That's right.

Q. Okay. And do you still stand by that May e-mail that you wrote to Marcia?

A. Yes, I'm still reluctant to agree to give my approval to constructing a road up in there in the middle of the winter.

Q. And why -- can you just elaborate a little bit on what is

the nature of your concerns?
A. There's a couple of issues, and one of them is my concern about reconnecting the hydrology. That's my biggest issue.
And identifying where those locations where you need to do the specific measures would be difficult to do in the winter. They could be identified perhaps ahead of time, but it would be difficult to do that in the winter.
And then there's just the conditions where it's very cold, the snow, the wind blowing, and you're trying to do some fine grading with soil that's not frozen and temperatures that are going to be way below freezing.
The structural issue with the road, as well as reconnect hydrology.
Q. On the hydrology piece, that's in part because the seeps were prevalent and they are not necessarily able to be identified during the winter; is that right?
A. Yes. Not just the seeps, but there's a lot of groundwater that's very shallow in the mountains.
It's either in the soil running along the hard pan, along the bedrock, or sometimes in a bouldery surface, and you may not see it but it's there, so that can be intercepted.
Then it has to be reconnected below there.
Q. So the idea is during winter construction if you're out in the field identifying, you need your toolbox approach as you start to go along trying to figure out what technique to use,

you night not even know what technique to use because you want be able to identify the hydrologically sensitive areas that you're talking about?

A. Yeah, it may be very difficult. For one thing, once it starts getting below freezing in the mountains, the water supplies may not be there, so we may not see the water unless there was somebody who was trained and really understood, and the ground may be frozen, too. It may be difficult to anticipate where those are.

Q. Okay. And in your experience, if you had to use this trap rock sandwich that the Applicant is talking about using in these situations where there's hydrology concern, would that significantly increase the cost of the project -- of the road construction portion of the project?

A. That would be -- I'm not an expert in what things cost but it would be my opinion that that would be an expensive measure to use extensively.

MS. JACOBSON: Thanks. That's all I have for you. Thank you.

Next, I guess, Karen Morris, if I could ask you a couple of questions.

EXAMINATION

(Of Ms. Morris)

BY MS. JACOBSON:

Q. I don't know if you heard Steve Pelletier earlier today

state that one cannot map the home range of northern bog lemming based on just one data point, in other words, you can't determine a home range of lemming annual cycle if the only information you have is one single location point for that lemming.

Do you agree with that statement?

A. You can't map the home range of that individual lemming, but you can take an educated assumption of where those lemmings are likely to be found based on habitat type.

Q. Isn't it possible, though, that even though the lemming is found in the wetland that it could potentially use areas outside the wetland for its other habitat needs?

A. Well, as far as I know, the only places they've been found have been in sphagnum-dominated wetlands.

MS. JACOBSON: Okay. Mr. Hodgman, I only have about 2 minutes left I think here.

EXAMINATION

(Of Mr. Hodgman)

BY MS. JACOBSON:

Q. I understand what you were saying earlier that basically when the Application was doing these studies nearly four years ago now that you weren't aware of the, I guess the importance, maybe, of altitudinal data; is that right?

A. I wouldn't say the importance. I would say the options, the technological options, the radar technology for doing it.

I'm no expert on radar, but when we asking questions regarding bird migration at the site, I think I suggested we use radar.

The Kenetech project had used a modified marine radar to do that and suggest Woodlot look into that, which they did.

Q. So you were really referring back to the Kibby project, the data which was in '94, so it would have been eight years before that, that same methodology was used; is that correct?

A. Yeah, in terms of radar, yes.

Q. So you weren't aware of studies that were done in the '90s by Cooper and Harmata that addressed the ability to take altitudinal data using vertical radar for avian studies then; is that what I'm --

A. Not until I attended -- no, I wasn't. I have in the past year or two or three. Working with Woodlot on other projects I have.

Q. And you're also part of the stakeholder group on wind power?

A. That's correct.

Q. As part of that process, that group is to come up with some protocols for current avian studies that are in draft form still, but nevertheless, they've agreed on some basic principles or recommendations for avian studies that are performed today; is that right?

A. That's right.

Q. And those include taking altitudinal data for birds so you know whether the bird will be in the rotor-swept area; is that right?
A. That's right.
Q. Okay. And also that those recommendations involve placing the radar on top of the mountain so that you can then measure the area where the wind turbines will be?
A. That is right.
Q. And also the recommendation is that the studies must adjust the data to eliminate the number of insects so that you know how many birds and bats you have versus the number of insects?
A. That's correct. Those are all state-of-the-art techniques that I would not be comfortable recommending to either -- providing a recommendation from my agency to either DEP or to LURC via Marcia that if those weren't addressed on any project or from this point on, but at the time those really weren't -- I wasn't aware of them. It's a timing issue.
Q. And whether it's acceptable in a current permitting process to use data that's almost four years old I guess.
Are you familiar with the Maine Comprehensive Wildlife Strategy?
A. Indeed I am.
Q. Are you the author of that document in part?
A. I am not the author of that document. I did help in many

ways in preparing it, but I did not write it, no.
Q. Does that document list both wind power development and the construction of permanent roads as a threat to mountaintop forests and specifically to Bicknell's Thrush habitat?
A. The reference to that would have come from a meeting held in Rockland in I believe December of 2003 where a set of threats were developed for all priority birds that occur in what we refer to as the Atlantic northern forest region, which Redington would be.

That workshop, those breakout sessions were essentially a brainstorming of what people thought were threats at that time, and certainly many of them are still pertinent today.

That information was then ultimately folded in to the comprehensive wildlife conservation strategies; so yes, I'm aware that that's in there, but that's, in a nutshell, that's where that information came from.

It's not like I sat down and wrote that one day and then today I'm testifying differently.

It's a little bit out of content.
Q. I just wanted to establish, though, that the document states that wind power projects are a potential threat to mountaintop forests and the Bicknell's Thrush habitat.

I'm not hearing yet that it says that. You just don't want to be considered the author of that statement?

A. That's correct.

MS. JACOBSON: I have no further questions. Thank you.

THE CHAIR: Any other members of the Commission of any questions here?

I guess you folks are off the hook. Thank you for coming and being here.

PARTICIPANT: Mr. Chairman, members of the Commission, I would like to present witnesses for Conservation Law Foundation, Dr. Colin High and Seth Kaplan.

DR. HIGH: Thank you. I will present a verbal summary of my testimony.

I have prepared a technical report of the voided emissions from the Redington Wind Farm, which, in the past to my testimony, Avoided Air Emissions from Electric Power Generation at the Redington Wind Farm.

DR. HIGH: This provides, I think, all the technical information that you may require. I would like to first of all tell you a little bit about the form of analysis that was used because I think it would help clarify a number of issues that have arisen in this case.

First of all, I think we need to understand the determination of avoided emissions from wind power plants. That is not an exact science, but it's one which has made a number of leaps forward in the last two or three years as many

jurisdictions throughout the country, states have regional gas initiatives, state gas -- greenhouse gas initiatives and other projects and also particularly the need to meet NOX emission reductions under the Clean Air Act, particularly the NOX CYPCOL. These are concerns for states south of here, in southern New England states, and in the mid Atlantic states.

As a result, because wind energy efficiency can become very important strategies in all states for reducing air emissions, and they are now generally accepted as an important resource for reducing air emissions, and also, of course, including the reduction of greenhouse gas emissions, ultimately carbon dioxide of course.

The methods which I used are typically described as a dispatched analysis or more exactly a generation matched analysis.

In this what we have done is take the hour-by-hour generation of all of those power plants in the New England power pool, also known as the New England ISO, which are variably dispatched, meaning they can be dispatched to meet change of demands, and for all practical purposes these are all fossil fuel plants -- coal, gas, and oil.

What we have done is to take the hour-by-hour projected generation of the Redington Wind Farm based on its meteorological data, which was provided to us by the Applicants, and matched that against the generation which was

occurring on the New England grid from variably dispatched hour by hour.

This first slide here shows you the average monthly match against power plants by their fuel type. What you can see is, of course, of most of the year -- in fact all of the year -- the larger signal match is against gas, natural gas, and then the next large matches, in some cases it's oil and in other cases against coal. This varies by month, and it's the summary of the hour-by-hour match that we find.

So this substantiates the well established point that in general the Redington Wind Farm will displace or will be matched on a time basis against predominantly natural gas and then oil and coal.

This shows you the hourly emission right in pounds per megawatt hour for NOX -- that's nitrogen oxide -- sulfur dioxide and carbon dioxide.

As you can see, that changes dramatically hour by hour, that trough there is power average, and you can see it also has some NOX seasonality. And one of the reasons it was summer, it's a little lower for NOX and $SO_2$ is because those pollutants are regulated under a Cap and Trade program in New England power.

Thank you.

When you take the match of those power plants against the projected generation of the Redington Wind Farm, you can

then calculate what the actual -- what the hour-by-hour emission rates are for those three, and then we have summarized those on an annual and seasonal basis in these next two tables.

Just flip to the right chart because with my reading glasses on I'm afraid I can't read what's up there.

In Table 2 you see the average annual avoided emission rates from the Redington Wind Farm in pounds of megawatt power of generation and you see what those numbers are.

I will just tell you that they are a little higher but quite close to an independent evaluation made for -- by the New England Power Pool for what they call the marginal emission rates, and those are the numbers I believe which Mr. Harnisch has used also.

So those numbers are a little higher but generally in the same ballpark a these NEPOOL numbers.

And then in Table 3 you see the total annual avoided emissions from the Redington wind plant, and I have estimated 93.6 tons of nitrogen oxides, 401 tons of sulfur dioxide, and 149,381 tons of $CO_2$.

You'll notice in some of the other presentations on the subject they've used total avoided emissions adding the NOX, the $SO_{2,}$ and the $CO_2$ together.

I would have to say that it's much better to distinguish them separately because each of them has their

specific characteristics and their importance.

Nitrogen oxide and sulfur dioxide are both regulated pollutants. Under the Clean Air Act, as everybody knows, they contribute to acid precipitation, a significant problem in this part of the world, and in addition they contribute, in the case of NOX, to the ozone problem, which is wide spread throughout northeast states, including on some occasions in Maine, and $SO_2$ and NOX together cause some part of the regional haze problem and some part of the particulate problem. $CO_2$, as everybody knows, is the major and most serious greenhouse gas, which is of special concern I think to us all.

So this is what I have done, and I was posing forward as reasonably comprehensive and as accurate as we can get estimate of the emission rates and total emissions at the present time.

The method which I used is also the method that my firm has used and some of my colleagues working with the DOE and The National Renewable Energy have also used in a number of other states including Maryland, New Jersey, Connecticut, and Virginia, all of which have used methods similar to this for establishing the avoided emission rates in order to provide credit incentives of other public policy actions with respect to the air emission reductions from wind and other renewable forms of energy.

That concludes my summary.

MR. KAPLAN: My name is Seth Kaplan, and I'm the director of the Conservation Law Foundation's Clean Energy and Climate Change program. I'll speak very quickly, very briefly.

The purpose of putting this slide up here, which is Chart 4 in the direct testimony, is drawn from academic work regarding the impact of global warming on forests of New England.

It's very interesting -- actually, the US Forest Services researchers, who have done tremendous work from 1991 to 2001, froze in 2001, and one suspects it had something to do with the change in administration in Washington, but this is still the best look at the impacts of global warming on the forests in New England. Just to put into context, the one in the upper left-hand corner, which is current FIA, is the Federal view of current forests, types of tree cover.

The light blue dominating eastern Maine is spruce and fir, and the red, that dominates much of New England, is the traditional maple/birch that we all know so well.

And then the other two are different scenarios. The CCC scenario is based on the global climate level maintained by the Canadian government. The one at the bottom, the Hadley scenario, is based on the global climate model maintained in England by the universities there as one of the best respected climate models.

And it just illustrates, I think --- based on -- I

just want put in context here, I think there has been some underlying sentiments present at this hearing that I try to dispel in direct testimony that there is a tension between attacking the larger problem of $CO_2$ and global and local resource protection.

I would strongly submit that this reality that we're staring in the face here tells us that this is a false dichotomy.

The largest single threat to the forest and the magnificent mountains that this Commission is the steward of is in fact this global warming. It is incumbent on the Commission to know to deal with such threats using whatever tools you have available to you. I know this Commission has fewer tools to deal with it than the United States Federal government, but you've got some.

As I discuss in the direct testimony, I have had the misfortune of being exposed to a great number of the academic and exercises in trying to figure out what variety of tools will be needed to stabilize the climate.

I discuss at length one of the best known, which is the analysis Doctors Pakulov and Sokolov from Princeton -- Dan Schrag at Hartford is doing similar work -- and every one of those analyses -- I talk at length about the Pakulov and Sokolov one -- comes to the conclusion that amongst the tools we need is a tremendous amount of zero emissions, renewable

energy generation, and that the only technology that we have in the toolbox right now that can produce in those kinds of amounts is wind power.

When we crunch the numbers, you've heard direct testimony in terms of looking at what that means for New England, it means thousands of megawatts, and I think there is relative little dispute about that.

This means that rather than -- and as I lawyer I'm very open to the way that an adversarial process can help us arrive at truth -- I would suggest that what we need rather than an adversarial process is a collaborative process to figure out not if a project of this size, scale can be built in a place with wind resource, but how, because we need to build a lot of them if we are going to deal with it.

These and a lot of other things. In other rooms I'm talking about efficiency and saying something very, very similar about the challenge of efficiency.

But in this room, the tool that is at issue and the tool that this Commission has available to it is siting permitting of wind power.

As Mr. Didisheim actually discussed in his cross-examination earlier, we have a paradigm in New England that we have been as of yet unable to permit projects of this size, scale, and type and that in fact is a problem.

I would just note for the record that CLF is a party

to the East Haven proceeding that was mentioned earlier. I'm happy to answer any questions anyone has about that, about that pilot project, that very small pilot, which is intended to be a much larger project, but also deeply involved in the Cape Wind process, and if anybody wants to know about the works on the Beacon Hill Institute economic study, I'm happy to discuss it.

I would also note, as I mentioned in the direct testimony, I'm a member of ISO New England's planning advisory committee, and the next system plan that's in development right now, looking at the draft, the e-mail came in yesterday -- two of the topics that are greatly discussed in there are how to build a system that can handle the kinds of renewable energy -- wind power -- that are contemplated by the new portfolio standard, and dealing with the north/south bottleneck, the interchange at the Maine/New Hampshire border.

So those are topics that are being heavily discussed in the dynamic process that defines transmission thought process.

Finally, I just want to address the thought -- I tried to in direct testimony, the written direct testimony -- if it doesn't get built here, it will get built someplace else.

As has been pointed out, among other place, the testimony the Natural Resources Council of Maine of their economic expert, right now the renewable portfolio standard of Massachusetts is being met through alternative compliance

payments. That is, there is not enough renewable power to meet the mandate, there's a shortage.

I've often presented this in terms of an analogy about a polluted lake and that applies generally to the issues of greenhouse gas emission, that we have an enormous problem being caused from lots and lots of places, and we need to begin telling everybody, not just the big hotels that are pouring pollution into the lake, not to the factory, but the little houses, the small contributors, that they need to take action to address this enormous problem, and we need to start figuring out how we can address it.

On both sides of the coin, in terms of the actual greenhouse gas emissions and in terms of getting the kinds of projects we need to get built in order to address that problem, we're facing what is known as the tragedy of the commons, that we all are moving towards a larger mandate but we are unable to take the individual steps needed to reach that mandate.

Our point today to you is in making a decision, it is very, very important to ask the question, What step can be taken in this, and in all other proceedings, to move towards meeting that mandate that the legislature has put in front of you as discussed in the statute that we have cited in the testimony, and that is an imperative before us all.

THE CHAIR: Thank you very much. Does the Commission have any questions?

MS. KURTZ: I have a question. When you add up all the funds, 149,875, what is the ultimate emissions of all sources for the entire year? I'm just wondering what percent of all the emissions the 149,000 tons represent within Maine. I think all the graphics we saw was Maine.

What percentage is 100 -- I mean, it sounds like a huge number, 149,000 tons. Is it 1 percent of all the emissions created in a year?

DR. HIGH: I'm sorry that I don't know the answer. It's quite a small percentage of the total.

Redington on its own will not solve the greenhouse gas problem, but it is an important step along with the construction of many, many, many other wind plants all across the country that will be needed for us to get our greenhouse gas emissions down.

So it's a small number. It won't solve the problem on its own.

MR. WIGHT: Thank you very much.

THE CHAIR: Thank you. Does anybody -- Mr. Plouffe or Mr. Thaler. Jeff No. 2.

EXAMINATION

(Of Dr. High)

BY MR. THALER:

Q. Dr. High, I had some troubles with your numbers so I tried to put them into context of something that I see like when I

think about losing 5 pounds, I think of it like a bag of sugar that I'm carrying around my stomach so I can visualize a bag of sugar.

But 149,381 tons of $CO_2$ a year, would you agree, is about 300 millions pounds per year, 2,000 times --

A. Yes.

Q. So roughly 230 pounds per Maine person, so if I think about carrying 230 pounds of $CO_2$ around, is that how much your calculations, your study, independently suggest would be displaced each year?

A. If you've got the math right, yes.

Q. Let me just make one observation, then. Burning a gallon of gasoline in a car, for example, produces 20 pounds of carbon dioxide.

If you want to -- if you want to do something a little scary, you can calculate the fuel economy of your car times how many miles you drive per year, that's how many pounds of $CO_2$ your vehicle has put into the air.

I think that's what you're looking for is that kind of an output.

PARTICIPANT: I'm too tired to go quite that far yet.

DR. HIGH: Six tons per car per year is the average for the American automobile. That -- if you travel it's a little worse.

BY MR. THALER:

Q. Mr. Kaplan, you said that you know something about the study, the Beacon Hill economic study on tourism that Ms. Hagerstrom was questioned about earlier.

I'm guessing that that was a study of not an existing wind farm but a possible wind farm; is that right?

A. That's a study of the proposed Cape wind project. I'll also fully disclose that my wife teaches at Suffolk University Law School and David Tuerck and the other staff of Beacon Hill Institute are faculty in the economics department at Suffolk, but the Beacon Hill Institute they do theoretically on their own time.

The study was financed by the Egan Family Foundation, the AMC Corporation. AMC are strong opponents of the Cape wind project. The raw data for that study was drawn by one telephone poll.

I personally know several people who were reached in that poll who took issue with the way it was conducted.

The result of the study was to find a -- go back to the initial numbers -- but it was -- I can say with certainty it was less than 1 percent impact on tourism on Cape Cod and the reason they came back with large dollar numbers is because there is so much tourism on Cape Cod.

I would also note that the Beacon Hill Institute is on record as finding such other things, as investment in public schools does not have a positive impact on the local economy.

That's from a study they did for the State of Alabama.

So there are a number of things that one could say about that study.

MR. THALER: I won't go any further.

I do have a couple of exhibits I'm going to mark and show Mr. Kaplan. I guess I should ask Marcia or Mr. Pidot, do I need to offer and mark the PowerPoint that we gave out this morning that were summaries?

MS. SPENCER-FAMOUS: I entered them into the file as Exhibit 11-A.

MR. THALER: So if I'm offering exhibits now, what should I do, 1, 2, 3?

MS. SPENCER-FAMOUS: I could go 11-A-1 with that.

MR. WIGHT: Let her number them.

EXAMINATION

(Of Mr. Kaplan)

BY MR. THALER:

Q. Mr. Kaplan, your prefiled testimony talks specifically starting around Page 6 about global warming impacts on Maine, and you also reference a number of studies in here?

Is it safe to say that some of the impacts of global warming that studies are showing would include things such as adverse impacts not only on the forest in terms of diseases but also wild fires, things like that, increasing?

A. Yes. As a matter of fact, in some of the studies of wild

fires, additional work has been done, just been published, in the last month or so, and I thought that it was frankly insulting to the Commission to make the point that a radical change in the tree species would cause a radical change in all other plant and animal species in the forests. I thought that was strongly implied in the changing tree species.

You asked the question, I'll answer yes.

Q. Thank you. The other general area, is it true -- this is something I hadn't been personally fully aware of until recently -- is that with respect to global warming and the increase of carbon dioxide in our atmosphere is having an adverse impact upon our oceans?

A. Yeah, as a matter of fact, we're about to publish a report on that probably next month.

Basically if you're a fish, the geography of your world is defined by the ocean currents, and there is a lot of work -- I would refer specifically to the work of the Arctic Climate Impact Assessment that's referenced several times in the direct testimony -- that the effect of global warming is to radically change those ocean currents in ways that we frankly don't completely understand but very likely to have a tremendous change particularly on things like the gulf stream that define the circulation around the Gulf of Maine and what our fisheries people refer to as regional seas.

Q. Is it true that one of these effects of these increased

carbon dioxide emissions and the calcification of the ocean is what appears to be the slow dying or death of things like coral and sea life that tries to grows shells because of calcification issues.

A. That's an area that I don't pretend to have expertise. There are many, many studies documenting the impact of global warming, particularly coral seems to be those studies saying that there is combination of increased temperatures and calcification, but I have to stop there. It's well beyond my expertise.

Q. I'll offer and identify for the record -- and I have copies for the Commission and parties -- three articles, one a study by NOAA, National Oceanic Atmospheric Administration, on carbon dioxide, and Ocean Legacy, a Washington Post story in July of 2006 reporting studies of growing acidity of oceans, and the third is a Portland Press Herald article of two weeks ago reporting a study on Warming and Wild Fires.

These are topics that at least you referenced in your testimony; correct?

A. Yes.

MR. THALER: Mr. Chairman, I'll pass these out. There will just be a set of three, and then I've completed my questions.

Whoever has their next set of questions can come up if they want while I'm passing them to staff.

THE CHAIR: Mr. Plouffe, do you some questions?

EXAMINATION

(Of Mr. Kaplan)

BY MR. PLOUFFE:

Q. Mr. Kaplan, did the Conservation Law Foundation look at the Redington project with respect to its potential impacts on wildlife habitat?

A. It is not -- the answer actually is no, in terms of an in-depth look in the way that we address these things in terms of filing comments.

Q. How about water quality, impacts on water quality?

A. I haven't asked the people who do that work to take a look at it.

Q. Did you look at anything other than your analysis of the contribution of this project to reduction in fossil fuel burning?

A. I have asked the other folks who do the work that you referenced to take a look at it, largely because I felt that there was a robust record on the subject and sufficient expertise and justification and we have the resources to do that considering the state of the record here from all sides.

Q. So the short answer to my question is you just looked at the potential reduction in fossil fuel burning?

A. I did that because -- yes, and I did that because it was clear to me that the record was very well developed with great

expertise from many different points of view on the subject, and I didn't feel we added anything.

We have a limited staff with limited funding and asking them to do something that others were doing seemed duplicative.

Q. So your position is not, I guess, to support this project at this location no matter what. It's just you're telling the Commission that you looked at the fossil fuel avoidance issue?

A. We are here, as we stated to the Commission in terms of our status here, we are here as neutral, we are here stating that we strongly believe that the factors that we've stated should be a very important part of the decision making process, and it needs to be emphasized in the decision making process.

However, as we state correctly, yes, we do not believe the project should -- that all wind projects should happen at all places at all times, that there needs to be thought given to -- in the process.

We are simply stating what we believe to be an extremely strong element of that decision making process that we wish to emphasize.

EXAMINATION

(Of Dr. High)

BY MR. PLOUFFE:

Q. Did I understand you to say that Maine Mountain Power shared with you the meteorological data of Mr. Neidmeyer,

meteorologist?
A. No; shared with me information concerning the generation -- the patent generation, which a based upon meteorology.
Q. They didn't give you the meteorological report?
A. No.
MR. PLOUFFE: Thank you. That's all I have.
THE CHAIR: Are there any other intervenors that want to question these witnesses? Peter Didisheim.
MR. DIDISHEIM: I just have a couple of very quick questions.

EXAMINATION

(Of Dr. High)

BY MR. DIDISHEIM:
Q. Colin, if I understand your testimony correctly, I would assume that you would include that if a 54-megawatt project were built in this project area, you believe it would have significant air emission benefits?
A. Are you referring to part of the --
Q. Yes. If the project were permitted to 54 megawatts in this area, do you believe that would have significant air quality benefits?
A. The emissions benefits are directly proportional to the generation. So to the extent that a smaller project would have smaller air emissions benefits, but all wind projects have air

emission benefits.

I think 54 megawatts would have proportional benefits and they would be significant.

Q. You travelled over here from Vermont today?

A. I travelled from my home in New Hampshire.

Q. Are there any projects in Vermont that are as large as 54 megawatts that are currently are in the permitting process?

A. Not that I know of.

MR. DIDISHEIM: Seth, let me ask you a question quickly.

EXAMINATION

(Of Mr. Kaplan)

BY MR. DIDISHEIM:

Q. The Conservation Law Foundation has followed New England wind power projects in your organization as I'm aware and you've been involved as an advocate.

Would it be preferable to Conservation Law Foundation to have a 54-megawatt project in this area over nothing?

A. I mean, of course building something that has benefit is preferable to nothing that does not have benefit.

It's a pretty simply calculation.

Q. You have followed many projects that have been denied recently in the permitting process or the developer has pulled out in New England, so wouldn't you assume that a 54-megawatt project would be a pretty significant development if it was

permitted in New England -- in the interior Maine mountains in New England?

A. Well, the projects that we spend the most time on are significantly larger than this project.

Q. And they're not in the mountains?

A. They are indeed, yes, they are not in the mountains. It is the nature of energy development in the United States over the last 60-some-odd years that they are by and large built by private entities.

So it is necessary to -- within that system -- to work with places where a private entity has some degree of site control and has actually proposed a project.

And yes, the project that we are working with the greatest involvement are our mountain projects; however, I would also note that the East Haven project, as I noted earlier, was intended to be a pilot project for a much larger project, and the outcome there is unfortunate, and I would characterize the trend that you are relying on here that nothing of this size has been built as an unfortunate one, not a manifestation of the will of God or any such thing.

MR. DIDISHEIM: That's all I have.

THE CHAIR: Mr. Trafton.

MR. TRAFTON: Dain Trafton, Friends of the Western Mountains.

EXAMINATION

(Of Mr. Kaplan)

BY MR. TRAFTON:

Q. Mr. Kaplan, I hadn't seen in your testimony any reflections on the Beacon Hill study, but you apparently made some that I just caught as I came in.

THE CHAIR: Get right up there because I'm having a hard time hearing.

BY MR. TRAFTON:

Q. I hadn't seen any comments on the Beacon Hill study in your testimony. I expected to question you.

Since you made some impromptu, I would like to say this: Would you agree that it's rather hard to find any studies whose providence or whose financial support is without some question of bias?

A. I think accusations of bias can be raised in nearly any context. In that case --

Q. Okay, you've answered the question.

When one raises accusations in accordance with one's own prejudices rather typically, wouldn't you agree that the final test of a study is to examine its methodology and to determine whatever the problem it's for, that its methodology seems to be balanced and sound or not?

A. I think the answer to that was implicit in my main response to the question about that study, was to discuss the data source that it drew upon and the fact that it -- in fact,

the conclusion that it's based upon is that the economic impact of tourism on Cape Cod would be on the edge of statistical significance and that the dollar numbers --

Q. Thank you, that's enough. I don't have much time.

In this case it might seem to show that very small changes, percentages actually lead to rather significant dollar amounts.

I would like to question Dr. High.

EXAMINATION

(Of Dr. High)

BY MR. TRAFTON:

Q. You provide, in your testimony, Dr. High, avoided emission estimate which involves multiplying the estimated hourly output of the plant by a time matched and generation weighted average emission rate for the entire New England power pool; is that correct?

A. Matched power to output, yes.

Q. When a renewable power plant is brought on line, does it displace all existing fossil fuel generation proportionately or does it displace the highest marginal costs power units in the dispatch order?

A. Would you be specific about the renewable fuel generation?

Q. Wind.

A. Okay. It displaces that part of the load, which is able to respond quickly, and it displaces that generation, which is

able to respond quickly because it is not -- wind is not predictable, so it displaces what is on the power grid at that time.

To the extent that anybody could foresee wind coming on a particular time, it might displace the most expensive pour -- called marginal rate -- but I don't believe the way the system is actually operating that that is the case.

Q. Well, if it does require to displace power, which can react quickly and thus react to the instability of wind, then isn't what one needs in order to determine what the actual effect of a particular wind plant would be quite specific study of the areas in which the wind plant is located, the various aspects of the grid, into which this wind power has to go, including questions of congestion, so as to know precisely how a particular wind plant will react?

Isn't that true that this is the only way to really know what is going to happen?

A. That isn't the only way of knowing what is going to happen. It's also very difficult to do if you wanted to because the decision might be quite transient.

I assume that you're alluding to the fact that there may be congestion on this line and/or there may be congestion between Maine and the rest of New England at some times, and that may be true and it may affect it to some degree but not to any large degree.

There is a fairly well established practice called taking the average throughout the power market that has been the way of making this estimation.

Q. I know it's an established practice, but I think your own testimony and answers to these questions suggest that as an established practice it's quite an inaccurate one.

Are you aware --

A. I --

Q. I ask you questions. I'm the one who has to conduct this.

You used a New England average. Are you aware that the emissions rates that you used employing the New England average are in fact 12 percent higher than the emission rates given for Maine in the ISO New England report?

A. First of all, I do not agree with your characterization of my answer.

Second, I'm aware that there are differences between the New England ISO estimated margin emission rate data and mine. It is lower and that's because it's calculated in a slightly different way.

I don't -- I don't want to say that the New England ISO's marginal numbers are inaccurate; I just believe that mine are better and that whichever of those numbers you take, you still get a fairly large -- a very large and quite significant air emission reductions for NOX sulfur oxides.

Q. One which is based on averages, not on actual analysis?

THE CHAIR: Dain, we're done.

MR. TRAFTON: I'm done. Thank you.

THE CHAIR: Is there anybody else? Okay. Thank you very much. I appreciate your testimony.

We've got about 20 minutes to go until 5 o'clock, and we've got to kind of take a break because we really have an obligation to be back here at 6 ready to roll.

I think that NRCM, what can you -- I'd like you to do whatever you can do in the next 20 minutes, and then we'll have to pick it up afterwards.

You can be the hero of the day if you can get it all done between now and 5 o'clock since you've quite a bit to say.

I think we know what your case is.

MR. DIDISHEIM: I am going to use some slides. I don't know if those are going to be set up or not.

I'm Peter Didisheim. I'm the executive director for the Natural Resources Council of Maine, and with me today as an expert testifier, Jonathan Winer, of Kaplan and Associates, will be speaking about the viability of the Black Nubble-only option.

You have a very difficult job; we have a difficult job. Not just those of us in the room today involved in this proceeding, but the State of Maine.

We're being asked by the Applicant to allow a very large wind farm by New England standards to be built in one of

the most scenic areas not just in Maine and not just in New England, in the entire eastern United States along the entire Appalachian Trail corridor.

As we've seen over the last 24 hours and will find out further over the next 24 hours, there are very strong arguments and passions on both sides of this issue, and both sides have valid claims: We do face an imperative to reduce our dependence on fossil fuel and to do our share in responding to the threat of global warming.

We also have a responsibility to protect parts of the natural world with special values, places like Redington Pond Range and the mountains behind us.

The stage is set for an all-or-nothing battle that NRCM does not believe that the only viable outcome in this proceeding is for one side to win and the other side to lose. We actually think that's the worst outcome.

NRCM believes that a compromised solution is available. It would involve only building 18 turbines on Black Nubble and placing Redington into permanent protection as mitigation for development.

A 54-megawatt project would be a very significant renewable energy project. It would be one of the largest wind power projects in New England.

As stated in our prefiled testimony, we conclude that the Applicant has failed to demonstrate that the proposed

project would have no undue adverse impact on existing uses.

A project like this is going to have very significant impacts. It is not correct to say that putting turbines on these mountains will be as beautiful as what nature has provided. The impact will be striking to people who see it.

We also conclude that the Applicant has failed to demonstrate that the proposed project utilizes the best reasonably available site for the proposed purpose.

I believe that in our cross-examination we have helped to show and establish for the record that a project confined to Black Nubble would result in significant reductions in visual and environmental impacts, and we believe that the Applicant has established that for the record, while also providing significant clean air benefits.

If I can switch to slides, I would like to do that.

This chart shows that Redington is one of the highest peaks in Maine. It's the only mountain, Redington Pond Range, above 4,000 feet in elevation that is not currently protected other than the top of Sugarloaf Mountain.

We believe that the resource values associated with Redington Pond Range make it one of the most deserving of protection, and we believe that the line needs to be drawn somewhere within Maine's mountains about which peaks wind power can go on and which ones they are not going to go on. We believe that it's important to set the precedent that Redington

Pond Range is one that is not appropriate for wind power.

We believe that Black Nubble project, however, does provide the best reasonably available siting. It would have reduced adverse impact in many ways: Reduced road building, reduce habitat fragmentation, reduce impact on the roadless corridor, reduce visual impacts, reduce impact on remote resource values, and reduce proximity to the Appalachian Trail.

If combined with mitigation of protecting Redington Pond Range, we believe the outcome would be a very significant and meaningful result for the state of Maine.

This map shows where the 30 turbines are located. You can see in the center where Redington's turbines, those 12 turbines, are much closer to the Appalachian Trail. They're higher elevation.

This chart augments that. You can see that the distance to the AT for each of the 12 turbines on the left side of this is between 1 mile and 1.95 miles.

The nearest point to the Appalachian Trail for the Black Nubble turbines is from 3.3 miles down to 4 miles.

As our testimony also describes, from most visual sites along the AT, we believe the impact will be significantly reduced as a result of reducing cutting this turbine project back.

The Black Nubble Mountain, we believe, is over on the fringe of the Bicknell's Thrush habitat. It is the mapped

image here.

In this map -- in this chart we show all of the wind power projects currently being pursued in New England. We include the far-to-right Redington/Black Nubble, the Applicant's proposal, and another project that may be coming.

The yellow is a 54-megawatt Black Nubble project, which is larger than all of the mountain -- all of the projects that currently are being pursued, perhaps other than Cape Wind, which we believe is.

The yellow would be a 54-megawatt Black Nubble project in comparison to Maine's hydro power dams. Maine has 102 hydro dams. Ninety-five percent of them generate less power than a 54-megawatt Black Nubble-only project would generate.

The challenge before us is that Maine does need both clean power and protection of our remote resource values. We believe that progress towards both goals is possible through a compromise.

What has been proposed we believe is too big for this landscape. It's asking Maine people to sacrifice too much in exchange.

We think a compromise is available. We commend what Seth Kaplan just mentioned about a collaborative to try to get to the right solution for this problem. And all or nothing, we do not believe, is the right outcome.

We hired an independent consultant to do a financial feasibility assessment for us of the Black Nubble. I'll pass it on to Jonathan Winer.

MR. WINER: Thank you. My name is Jonathan Winer. I work at Kaplan Associates down in Boston. We're a 20-person energy consulting firm with our focus on energy markets and a special focus on renewable energy markets, electric resource planning, energy procurement, and project-specific analysis.

Our work is in fact very objective. We have worked with developers, we work with utilities, we've worked for potential investors in projects sizing them up, and we do work for regulatory agencies, and this work is basically across the country and it includes work in Canada and in fact some other countries.

We were engaged by NRCM with a question and it was a very open-ended question. Can a 54-megawatt project work financially.

No prejudgment was applied. We were asked our opinion with the idea that if we came back with an answer no, that would influence how the Council would look at it. But there is nothing -- no specific instructions other than to do our best job with the information available.

And the second question we were asked was, well, if it is feasible, how would a 54-megawatt project impact or fit in with the renewable policies of various states including

Maine?

The answers that we came back with are that a 54-megawatt project does have potential to be financially feasible and that the 54-megawatt project will be a significant addition to the region's renewable resources.

Since the explanation of the financial feasibility is a little bit more involved, I would like to just summarize how we reached conclusion No. 2, a few observations on how a 54-megawatt Black Nubble project would fit in to the New England demand.

Basically, Maine and other New England states as a whole have consistently promoted renewable energy, and recent developments have accelerated that.

There's material on Pages 9 and 10 of my testimony, which I show how this is developed, with major demands coming from Massachusetts, Connecticut, and Rhode Island as that State's renewable portfolio standard unfolds.

If you look at the graph on Page 10 of my testimony, you'll see that I don't have any slide in there for Maine. The way we were looking at it at the time we were starting to prepare this was that the existing Maine renewable portfolio standard at that time was fully subscribed by existing projects.

However, as you're all aware, recent legislation has set a goal of adding 10 percent new renewables by 2017 and has

put in place a mechanism that has potential for achieving that goal. And when you look at all that, I would just add, too, the demand is out there for renewable resources in New England, so a 54-megawatt wind project on Black Nubble would take a nice step towards meeting that.

Now to a more detailed discussion in Question 1. Is a 54-megawatt project economically viable on Black Nubble.

As I said earlier, we do conclude that it's feasible.

In order to get there, I would like to explain steps we took to reach our conclusion.

First, ideally we would have looked at the details of the spreadsheets of the developer but those are proprietary and we elected not to go that way because there is enough information in the public record that we could construct an approximate view of the project.

So we took that information that was available, basically accepted it without challenge initially, and then applied our knowledge to fill in some of the missing points.

When we filled those in and ran this in our wind model, which we've applied in many different circumstances around the US, we came out with answers that were consistent with other numbers that were provided by the Applicant in terms of tests that we don't normally look to, which is the accounting income, the book income.

So we thought that our model was close. It's

definitely not the exact model that the Applicant is running, but it is very close.

We then took that model and applied the data that focused on 54 megawatts, and we started looking at how that project would work out, again using input from materials supplied by Applicant.

We found the results from that were acceptable in many ways. It's clear that the economics of the 90-megawatt project as a developer are far superior, but there are ways to look at the 54-megawatt project and make it, at least as I would call it, feasible.

Prefiled testimony that I presented explains many of the details, but I do want to clarify a couple of items that have come up several times in discussion this morning as to how my presentation applied to various numbers available for achieving our revenue expectations for the project.

You may recall that there's three components that we've been talking about. There's the energy revenue, the dollars per megawatt hour, the cents per kilowatt hour. There's a value to that project for producing and delivering energy at the Bigelow substation.

There's also what we call a TASKY value, that instantaneous capability in terms of kilowatt or megawatts, and I'll explain a little bit about that in a moment.

Then there is this concept that we've been talking

about calls RECs, renewable energy certificates, and those are the way in which our compliance with the renewable portfolio requirements. That's how that's tracked. They can also be used for other mechanisms as well. That's the primary way of doing it.

So there has been some confusion as to what do these numbers mean, did the AIRIS analysis just look at short-term numbers and create something that is perhaps out of line of long-term expectations.

I'd like to explain why that's not actually what we did. I think it is in my testimony.

We basically did not limit ourselves to short-term data, although we referenced it by way of context so you would understand where we were coming from.

On the energy, we looked at the last two years' worth of actual short-term delivered cost data or the energy price data at Bigelow substation.

We then applied market conditions, futures market analysis for gas prices on the New York Mercantile Exchange. Those go out to the year 2011.

We adjusted that pricing and applied that to the clearing prices that we were seeing at Bigelow based on the gas prices that applied retroactively for the two years, and that produced a forecast of prices through 2011 of between 59 and $69 a megawatt hour.

You may recall my testimony, we talked about a range of 55 to 65. We used that lower number because we reduce the bias downward over time, and we stuck with $59 a megawatt hour, which was the below the point of the next four years, as the basic starting point for our comparison to see was it feasible. Not that it's definitively going to happen, but is it feasible.

On the REC side, as I mentioned, in the last few years the major driver of REC prices in New England has been Massachusetts. The prices in the short-term market are clearing over $50 a megawatt hour, 5 cents a kilowatt hour.

We didn't use that number other than by way of context because we know that the longer term deals being done are showing clearing prices in the $20 per megawatt hour or slightly higher.

There aren't that many of those deals done separately, but we are privy to some information, public information, that I can talk about here.

We actually expected a range in the chart that I have, I think it's on Page 8. We used both 15 and $25. It's much harder to forecast for REC prices. It's a newer market and it's a very shallow market, but there's a very high demand. And in fact, as I say, if you had RECs available today from this project, you could sell them short them in Massachusetts, that they're worth over $50.

On capacity we were driven by a schedule that came

out in the most recent -- a very recent ruling in June from the Federal Energy Regulatory Commission that specifies approval of a settlement and includes rates for capacity pricing into 2010; and as you'll see on the table on Page 8, I show 5 and $10 pricing in low and high REC expectation scenarios.

We translated the settlement approved by FERC and translated that into a dollars-per-megawatt hour basis to come up with that range.

When we took those numbers together, as you can see, in the high REC expectation, we ended up with revenues that would exceed the revenue requirement as accepted from the numbers we got from the Applicant. The lower expectation comes up short.

So the range is there. It could be done. This is accepting all the cost information that we were provided.

So we then took a look at that and said, well, gee, if the Applicant gets an approved site for 54 megawatts and sees neither of these middle two revenue stream possibilities, the Applicant should have incentive to figure out a way to get there if possible.

We then looked and said, are there any ways -- what we would call creative ways -- that would allow the project to drive these costs down to more neatly fit within the range of pricing that we see in the long term.

We came up with several costs in this regard, which

we touch on in the testimony, and these would include, well, if you only built 54 megawatts, you might not need a full 115 kV line and you might be able to get by with 34, and typically it costs a bit less. It's not proportionate but it's a bit less to construct a 34.5 kV line.

Financing costs are flexible and move over time. We've seen recent financings by other parties of the magnitude of the Edison Mission Energy company where costs have come down. Long-term debt financing is available. Wind investments are favored by many players, and in the right situation, we could see potentially some financing cost savings.

And we also see potential for revenue enhancements. It's true, it sounds like the deal that has been worked out between the Applicant and Constellation, but we're not that far apart, a developer could come along and try to figure out a way to renegotiate, come up with some additional revenue.

So in inclusion, we determined that a permanent 54-megawatt site at Black Nubble does have value, and if this Applicant after this many years of working on project decides that the numbers just don't work, we do think that there may be other developers out there who would take a very serious look at this, and we do encourage the Applicant to seriously consider this option.

Thank you.

MR. WIGHT: I want to know if you have investors.

MR. WINER: No, but we're familiar with them. As the folks from Edison have testified and in their materials, they're in a position to finance this fully on their own.

Whether they -- as I said in my testimony -- whether they decide to proceed is very much an individual matter of looking at the risk profile and the likely rewards that they're going to get.

I'm not here to tell you that Edison -- excuse me, Maine Mountain Power only needs a certain level of return in order to go forward. That's a very individual item.

But clearly the wind business, which expects to have upwards of 3,000 megawatts installed across the US this year alone, that's a lot of capital, and there is a lot of capital chasing these projects.

This Applicant has the ability to go forward and do it.

THE CHAIR: Rebecca.

MS. KURTZ: You mentioned possibly putting Redington into conservation. Would that be as part of the compromise, develop Black Nubble and put Redington into conservation?

MR. WIGHT: This isn't in the application.

MS. KURTZ: No, no, but I'm just curious when we're talking about financial stuff and wondering if there's any --

THE CHAIR: I guess the question, your direct testimony indicates that there were two pieces here: One you

wanted Redington range basically, and you would support a 54-megawatt project if they would throw in the Redington Mountain, the top of the mountain.

MS. KURTZ: Physically putting something into conservation as a tax benefit to them.

MR. WIGHT: That's private land.

MS. KURTZ: I think if it's put into -- is there the possibility of any kind of tax incentive to putting that land into conservation.

MR. DIDISHEIM: The Applicant owns 17 acres on the top of Redington Pond Range. We do, in our direct testimony, state that we think it would be a good compromise and an appropriate mitigation on site within property that's owned by the Applicant in exchange for the impacts of development.

That land currently is zoned as protection management. It isn't zoned for wind power. So there is a level of protection right now.

THE CHAIR: It's 5 o'clock, and to keep our obligation back here at 6, I'm going to have to take a break.

We will allow cross-examination of these witnesses. I'm very interested to hear what we're going to hear because I'm not sure what the other intervenors might have to say, but it should make for interesting testimony.

We will -- well, I hope that the intervenors and the and Applicant will melt a little bit here and we'll take a look

at the situation for tonight, how many people from the public we have, and based on last night, we had 65 people testify last night. I'm not sure we're going to have the same volume. I would hope to get back to this tonight.

I think the obligation, however, is to allow some people from the general public to testify at 6 o'clock because that's what we advertised.

I'm hoping Mr. Winer can remain with us at least until the conclusion of tonight's program.

Is that fair?

MR. WINER: I would be pleased to.

THE CHAIR: Thank you. We will be back here promptly at 6 o'clock, so I would ask that all of the intervenors and their witnesses be here at 6 so we can proceed.

Thank you.

* * * * *

(The hearing was suspended at 5:02 p.m. on August 3, 2006.)

* * * * *

(The hearing resumed at 6:02 p.m. on August 3, 2006.)

* * * * *

(PARTICIPANTS SWORN EN MASSE.)

* * * * *

THE CHAIR: We're not going to go through a whole detailed presentation on the project because I think most of

you are fairly familiar with it.

Marcia is going to give a very brief overview, and there's lots of information on the wall over here and over on the table over here to give you additional information should you desire it.

So with that I'm going to ask Marcia to go ahead with her short statement.

MS. SPENCER-FAMOUS: In February of 2006 Maine Mountain Power submitted a petition to rezone approximately --

PARTICIPANT: We can't hear you.

MS. SPENCER-FAMOUS: In February of 2006 Maine Mountain Power submitted a petition to rezone approximately 1,000 acres on Redington Pond Range and Black Nubble Mountain in Redington Township, Franklin County.

This is for the purpose of constructing a 30-turbine wind farm. The matter before us is being considered at this time is the rezoning of the parcel and preliminary development plan.

Within the proposed planned development subdistrict, the Applicant would construct wind turbines on Black Nubble Mountain and Redington Pond Range, gravel access roads, and utility lines.

Outside the proposed planned development subdistrict associated with the project in Redington Township and Wyman Township, the facility would include 34.5 kV and 115 kV utility

lines, access roads, a maintenance building, and a substation.

The activities within the planned development subdistrict would include 12 turbines on Redington Pond Range and 18 turbines on Black Nubble Mountain, approximately 12 miles of new gravel roads, and above- and below-ground 34.5 kV utility lines.

Each turbine would be 260 feet tall with a 300-foot diameter rotor, for a total height of 410 feet.

The area to be cleared within the planned development subdistrict would be 106 acres during construction, which would be reduced to 70 acres when operated after revegetation. The total untouched area within the planned development subdistrict would be 898 acres.

Both within and outside of the planned development subdistrict the total area to be cleared for this project, including mountain and utility lines, will be 307 acres. The total area of wetland impact will be approximately one-third of an acre.

THE CHAIR: Thank you, Marcia. I guess in reviewing the list here, we have -- if there are any State representatives that wish to speak, we would offer them the courtesy of coming up first.

Also, Governor King is with us tonight, and I would offer him the courtesy of making the first testimony.

FORMER GOVERNOR KING: That's okay, I'll wait.

Whatever order it's in.

THE CHAIR: Thank you. You're number 55. We'll be here at 8:30 tomorrow morning.

All right, that being said, I would -- I'm going to read four names off here and I would ask that you come down to the microphone and be prepared to testify.

Tony Barrett, James Picone, and John Bertl, and Tom Manzaka. I hope I've got that one right.

So if those folks would get ready to testify, that would be helpful.

And with that the first gentleman may proceed.

Please give your name and residence for the record so this lady over can get it on the -- the court reporter can get it. Just as a reminder, everybody, as I said, we are recording this. There's an audiotape being made as well as an official court recording.

PUBLIC TESTIMONY

MR. BARRETT: My name is Tony Barrett. I live in Harpswell, Maine, and I'm speaking in opposition to the application.

Just as -- Mr. Chairman and Commissioners, just as background I have worked in the energy industry for 21 years and have some familiarity with the power business and as such I've always been interested in wind power.

I've visited Altima in California; I've seen several

wind farms in Europe; I've stood beneath the turbine in Hull, Massachusetts, and you hear people talking about them being too noisy but this is actually pretty reasonable sound-wise. Maybe it was one of those days it wasn't operating, I don't know.

Two weeks ago I was driving down in Boston and went by the wind turbines in Dorchester, the first commercial wind turbine in Boston.

What struck me was the variety of sites that these turbines have been sited, both on the coast and inland, rural and urban. It sort of raised a question in my mind, why is Maine Mountain Power siting this project in the western mountains in the Redington Pond area in such a unique place.

I was here last night and listened to some of the comments. There is some very sincere people talking about global warming, and the implication was made that this project is the only wind power project that can be done in Maine and it should be done at any cost.

I also realized that wind resource is an important component in the evaluation of many of these projects economic, but I would guess that Katahdin has more wind resource than Redington Pond Range.

It's possible that Cadillac Mountain has more wind resource than Redington Pond Range. Would we put wind turbines on top of these two mountains? No, we wouldn't.

And the reason why is the quality of place. The

impact on the quality of place is too great compared to the value of those sites. That quality of place costs does not offset the perceived value of the wind power.

I have walked on many of the high ridgelines in New England, and I'll see while walking along old fire towers, cell phone towers, ski lift towers.

Personally, it doesn't bother me because it's in the areas where there's already been development for hundreds of years. Down in valleys you see highways, towns founded in the 1700s, homes.

When you walk in the Redington Pond area, it's one of the last few places in the eastern United States where you see no development. It's quite unique. You can walk through there and all you see surrounding you is 4,000-foot peaks. It's quite a unique place.

Also last night in hearing the comments I had a realization. There were a string of speakers who were private investors in Endless Energy who spoke, and my realization was my wife and I are investors in the Redington Pond area.

Not too long ago we made a significant -- at least significant for us -- personal donation to conserve land on Saddleback and on Mt. Abrams.

Unlike the investors for Endless Energy, we're not looking for a financial profit on our investment. We made that investment because we value the quality of this place.

Please don't grant the zoning variance that will ruin the quality of this place.

Thank you.

MR. MANZAKA: Good evening. My name is Tom Manzaka, and I'm speaking in opposition to the proposed wind power project.

My wife, Pam, and I have lived in Strong, Maine for 25 years. We made a conscious decision to live in this region because of its unique character and feel that this project constitutes a severe and unnecessary threat to this area for two basic reasons: No. 1, the physical presence of such machinery would destroy the identity that makes western Maine so special. It is extremely important that the local people that live in Franklin County are heard in this discussion. We do not want these windmills to dot the horizon. It would be difficult to find a worse place to site such construction.

Secondly, this project is less about energy conservation and more about wealth production for a group of private individuals. It is disguised as using a renewable resource when in fact it will destroy natural resources that are not replaceable.

When the facts are considered, this is a reckless project that does not benefit the people of Maine in a way that would come close to justifying its causes.

In conclusion, we hope that the Commission will

recognize the severe impact this proposal would have on this fragile ecosystem that is so important to us.

Thank you.

THE CHAIR: As I said last night, it would help if we minimized the applause.

I appreciate that you all want to support people who agree with you, but it slows the process down and it really doesn't serve much purpose as far as we're concerned. It's not relevant to our decision that you applaud all the people you agree with.

It would help us move this along if you didn't do it. Thank you.

And you are?

MR. LABRECQUE: James Labrecque, I'm from Bangor.

THE CHAIR: Well, Jim, I didn't call you up. A lot of the people that I did call up didn't show up, so I don't know where they went to.

MR. LABRECQUE: I didn't know if you pronounced my last name wrong.

MR. WIGHT: Go ahead.

THE CHAIR: You can go ahead. We'll get it sorted out after you're done.

MR. LABRECQUE: Thank you. My name is Jim Labrecque and I'm from Bangor, and I'm originally from Franklin County, born in Farmington, graduated from Mt. Blue. I'm also an

inventor. I invented refrigeration processes that don't use CFCs and are far more efficient. I invented process controls systems, the most advanced in the world, used in big places like Trump Palace in Manhattan. And I also have refrigeration's first CFC-free refrigeration system in Trump Palace in Manhattan, and I also have one of my first prototypes here in Franklin County right in Kingfield at Trenton's Market where we heat the building with waste heat from ice cream, meat, and so forth, and we don't use any oil in the building.

So I wanted to read some of my testimony, and then I wanted to follow up with a few comments.

I'm going to check into the zoning petition. The one, under the issue of whether the suitability of the prescribed site conforms to the intended use of the land. I had checked on the grounds of the projected site raises a genuine dispute regarding the uncertainty of the project's intended capacity factor due to environmental conditions of the planned site at that altitude.

Two primary factors of dispute are the effect on high winds and the likelihood of a significant icing condition not inherent at lower altitudes.

Two. Under the issue of whether there are alternatives to achieve the same results by other means, I have checked on the grounds that the Applicant has failed to conduct a due diligence search for less costly alternatives that yield

a healthier net environmental impact.

Three, assurances. The Applicant fails to reference the cost of an independent company to secure a bond for a proposed project in order to assure the public that the project will meet its projected performance promises.

A guarantee for use of land should reciprocate a public guarantee of performance. If performance risk is low, bonding cost is minimum. A higher bonding cost will put at notice all parties, including the public, investors, and rate payors, et cetera.

If bonding costs are high, then it's better to address the issue of the bonding company up front. We must avoid another public failure like the wood-fired plants that we're all still paying for in the form of stranded costs.

This board has to guarantee that granting the Applicant's request today does not transpire into more stranded costs tomorrow.

The board should not advocate the free enterprise bonding process over politics.

What I'm basically trying to get to on this is the issue of whether or not the power plant can meet their projections.

I did a calculation on numbers that they don't seem to be readily making publicly available, that is, if the project at $150 million has a capacity factor of 30 percent

with a 20-percent carrying cost, that will produce electricity at 12 cents and I say it's good.

If it only meets the performance factor of 20 percent, then the costs go up to 19 cents a kilowatt hour and it makes it an ineffective product.

Also, concerns about the lack of sufficient competition. We're basically taking the first person who comes along and says, we'll give it to you. Unless -- there's no best deal unless the market place says so, so right now we don't have any basis of whether or not that is a good deal.

I bring up the possibilities of problems because it's real. I know that more than anybody. In my years of research and development, I model myself after Edison who once said, I have not yet failed. I have only discovered 300 ways that don't work.

The people that develop this project are extraordinary people, and they still have a long ways to go, a lot more failures.

I just want to make sure that somebody else is going to assure that we don't have more stranded costs down the road.

The project, unlike other mature technologies, this product does not have the maturity that you can rely on from an experience base. In other words, another company can't come up here and say, here's the demographics.

Time's up? Okay, thank you.

MR. PICONE: My name is James Picone. I'll try to be brief.

I'm a retired dentist and pilot and I own property in Eustis, and I've been kind of hanging around this area for about 40 years. I know ice and propellers do not mix.

I heard a lot of pleading last night about our need for cleaner energy, but it seems like they're preaching to the choir because we're all desperate for that very need.

But I'd like to bring to your attention the hidden energy costs that are put into a project that's designed to save us energy or fossil fuel.

I have a relative who, living on a hill, put up a windmill power generator and quite successfully for a while, but then the cost of winter damage and the increasing maintenance shut him down completely.

The point here is that wind power is a fantastic alternative but in an altitude with a freezing, harsh environment, the maintenance costs are dramatically increased, including the increased consumption of fuel oil to get them to the problems to fix it.

So, it said that this project is supposed to save us fossil fuel, but if you considered the magnitude of the fuel oil to build and reinforce roads strong enough to support the heavy cement trucks and convoys of them, by the way, that will build bases for these towers, these bases will have to be

substantial enough to support a 400-foot tower times 30. That's a lot of cement to be trucked up, an enormous amount of cement to be trucked up. I can't imagine how big these bases are. I'm sure you know.

But anyway, another thing is I want to bring to your attention the fragility that we talked about last night of this alpine region.

This fragility was demonstrated to us in the early 90s by Hurricane Bob, and I'm sure that many of you are aware of the severe land slide that occurred on the north face of Crocker Mountain, and this scar is very visible today from Route 27 looking south on Route 27 from Eustis.

I wondered what would have happened if there were any wind farms up there then.

The cost of heavy duty road beds in this area will not be cheap. We've got the technology do to it, though, the investors are sure out there, and our tax dollars are there with subsidies and tax credits and depreciation, so I know it could be done.

But the question is, is it worth it? Let's look ahead 10 or 15 years when the company finds the cost of maintenance isn't worth to keep up the cost of maintenance because of the hard winter environment. Whether they do to break even by -- they can break even by placing more windmills or they could abandon the sites and make it a windmill grave

yard.

It's likely the initial investors will have good value for their efforts, but the real burden will be on those who allowed the placement, a good idea in a very inappropriate place.

Well, thank you.

THE CHAIR: John Bertl, is he here?

MR. BERTL: Yes.

THE CHAIR: I'd also like to have Carole Haas and Vera Trafton will be next in line after John's done. Go ahead, John.

MR. BERTL: Only in America can we come here with such diverse opinions. Thank for listening to us. I know it's been long last night and long the next three days, and I apologize for the repetitiveness of some of the testimony.

I have some photos with me that are of a similar area to the proposed site, and I want to leave them here with you. This is in a place where I vacation and it's in Italy. It's halfway between Viscar and Naples.

There are thousands of windmills, and they stretch in single line on all the ridges.

The difference between there and here is there the people were 100 percent for it. They look at this as being an item of beauty, such as a Colosseum or the Eiffel Tower or something like that. In addition to that, the one big

difference is the surrounding area gets beyond what's going to happen here.

I don't see any reason why these windmills shouldn't be installed as proposed.

THE CHAIR: Thank you. You can leave those with Melissa and she'll see that they go into the record.

MS. HAAS: Hi, I'm Carroll Haas. Thank you, Commissioners, for holding this hearing.

I submit my testimony as a Maine citizen who has worked for countless hours as a volunteer and professional protecting the wild and special places in Maine. I drive a hybrid car and will be heating my home with bio diesel fuel this winter.

So I've made a big personal commitment to energy efficiency and understand the desire of some individuals and organizations to just get going and start doing something but not just anything.

I am extremely disappointed and concerned by the notion that wind power in any place must be supported. Over the past few months I have learned about the ecological qualities of the Redington/Black Nubble region and the damage that would be done to those qualities to build this project. Clearly the project location is inappropriate.

Could it be that this project is an easy target for support because so few of its supporters have ever been to or

learned about the project area?

The country of Denmark generates 20 percent of its electricity from wind projects. I am quite sure they have accomplished this without building projects 12 miles away from the nearest roads, cutting new roads, 11 miles of transmission lines through rocky and difficult terrain at high elevations in order to get to the top of the ridgeline where they then blast and pour 30-feet deep concrete turbine support buffers in endangered and rare wildlife habitat.

Thoughtful siting criteria for wind turbine projects advise locating them on already developed land close to existing roads and power lines and away from remote and otherwise undeveloped areas.

Maine needs to develop a regional recommendation for places where wind should be and should not be sited rather than being forced to react to proposed projects that are in the location of choice and ownership of the developer.

There are far less environmentally vulnerable sites than Redington and Black Nubble. Most would be a lot less complicated and expensive to build.

Across the country farm land and cattle ranches have provided excellent sites for wind power. They provide power for the public and additional income for farmers and ranchers.

I have included in my printed testimony information from the Union of Concerned Scientists on the success and

acceptance of wind projects on farm land.

Wind projects on farm land have been proposed for Maine. Those are the projects we should be supporting, not getting panicky about global warming and supporting projects we will ultimately regret.

Devaluing the quality of special natural places, underestimating construction damage, exaggerating the benefits of energy development, and stressing the need for trade-offs are familiar tactics used by all energy developers regardless of the energy source they are developing.

In this case, the Redington/Black Nubble area is protected from such development by Maine's Land Use Regulation Commission as a mountain area protection subdistrict.

I strongly urge the Commission to keep it that way.

Thank you.

THE CHAIR: Vera Trafton, and then Pam Prodan and Patty Silvia.

Go ahead, please.

MS. TRAFTON: Thank you for letting me speak. My name is Vera Trafton. I live in Phillips, and I'm opposed to the wind power proposal, which we're here to discuss.

As well as the Founders of Friends of the Western Mountains, I've talked daily about this proposal and the changes siting wind power 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 local people and visitors have for this area. The mountains dominate the woods, lakes, streams, and towns and stand for Maine in many people's minds. We treasure the quality of natural beauty and the rural life, which in many ways seems unchanged from years ago.

It's also very important to our economic well being that many people seek out this area to enjoy what we're 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 are not spoiled.

It's striking to someone from Maine how cavalier other states can be about some of their natural resources. I'm a fly fisherman, and I've fished in some wonderful fly fishing country. I've walked through sage brush and had the Grand Tetons towering above me, and yet I was always aware or almost always aware of what man had done to change the face of nature.

I don't think that people in other states, unless they come here to make the comparison, can see how valuable our protection of, for instance, the rivers is to what people get when they are fishing or touring or living in another place.

Our mountains are protected above a certain heighth by rules which LURC enforces. The reasons for these limits to mountain development were worked out by people with vision and

the same reverence and respect for the mountains that we feel today.

In April 1972 the first Maine Mountain Conference was convened. The proceedings make wonderful reading and are a stern reminder of our duty to those who trust us to preserve the wild character of our mountain for future generations.

I would like to read you a few passages because they reflect my concerns.

Elmer Viollette, a chairman of LURC, quoted Wordsworth: Two voices are there, one is of the sea, one is of the mountains. Each a mighty voice.

Our task as a state is to reconcile the use and development of the mountains with our need and with the environmental needs of the mountains themselves.

I'm going to have to skip because I've made this much too long.

A professor of botany and geology at this conference said, With increasing altitude on mountains, the ecosystems because increasingly vulnerable to damage by man and slower to recover from damage. Higher altitude ecosystems are more fragile and require more protection.

I'll end my remarks by quoting Herbert Hartman, who was also at the conference and was part of the Natural Resource Council.

At the very least the mountains by their distinctive

elevation dramatically impress upon us their pledge as an important feature of the natural landscape. The integrity of this scene with its diversity of natural components is itself in many instances reason enough for protective consideration.

Finally, how many of us here and how many others cherish that experience of the natural world for which the mountains are the saying, in inspiring views, the presence of great natural forces, and tremendous spans of time, the special companionship created by the sharing of these experiences, which are so different than those of our daily lives, for many of the mountains certainly provide health, enjoyment, enrichment, and new vigor from stunted as they will be by human pressures. Many of the mountain settings could become monuments to our own ignorance, apathy, or greed.

Thank you for letting me speak to you.

MS. PRODAN: Good evening. My name is Pamela Prodan and I live in Wilton in southern Franklin County, and I love all of the mountains in Franklin County, and we're just very fortunate to have what we do have here.

By training I'm an attorney as well as an artist and author, and I wanted to make three basic points tonight, and I will try to submit more detailed written testimony later.

First is that I believe that the court issue that the Commission will grapple with in this case is the rezoning of a protected mountain area, and this court issue arises because

there's a very land intensive project here.

Regardless of the purpose of development, it is development and it removes a large area from a protection subdistrict.

There are presumptions that land will not be removed from a protected mountain area unless specific criteria are met. It goes above the criteria of no undue adverse impact.

You must read the description and standard for protected mountain area subdistricts to understand what I'm saying. The analysis in the end has nothing to do with the type of development or the benefits of the development. Rather, it goes to the suitability of the resource for any development, and protected mountain areas there are very few uses that the district recognizes as legitimate.

Secondly, the issue of the site selection and the process that evolved for the site selection.

It appears to me from what I have heard and seen in the testimony that there was no alternative analysis. In short what happened was the developer made a decision to obtain a mountain site, and this is a site that is now owned and therefore this is the site that is proposed to be developed.

I don't perceive that there was any regard for the existing laws and regulations applicable to this piece of land in a protected mountain subdistrict because they're actually very strict. So I think what I'm saying is that there was not

an in-depth analysis at the beginning of what the impacts would be.

For example, discussion this morning around Bicknell's Thrush habitat. Comparing the impacts of this type of development here with a ski area seems almost ludicrous because common sense tells anybody that a ski area is not used during the breeding season of the Bicknell's Thrush. Nobody goes skiing in June and July. So to trying to compare the uses is not common sense.

The third and last issue I wanted to go to tonight is the view shed issue.

For many of us this issue is not at all about the view. Personally, you may make a decision on that basis and I will be thrilled, because I know you have a lot of testimony on that, so I think it is something that you will be able to look at in depth.

But reducing the experience of the mountains to many of us to a view is nothing but an insult. Views are only the most visible manifestations of the desecration of the mountains. I'm really glad Vera read some of the quotes from the Mountain Conference and I wanted to read another one.

This is by T. Tarpy Schulten, who was a State senator at the time of the Mountain Conference.

The mountains have been a source of inspiration since the advent of mankind. They, in some cases, have not only been

the seed of divinity, but they, themselves, have been considered divine.

And he goes on to describe some of the instances.

I would submit that over the course of humanity it has been the role of poets, great orators, from Abraham to Martin Luther King, from Wordsworth to other poets to describe and try to articulate what it is about mountains that provide inspiration and understanding around vulnerability, as well as strengths.

Now I ask that you please deny the petition for rezoning and leave these irreplaceable and beautiful resources alone.

Thank you.

THE CHAIR: Peter Arnold and Harriet Powers are the next two people. Go ahead, please, Ma'am.

MS. SILVIA: My name is Patty Silvia and I live in Rangeley where I am a teacher, an avid outdoor enthusiast, as well as a registered Maine guide. I became a Maine guide because of my love of nature and enthusiasm for the outdoors. In my opinion there is no better place to live than in this area of Maine.

My love of the area has to do with the remoteness, natural resources, undeveloped space, and pristine environment. I am lucky to be able to share my environment and knowledge with other nature lovers from away who see nothing but

development and industry from where they come from. The western mountains are one of the few places that still offer what is missing for them.

I'm opposed to the rezoning of Redington and Black Nubble. One of the official duties of the Land Use Regulation Commission is to protect the property in unorganized territories here in Maine.

LURC has a reputation for strictly enforcing the regulations that are written to protect the vast lands they regulate. Local folklore reiterates how far members of LURC will go to make sure the laws are followed to the letter.

A landowner in the LURC territory called Rangeley Plantation wanted to cut down a dead tree on his shorefront that had become a hazard. The LURC representative refused to let the landowner cut down the tree. It took intervention by the property owner's insurance company to get the tree cut down. The landowner was required to replant another tree in its place.

LURC's consistencies in applying its regulations to small amounts of tree cutting should carry over to significant projects like this wind farm. Denial of the request to rezone Redington and Black Nubble would reinforce LURC's consistency in applying and enforcing its regulations.

Thank you.

THE CHAIR: Peter.

MR. ARNOLD: Peter Arnold. Thank you very much. Thank you for letting me speak this evening.

I'm going to wear two hats tonight. I'm the director of Pathways to Sustainable Future for the Chewonki Foundation, so I'm going to put my Chewonki hat on, and then I'll speak as a citizen. So I'll take this off when I'm done speaking for Chewonki so as not to confuse you.

My job for the Chewonki Foundation is to educate all of the folks that we touch with the various programs that we have about the effects of global warming and to look at what non fossil fuel alternative energies can be like, what their installations are like, how they work, all of the ramifications dealing with that.

As a foundation, as the Chewonki Foundation, we very much appreciate the incredible hard work that this Commission is doing and anticipate that your decision on this project will be very well reasoned and reflect your best judgment.

We don't have a recommendation for you about this particular site, but we are very strongly in favor of wind development. We're planning our own 10-kilowatt wind power demonstration down on our campus on the coast, and if this project goes through and there's power available to buy, we want to buy it.

So I'm going to change hats now and speak to you as a citizen of Damariscotta who struggles daily with how to do my

energy business in a way that honors my intense concern about global warming.

I've spent a lot of time up on Redington Ridge and Black Nubble days, nights, summer, winter, and I decided that if this was my place to lend, I would lend it to this development. I would make that lend.

I have a recommendation and I don't know whether it could be built in here somehow, but if it were my land, I would lend it for a period of time -- 20, 25 years -- and then ask for a reevaluation to see of whether we still need it for wind power at that time. If we don't, decommission, take it away.

I drove up here today in a Volkswagen Jetta, and it was 50 percent bio diesel, 50 percent regular diesel, so I was getting 100 mile to the petroleum gallon. Pretty efficient, I thought.

My wife told me before I left -- she has a Prius -- she wants to get a plug-in after-market product for her Prius so she can run it as all electric if she wants to, and she wants to have wind power available so we would have wind powered transportation. She wanted me to tell you that story.

Thank you very much.

THE CHAIR: Thank you, Peter. Harriet Powers, and following Harriet would be Jack McKee and Dave Cota. Has Basil got you timed?

MS. POWERS: This is my own story. After 55 years I

do my own thing.

Just remember that those stars represent what I want to see at night in the sky.

My name is Harriet Powers. I live in Coplin Plantation. I was born and brought up there. I grew up there without electricity and probably I'm the only one left in Franklin County that still uses a wringer-type washer and hang my wash on the line to dry.

I do not mind being called old as it was mentioned last night or being called a NIMBY. This is my in my front yard, not my backyard.

Oh beautiful for spacious skies, for amber waves of grain, for purple mountains majesty, if LURC allows the change for this proposal, our purple mountains majesty will be gone forever.

If I wanted to see the bright lights at night, which will be very visible from my house, I would move to Portland, Scarborough, or Yarmouth. What part of "no" doesn't LURC understand?

I would like to ask the Commission not to change the zoning ordinance which is already in place.

Thank you for giving me this opportunity to speak my opinion.

THE CHAIR: We're looking for Jack.

Okay, Jack, go ahead.

MR. McKEE: Commissioner and members of the board, thank you very much for holding this hearing and for listening to those of us who have an interest one way or the other.

I am Jack McKee, and I'm a resident of the town of Kingfield.

Our forefathers and foremothers, if you pardon the expression -- fought and won a war of independence 230 years ago. In my judgment, we are now at a time and place where it's time to fight another war, if you want to call it that, of independence. This time it's a war. It's a war of independence and energy.

We're being held hostage by OPEC. I don't think there's any question about that. Oil is going to run out. One of these days there's not going to be anymore. That's the best scenario because we'll have to find a solution and hopefully that will give us time to find solutions.

The worst scenario is what's going on right now in the Middle East. We could have the chaos turned into a catastrophic explosion. Even while we sit here tonight, we don't know what's happening over there.

A misplaced bomb, an airplane crashes someplace, somebody gets assassinated, whatever, and that whole area would explode in a catastrophic conflict, the likes of which we've not seen in a long time. They shut off the oil. That will force some kind of drastic action on the part of this country

and others.

The real and political climate and economic disaster of the United States is beyond belief. It will make the 30s, the depression days of my youth, look like a walk in the park.

Natural gas supply is limited, I don't know how much, but we know that it's a finite thing, it's going to run out. We also know that natural disasters, such as Katrina, have a significant impact from what happened with natural gas as a fuel.

Coal, limited or not, it's dirty and it's an environmental poison. I grew up in the state of Pennsylvania where there's a lot of coal and a lot of strip mine coal, which is even worse than the deep mine stuff.

The case for energy independence to me is clear and it's convincing. Now, we've got to have alternative sources of energy. Wind power is one of those sources.

I firmly believe that this is a project that must go forward.

I have six great grandchildren ages 1 to 10. If the 1-year-old lives to be as old as I am will be 83 years or 84 years old or something like that in the late 21st Century, almost into the 22nd Century.

Now, for those six kids -- and I love them dearly as you can imagine -- what will their lives be like between now and that time?

We provide them with energy independence but we're sentencing them to lives of unknown difficulties. I'm serious about that. We do not know what's in the future, and if we don't plan for the future, it will take care of itself, and our kids and our grand kids and our great grand kids will suffer because of it.

The lack of foresight is something this country is famous for. We've given demonstration after demonstration of how we wait until something gets too bad and harder to fix.

So I owe those kids, you owe those kids, we owe those kids energy independence.

Will this project solve, guarantee that independence? Of course not. But it's one little battle won, one more little source of energy. You get enough little ones like that come together, and we will have licked this problem. We can't do it alone, we can't do it just right here, but we can do it with unified effort across the country.

Some have said that you have a difficult decision. I'm going to tell you folks, I don't think you do. I think your decision is easy. I think it's a no brainer. I think you have to approve this project.

Thank you very much.

THE CHAIR: Dave Cota. After Dave is Walter Gooley, followed by Fred Huntress.

MR. COTA: LURC Commissioners, my name is Dave Cota.

I'm speaking as a resident and tax payer of Carrabassett Valley.

I am a proponent of this project for many of the same reasons that you heard last night, to prevent global warming, to reduce dependence on foreign oil, sustainable renewable energy, reduction of fossil fuel emissions, and beyond all those issues that are very important, I also think Carrabassett Valley is a big user of electricity. I think we've got an obligation to try to be part of the solution.

I'd like to also address a couple of myths that I -- at least what I believe to be myths -- I listened to very elegant testimony last night and I just have a couple of comments.

In my humble opinion, there's been a lot of discussion about an adverse impact on tourism. You know, I've got to believe just the opposite. People are going to ski Sugarloaf whether there's wind towers on Redington Pond Mountain or not. In terms of hiking, I think people are going to hike our beautiful mountains.

A couple of years ago I had the opportunity and visited the windmills at Searsburg, Vermont, and at the time there were bus loads of school children that were visiting that site the day that I was there. It had become a tourist attraction.

So I really do not feel that this is going to have

any adverse impact on tourism.

The other myth that I would like to discuss is that all hikers are against this project. In fact, I think you would be surprised that an awful lot of hikers are in favor of this project because it's renewable sustainable energy.

I think if there was some sort of objective study done, I think you would be very surprised at the results.

On a personal note, I am a hiker. Over 30 years ago I hiked the entire Appalachian Trial from Springer Mountain, Georgia to Mt. Katahdin.

I treasure and cherish the mountains of Maine. I've lived in Maine all my life. Somewhere along the line here, if we can't have increased hydro power, nuclear power is no longer an option, the reality is we've got to get power from somewhere.

Everybody drives home here tonight, they're going to turn the lights on in their house -- and I'm going to be one of those people -- and I think somewhere along the line we've got to get some kind of an energy policy and, yes, in a perfect world ten years ago we would have had a policy that says you can put wind towers on this mountain and that mountain, but somewhere along the line we've got to do the responsible thing.

You heard last night, the United States has 5 percent of the world's population and uses 20, 25 percent of the world's energy. There are some realities that are going to

have to take place here.

Again, as a hiker, I honestly think that over time people will come to accept these towers and appreciate them for what they are, for being responsible.

I saw the towers down in Vermont. I know they were shorter towers and I understand that, but I didn't find them objectionable, and I don't think over time you will find these towers objectionable either.

I think perhaps, you know, as early as six months ago if you had asked somebody where Redington Pond Range was or Black Nubble Mountain, if you asked a hundred hikers in Maine where they were, I would be willing to bet 99 have never heard of them before.

So yes, these are treasured and beautiful mountains and this whole area is surrounded by these mountains, and I'm not in favor of putting wind towers on Bigelow Mountain or Sugarloaf -- excuse me, over at Saddleback and some other areas right on top of the Appalachian Trail, but I don't want us to believe that this is going to be detriment to the hiking experience.

So as a final note, I am in favor of these wind power -- this wind power project and will hope that the board will give it at least fair consideration.

Thank you.

THE CHAIR: Thanks, Dave. Is Walter here? Sorry,

Walter. Thank you.

MR. GOOLEY: I don't have to bring a box of candy, do I? I was in the legislature, so everybody up there understands what I'm talking about I think.

In relation to -- I'm Walter Gooley and I live in Farmington. Mrs. Powers gave a very, very excellent talk.

I would just like to say that my wife and I have been married 48 years, and we have a little GI can opener that we've had for 48 years, and we have yet to purchase our first electric one, so I don't know what that says. It gives good wrist action.

Any ways, so to the Land Use Regulation Commission members, thank you for the opportunity to address the issue of rezoning a 1,000-acre parcel from mountain area protection subdistrict to planned development subdistrict in order to accommodate 30 wind turbines.

My name is Walter Gooley, and I live in Farmington, Maine year-round. I am a professional registered forester, Christmas tree grower, and served four terms as State representative in Augusta, 1995 to 2002, serving on the Agriculture, Conservation, and Forestry Committee.

Currently I am a Maine Senate candidate for District 18, which includes the area of current discussion.

Since 1959 I have promoted proper forest management in Maine and have walked more of the planned acres than most.

Trees are a renewable resource, and when managed correctly, supplies subside with many forest products, including energy for power. I have been involved with the wood biomass industry from the legislative and forest management aspects.

Last night I listened to four and a half hours of public testimony, and I was struck by the numbers of persons from away who supported the proposed wind power project and the local full-time residents, most who opposed the project.

At the same time, a number of young people -- God bless them -- of high school age got up and supported the proposal. I do understand where they're coming from as the future will be theirs to manage.

I listened to citizens talk about the unique qualities of the western mountains area: The clean air, peace and quiet, scenic vistas, a place for solitude and outdoor recreation.

One person said it's about the money, not pollution, and I have to include tax credits there, too, I guess. Another said the project will not reduce $CO_2$ emissions and maybe people should live in smaller houses. I wonder how many air conditioners were cranking last night.

Wal-Mart sells a 5200 BTU unit for $86 made in, you guessed it, China. It's about personal responsibility. Another person said Maine has a glut of power.

Frankly, I fully support and promote the use of

renewable energy resources: Wind, water, solar, and biomass. But I guess the current -- but I question the current proposal and am concerned about the precedent of rezoning a protected subdistrict above 2,700-foot elevation.

Where does it all end? It doesn't. The demand for power from our society is going to keep increasing, but apparently Maine is not even in the top ten states for wind power.

California is big time in the business and I think we heard that last night.

Maine has harsh winters. Ground frost creates significant problems for towers, and there is a history of such problems.

Our wind turbines rising 405 feet and lighted, are they quiet? Who defines quiet? In decibels? Information in print recently suggests that a Redington wind power facility would under certain conditions displace renewable hydro and biomass power from Wyman and Paris dams and from Stratton. This deserves further analysis. I think this was addressed a little bit this afternoon.

The wind power plants can add a valuable asset to our power grid but need to be located in environmentally secure areas. The current proposal has too many problem areas to be a win/win situation.

Thank you very much. I would just like to add that

we do not own an air conditioner.

Thank you very much.

THE CHAIR: Following Fred would be John Diller and Lisa Standish.

MR. HUNTRESS: Good evening, Commissioners. My name is Fred Huntress, I live in Poland Spring, Maine. I'm a consultant forester and I own woodland. One of my woodlots is part of a small mountain called Rattle Snake Mountain down in Casco where there is no wind power now and I hope the heck there never is.

I'm very strongly opposed to this rezoning of Redington and Wyman Township to allow wind power project on Redington Pond Range and Black Nubble Mountain.

I've had nearly 50 years' experience in managing forest lands, and I know the negative consequences of building roads on mountains. I've been up on Pleasant Mountain over in Bridgeton and seen what a road to a communications tower did there. Maybe it wasn't as well engineered as this one would be, but it was a disaster in my opinion.

There's an obvious reason why these mountains were placed in resource protection, a PMA zone. It's taken 10,000 years since the last glacier receded to produce enough soil in these mountains to grow a stunted fir or spruce. The roads leading to the tops of these mountains would require the removal of huge amounts of soil and the blasting of ledges.

The erosion and sedimentation of the streams will be inevitable. You just can't build roads on mountains with the slopes involved, and I've seen the figures which I'm sure you've all seen, a tremendous amount of soil and rock that's got to be moved, the blasting that's got to be done.

It's a fragile area. It says right in your LURC handbook. Your zoning, it's a fragile area. It should be protected.

Why should we sacrifice two mountains of Maine just to provide profits for investors, most of whom are not Maine residents.

We have already spent large sums of State, Federal, and private money to acquire and protect other fragile mountains, such as Bigelow, Old Spec, the Mahoosic Range, and the Mt. Katahdin area. Why are Redington and Black Nubble Mountains just as worthy of our protection? If this project is approved, where will it end? Which mountains will be destroyed next?

You know as well as I do, if this thing gets approved, there's other. I know there's one further up in the Kibby area that's being proposed. This would be the tip of the ice berg. They aren't going to want just Redington and Nubble, they're going to want many, many more.

There are alternative methods. Walt Gooley mentioned one and I'll mention a little more that do not require the

permanent destruction of our mountains.

At a time when we are losing our markets for pulpwood, there is a surplus of wood available for biomass fuel generation plants, which have created markets for our timber and provide many jobs for local people. The forest is renewable with proper forest management, but the mountains are not.

I sell timber for clients, and right now it's very difficult to sell the hardwood pulp that we generate, and it's going to get worse I think. We're losing pulp mills instead of gaining.

There's biomass plants in Maine. Someone mentioned that we have a lot of them that were bought out, but right now as I understand it, every biomass plant is operating to capacity, and there's a surplus of wood; and as a forester I know we can manage this land properly.

I heard today about the number of jobs with a wind power plant. It's insignificant compared to what a biomass plant would do. It would provide markets for millions of landowners and my clients to sell stumpage, and it would provide jobs for loggers and all these jobs that go along with the trucking industry.

So we can have our cake and eat it, too. We don't need to destroy our mountains. The biomass plant could be located down where the power lines, not way the heck up on top

of a mountain.

In my work as a professional forester, I am required by the State of Maine laws to protect water quality and timber harvesting operations. As a good steward of the land, I try to protect habitat and wildlife.

On the contrary, this proposed wind power project would do nothing to improve the environment. Its only goal is to improve the financial situation of its promoters. This is not sufficient justification to forever destroy mountains you've been charged to protect with the zoning process.

All this talk about saving the planet and global warming, that's nice but I don't think that's what we're here for. We're here to try to decide whether we zone something, a mountain area, which is currently being protected.

If you want an alternative site, maybe I could suggest one. Maybe you could put these wind power things on the State house roof down there. There's a heck of a lot of wind and hot air being generated during the course of the session.

Thank you.

THE CHAIR: Thank you, Fred. John Diller. Is John here?

MS. HASKELL: My name is Corey Haskell, and I've been asked to read a statement written by John Diller, who regrets that he can't be here himself to read this to you, but I will

give you copies.

John Diller, of course, is the president of Sugarloaf USA. His letters reads: Dear Commissioners, I informally polled people on how they felt about the Redington wind project. The most asked questions were, Why are we doing it? Do we need it?

These are two excellent questions requiring what I call big picture answers.

We all know there's an energy crisis in the world and it is long past the 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 systems.

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 this coming year alone.

Fossil fuel continues to be the major energy source of the midwest and the major contributor to acid rain here in the east.

The bottom line is we need more efficient and cleaner energy generation, so I ask the questions: Is wind power

clean? Yes. Does it have a visual impact? Yes.

However, having seen the Equinox 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 Redington and Black Nubble ranges offer 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 retort, Not In My Backyard; but current geopolitical and environmental challenges implore us to look to our collective backyard in the quest for energy self sufficiency. We all will 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.

Thank you.

THE CHAIR: Thank you. Lisa Standish. And after Lisa would be Nancy O'Toole and Tom Lewis.

MS. STANDISH: Good evening, ladies and gentlemen. My name is Lisa Standish and I live in Kingfield where I'm

developing a small farm and I own two businesses. One of them is a seven-bedroom bed and breakfast, and the other one is a real estate company. And I believe that both of my businesses are going to be enhanced by this project.

I've been a member of the Appalachian Mountain Club, the Audubon Society, the Sierra Club, the North Canoe Trail. I'm a corporate trustee for the Trustees for Preservation, which is the oldest land conservation organization in the country.

I've been responsible for bringing over 2,000 acres of farm land under conservation in South Dartmouth, Massachusetts, and I'm an early graduate of the Shelter Institute, which was located in Bath, Maine in the mid-70s when I was a student there.

I come here today to speak for my grandchildren, Lucy, Anna, Spencer, Mary, and Olivia. Be mindful of their future and the future of all children when deciding on the application of the wind farm variance request.

To me wind farms are beautiful symbols that represent the beginning of the end to oil wars, dirty air, global warming, and acid rain. I have forever been a staunch advocate for the protection of our wildlife and wilderness resources.

I believe that all of nature will benefit from the actions taken to protect our environment from the noxious and luminous effects of current energy manufacturers. While I have

lobbied against State and community economic leakage, I care not acquit that the energy created here is not to be used here. My support is not about money. It is simply about development of clean renewable energy resources.

Windmill farms are established in the midwest and the west and have been for years. It is time to get on board and to do our part.

To have this region host the start of such auspicious beginnings feels like an honor and a privilege.

I appeal to you to approve the variance for the entire project.

Thank you.

THE CHAIR: Thank you, Lisa. Nancy.

MS. O'TOOLE: Good evening. I am Nancy O'Toole, and I'm an environmental engineer living in Phillips. I have years of on-the-ground experience on road construction and hazardous contamination clean-up projects. I've worked in environmentally sensitive locations in mountainous country.

My primary concern is the proposed zone change in the high elevation of Maine mountains. These areas are presently protected from all development. Your predecessors did their research and decided that it was in Maine and New England's best interests to place these fragile places off limits and to preserve them as they are.

Make no mistake, if you relax your protection of a

specific location, it is just a matter of time before you're pressured to open another and then another and then another.

With respect to this proposed project, my experience has shown me that large-scale projects such as this one require thorough feasibility analysis. This includes soil testing, hydrological evaluation, environmental impact statements, and an extensive detailed comprehensive project design plan.

Once all of this has been completed, a realistic cost in time and dollars for the proposed project can be made.

The pros and cons of its value to the area's economy can then be evaluated. The lack of a complete repertory investigation and a design that has passed professional review in the engineering, construction, and environmental protection community makes this project a completely loose cannon.

After reviewing Mr. Lee's materials, only the tiniest fraction of my questions concerning order of operations, actual disposal of rock material, and the true costs of the project have been adequately addressed.

Furthermore, water issues, erosion control, and air quality during construction must be addressed before any permits are issued or exceptions to current regulations are made.

In my experience even the most well prepared projects have potential to go badly astray. In this current non specific state, this proposal will result in a project that is

guaranteed to be plagued with environmental tragedy, safety nightmares, and probably cost in time overruns of epic proportion. If we know all of the details, we can make informed judgments on whether the long-term impacts on the area are acceptable.

Until we have a fully engineered plan, we only have a series of toolbox responses to whatever conditions the project might encounter. This is not the way successful projects are designed and carried out.

Another windmill project I'm familiar with is not placed on alpine summits or the most sensitive protected areas to be found. The wind farm near Great Falls, Montana is located on the low bearing ridge, not in Glacier National Park.

If this sensitive and challenging location is the only place in which electricity can be generated from wind power, perhaps our part of Maine is not suitable for this endeavor. If this is indeed the best location for this project, then Maine Mountain Power should be required to complete all of the analysis and design work prior to asking for this zone change.

Thank you.

THE CHAIR: Thank you. Tom Lewis. And following Tom would be Dean Bennett and Sheila Bennett, if they're both going to speak.

MR. LEWIS: My name is Tom Lewis. I'm president of

the Maine Appalachian Trail Land Trust. On behalf of our board of directors I want to express our strong opposition to rezone this land and build wind power.

THE CHAIR: Tom, excuse me, he's not associated with anything you're doing, Bill, is that true?

MR. PLOUFFE: No. He's not an intervenor.

THE CHAIR: I just wanted to make sure you're not an intervenor.

MR. LEWIS: I'm not an intervenor.

THE CHAIR: Okay, that's all I need to know.

MR. LEWIS: I'm also speaking on behalf of myself and many friends and colleagues who volunteer thousands of hours each year in building and maintaining trails in these mountains, clearing blow downs, constructing camp sites and lean-tos, maintaining boundaries, counting birds, and monitoring wildlife, and raising the money needed each year to protect and care for this wonderful mountainous region.

Our land trust recently acquired 2,3000 acres in these mountains. It finally included the summit ridge of Mt. Abraham, which is one of the state's most highly prized mountains.

Title to the Abraham land is now held by the State. This effort, with support from the State and others, has resulted in protection of over 6,000 acres over the past few years and has involved significant public and private money in

investment. The Land for Maine's Future program has been a major contributor.

There is broad support for land conservation in this region, and we will continue to work with the State, with landowners, and with others as we move forward to protect more of this land.

These mountains are an icon to many, even spiritual to some. An individual from the midwest who made a major contribution to our Abraham campaign wrote, In June and July of 1978 I hiked all of the Appalachian Trail in Maine. That hike was one of the high points of my life and one of the high points of the trail was Saddleback and its surrounding mountains.

To help make that experience at once moving, spiritual, and physical open to generations, I am making an anonymous donation to the Western Mountain Campaign. This donation is made in memory of my sweet wife. She was not herself a hiker but she loved listening to my stories, and I believe that this donation in her memory would warm her spirit.

This remote and undeveloped high mountain region is a beautiful and special place in Maine and is not appropriate for this development.

As a private housing developer in Maine, I'm keenly aware of the issues of sprawl and inappropriate development that plague our state. It has been disappointing to see

positions taken by opposition and in the public supporting wind power on Redington, while dismissing the siting issues, which should be at the center of this discussion.

Anyone who has taken a careful and objective look at the Redington and Black Nubble proposal from a land use perspective has concluded that this is the wrong site for an industrial wind power plant.

The local developer of this project is not experienced in this scale of development or in any other development as far as I can see. This lack of experience is very troubling for me, particularly for a project that has this much impact on the land. He's been urged by many over the years to consider an alternative site.

Major development of this type in the middle of one of the state's most spectacular and undeveloped mountain regions is absurd and runs against recent efforts in Maine to control this type of inappropriate development.

Contrary to assertions by the developer, there are other sites in the state and in the region that are far more significant.

For the investor, Edison Mission Energy, the site doesn't matter. They have no connections to this place other than the desire to get a reasonable return on their investment, which is assured through Federal tax credits.

It should be noted that Edison owns or leases six

coal-fired power plants in Illinois, a coal-fired plant in Pennsylvania, and they're building one in West Virginia. Edison appears to see little risk that this investment in Redington will displace in any way the coal plants in the midwest.

The solutions to clean air are complex, and we need more than symbols. Maine cannot do this all by itself. We already can see our renewable standard by a large margin.

The future of wind does not hang in the balance over Redington and Black Nubble. There's a lot at stake here, and we have to get a grip on this before we destroy some very special places.

MR. WIGHT: Half a minute.

MR. LEWIS: Unfortunately what is missing is a carefully considered policy for siting wind power projects in the state. Hopefully the recent rash of wind power proposals will result in a policy establishing which sites are suitable and which are not.

It is certain to many who work on this issue that if siting policy had been developed, it would have ruled out Redington and Black Nubble.

The policy to guide the siting of renewable energy production can be found in the Maine Rivers Act. This legislation declared that certain rivers, because of their unparalleled natural and recreational values, provide

irreplaceable social and economic benefits to the people in their existing state.

Many mountains -- am I done?

MR. WIGHT: Yes. Thank you.

MR. BENNETT: Mr. Chairman, members of the Commission, my name is Dean Bennett from Mt. Vernon, Maine.

I speak in opposition of the application for development of the Redington Wind Farm but not in opposition to wind power, per se.

I could use a rational approach to try to convince you that this is a bad idea. In 1988 I wrote a book, Maine's Natural Heritage. It included sections that spoke in scientific terms of features that could be harmed by this development.

It might interest you to know that I didn't initiate this book, the State did, as a way of educating the public about what is unusual, rare, and unique concerning Maine's natural environment.

I worked under a contract signed by the attorney general at the State planning office. You will hear from others much of the rationale presented in this book for protection of this area.

I could review with you how I worked with the committee of the Maine Appalachian Trail Land Trust, of which I was a founding member, to identify the natural values along the

281 miles of the trail in Maine. This mountainous area of the Appalachian Trail clearly emerged as the area of highest priority for our land acquisition and protection efforts. Others will be more specific about our group's findings.

I could also argue that making this decision is premature because the alternatives are not clear during a time when you're putting in place factors to consider for siting wind power projects and during the time when technological advances are suggesting that we keep an eye on other sources that might be less obtrusive, such as tidal power or lower elevation wind power facilities.

Rather than go into these arguments, I'm going to speak from the heart as one who was born and grew up in Lock Mills in the hill town of Greenwood, Maine, 50 miles to the southwest from here, and for 71 years I've had a love affair with this state.

Across the street from my childhood home sits a large wood turning mill, in which members of my family were workers. These relatives felt an attraction to the Maine landscape, and they conveyed that feeling to me.

Over the years, however, I have seen a whittling away of the qualities of natural beauty, peace, quiet solitude, remoteness, challenge, and clean air and water that we have too often taken for granted.

With this has come a rising concern over the future

of our state's environmental quality, including the natural character of this landscape. Never before are we in need of opening our eyes and seeing clearly what we have, the threats to what we cherish and the direction we must take to protect these values.

The Redington/Black Nubble wind power development must be denied because it doesn't meet your criteria for protection, it is proposed for a location that is without question a place containing many of the highest values of Maine's natural heritage, and in the big scheme of Maine's energy future, this potential site for wind power generation is trumped by other values that relate to Maine as a special place for life and living.

Before we embark on the course of destroying the beauty of our mountains, it may serve us well to return to the wise counsel of Robert W. Patterson, a founder and former president of the Natural Resource Council of Maine.

Speaking at the first Maine Mountain Conference in 1972 on the protection of our mountains, he observed that, "When beauty and nature are endangered, we find ourselves usually listening not to the philosophers but to the chambers of commerce. We are ashamed or afraid to stand up and say much of Maine should be left alone just because it is unique, irreplaceable, and incomparably beautiful."

Thank you.

THE CHAIR: Following Sheila is Chuck Knox. Bob Cummings.

MS. BENNETT: I'm Sheila Bennett. I live in Mt. Vernon, Maine. Yes, I am the wife of Dean. We fruitfully agree on the issues but connect them a little differently and this is my take on the present issue before you.

I am opposed to the request to the change in the zoning of Redington and Black Nubble mountains from mountain area protection to a planned development district.

I want to be clear that I am here in opposition to the zoning change, not in opposition to wind power.

If some other project were in need of a change from mountain area protection, I would oppose it as well.

First, much has been made of the need for industries to have predictability in order to plan and remain viable. Industries in Maine's wild lands can find predictability by way of the zoning set out in the Commission's comprehensive land use plan.

Here areas are identified that are appropriate for protection and others that are appropriate for development.

Besides industries such as forest products, tourism, recreation, and energy, there are organizations that depend on predictability. Some are interested in the protection of certain areas and rely on predictability to know where to focus their intention. As a result, there are significant efforts

under way to acquire and protect the high peaks in the area under consideration.

As an example of this effort is the purchase and protection of Mt. Abraham.

Secondly, there needs to be recognition of the effort and expertise that led to the inclusion of Redington and Black Nubble in the mountain area protection zone district.

Since the purpose of the zoning of an area marked PMA is to -- and I quote -- "Regulate certain land use activities in mountain areas in order to preserve the natural equilibrium of vegetation, geology, slope, soil, and climate in order to reduce danger to public health and safety posed by unstable mountain areas, to protect water quality, and to preserve mountain areas for their scenic values and recreational opportunities, the change to a development designation ignores the values originally identified."

There should be great reluctance to go against the recommendations that led to the mountain area protection designation no matter the kind of development.

Finally, I urge the Commission to acknowledge the importance of the present zoning, recognize why Redington and Black Nubble were included in a protection district, and not be distracted by the debate over energy alternatives. In other words, stay the course. Provide the predictability. Protect the natural resources that have already been identified.

Thank you.

THE CHAIR: Chuck Knox.

MR. KNOX: My name is Chuck Knox and I'm here representing no group or organization, just myself. My wife and I live in Coutoonook, New Hampshire, and we are property owners and tax payers in Adamstown Township, not too far away.

As a boy I grew to love the mountains of western Maine starting in 1940s, and as a man I still treasure those mountains.

Over the years I've worked in a number of different capacities in the natural resources and environmental field. That includes 21 years working for the State of New Hampshire's environmental agency dealing with air, water, and waste management issues. I've also worked for conservation organizations, and I've also worked in industries, specifically for a mining company in the Pacific northwest working, as a land agent in Washington and Montana.

So I think I bring to the topic a broad perspective and I see all sides of it. I think, thought, that without a doubt -- in my mind at least for this particular site -- I ask that you not go forward with this proposal.

I would like to read a brief statement into the record.

The mountains of northwestern Maine are unique. As someone who has known and loved this remote high country for

over 50 years and as someone who has also lived in many other regions, too -- including California, Colorado, Washington state, Ohio, New York, and other parts of Maine -- I recognize and appreciate that there are few places like this anywhere, certainly east of the Mississippi.

The proposed industrial structures high upon the ridgelines of these mountains as proposed would intrude immeasurably upon this special area.

People have been drawn to this region for a century or more not to view man-made structures -- industrial structures in this case -- but to savor the remote vastness and scenic qualities that our region affords.

Therefore, keeping the scenery as is, as much as possible at least, will in the long term provide the greatest economic benefit for this scenery dependent region.

However, were the proposed towers and blades to sit atop these high ridges, they would draw the eye from far and wide. They would be visible from enumerable peaks for countless miles across Maine, as well as from key vista areas along several well travelled highway routes both day and night.

Not only Saddleback and Sugarloaf would these windmills be seen from but also Bald and also Bigelow, also Abrams, also the high peaks of the Mahoosics, from Old Spec and Bald Plate, perhaps even as far away as the Presidentials over in New Hampshire.

But fortunately the Maine Land Use Regulation Commission has adopted regulatory measures designed to help protect the integrity of northern Maine. I applaud the Commission's foresight to adopt with strong support from the public elevation-based and scenery oriented requirements.

I would also strongly urge the Commission to uphold these requirements in its decision making regarding this proposal, including LURC Chapter 10-E, scenic character.

The significant height of the towers and blades, along with their movement, reflection, and great numbers, coupled with their positioning along the length of the high mountain ridgelines, is certainly not in keeping with these standards.

The standards rightfully require that structures shall be designed to, "minimize visual impact" and to ensure placement and locations least likely to block or interrupt scenic views.

This is certainly not going to be the least likely to block scenic views in this situation nor is this proposal consistent with the accompanying LURC standard for elevated ridges, a standard which requires the design of a development shall preserve the natural character of the ridgeline.

In short, while industrial alternate energy sources have their place in many locations, this is not one of them. Maine's precious northwest mountain country, a wonderful draw

for tourists, as well as a special home for local residents, should be the last place to site industrial, highly visible structures, structures which I might add are visible from well travelled highways, specifically Route 16, Route 27, Route 142, and one of my favorite drives is along Route 4 from Oquossoc to Rangeley.

We all need aesthetics in our lives. Even for a flickering moment -- as I drive, at least, that route from Oquossoc to Rangeley -- and come over a ridge and I see before me stretch something that few people really know or get to enjoy, and that is the mountain ridgelines of Beaver Mountain, Saddleback. In the far distance on clear days you can see Bigelow, and right in the front -- right in front of you -- is, of course, the two mountains we're talking about, Black Nubble and Redington Ridge.

And to site these structures right on top of them you would literally have them right in your face, no question about it.

So in short -- moreover, to exempt these facilities from meeting the LURC standard would surely establish a precedent that would likely have far reaching consequences for any future proposals elsewhere throughout Maine's mountain country.

Thank you for your consideration of my comments and I wish you well in your deliberations.

THE CHAIR: Following Bob Cummings I'm looking for David Hodgkins and Governor King.

MR. CUMMINGS: My name is Bob Cummings. I live in Phippsburg. I'm speaking in opposition of this project.

I've been involved with Maine trails for at least 20 years. More than 30 years I've been involved in the design and building of a couple of solar energy efficient houses. I participated in and designed the energy systems and the insulation for a 1862 Town Hall, which I suspect is one of the few 19th Century super insulated buildings in the world.

First some basics. I believe the global warming threat is both real and serious. We need both increased conservation and alternative sources of energy to avoid a likely global disaster.

I don't think that we should severely -- I'm sorry I'm shaking. I just got out of the hospital, but I'm going to finish -- we should severely damage -- I don't believe we should severely damage the mountains of Maine. We especially don't need to support every wind project in the mountains of Maine where developers think they can make a profit.

These high peaks, the cluster of 4,000 summits surrounding the project, are the jewels of inland Maine. Were it not for the beauty of the coast, these mountains would have been preserved long ago.

Sadly, Maine has not -- has lacked to call attention

to the unique ecological and potential economic value of these mountains.

My wife and I last summer spent seven weeks visiting the northern National Parks, and many of the State Parks between here and Olympia, Washington. We visited the Adirondacks, Indiana Dunes, Grand Tetons, Yellowstone, Glacier, the Cascades, Olympia, and continued and came home through Canada.

As we worked our way west, I began to realize that these high peak regions of Maine were equal to or exceeded all the parks we visited.

Desecrating this region would be the equivalent of placing wind towers next to Old Faithful in the high mountain meadows of Yosemite or amongst the receding glaziers of Glazier National Park.

Maine mountains have a different beauty from those than the barren mountains of the west but not an inferior beauty.

By world standards we live in a northern rain forest. There is nothing like Maine anywhere else in this nation. Know this from personal observation.

A few years back I went and took the train to Georgia from Boston and walked back home on the Appalachian Trail. In talks with what I observed and in talks with others, they all thought of Maine as a wildest and most remote section of the

entire trail.

This project will serve as changing what is now one of the least developed viewsheds on the entire 2,175 miles of the Appalachian Trail to the most developed viewsheds of that trail. It will change the nature of these mountains totally and no power on earth can stop it.

I would like to say just briefly about the pictures on the wall about the so-called photo simulations.

Whether these simulations are accurate or not, they are not a -- they do not show what the human mind and the human eye will see from these projects. I know this is so because I know how the mind and the eyes work.

But just by happenstance from my house, which is on the Kennebec River, an estuary, just a mile away the distance of the first tower from the Appalachian Trail is an 80-foot church steeple. Everybody who comes in and looks out my living room window is amazed at the beauty of that scene. That church steeple, 80 feet high, dominates the view because that's what the human mind sees.

I can assure you that nothing, nothing that will -- I can assure you that something five times higher will be far more visible all through this area than anything those pictures on the wall show.

Thanks for listening.

THE CHAIR: Dave Hodgkins.

MR. HODGKINS: I'm Dave Hodgkins. I'm from Walpole, Mass. I guess I might be the only second out-of-state that has the opportunity to address the Commission and I really appreciate that opportunity.

I'm a maintainer and a monitor of the boundary of the Appalachian Trail over in the Elephant Mountain area, and you might wonder how come I am willing to come up from Massachusetts three or four times a year to clear blow-downs and that sort of thing.

It goes back a ways. I developed a love for Maine because my dad was from Eastport and we used to spend summers in the Ellsworth area.

I graduated from engineering from Orono, and I've taken boys' groups down the Allagash and the St. John's River and up Katahdin and that sort of thing, hunting, and fishing in Maine. Needless to say that gave me a real love for Maine.

I think the part that I love the most, though, which you're most interested in, is the unorganized townships, and I felt I had to leave Maine to make a living, which maybe wasn't right. I was in the electronic industry in the Massachusetts area, but I was never comfortable trying to get into the woods down there. I always wanted to get back to Maine.

Many people like the Moosehead area and the Allagash area and that sort of thing, but that is -- to me that was just too far away, so I started concentrating on the western Maine

area.

I was very fortunate. I put an application into LURC, and I got a permit to build a camp over on Richardson Lake in 1974.

We hauled the wood up from South Arm before the road was put in and built a camp up there with the help of a friend of mine from up in the Stockholm, Maine area that worked for the Bangor and Aroostook Railroad.

It was a disappointment when roads got put in there before I got a chance to really tramp around the woods there. But I appreciate what LURC's doing. I was glad to be able to go through the processing and get the soil scientists in and do what I had to do to be able to have a camp in that area.

There's a lot of other folks from out of state that love this area because of the natural resources that are here, and I've been thinking about the fact that what kind of a compromise could we have that would help the local economy and at the same time preserve the beauty of the area.

One compromise which I thought was very insightful was the compromise that New England Forestry Foundation came up with to promote for the Pingree family a conservation easement, and the nice thing about that was the woods product people could still make a living, not a one-shot deal in the arm, but continued jobs for many years to come.

If we carry that one step farther, what we might find

is to help the local economy go into the business of taking these wood chips and everything and use them to generate power.

I don't know if you are familiar with the Northern Woodlands magazine, but they had a great article in there just recently about Vermont. Burlington has a wood plant but a lot of the local schools and smaller organizations are putting in wood-fired, either power or maybe it's just for heating, and it's become very efficient.

With all the limbs and things that are left over from the pulp industry and that sort of thing, I would think there would be jobs that could go in quite a while. I do see -- in the Andover area, I do see trucks pulling out with a lot of chips, which maybe they're going to some of these --

MR. WIGHT: You need to finish up.

MR. HODGKINS: -- biomass places.

I'll finish up also with hydro. Hydro is a great renewable thing. I notice on Flagstaff, like you've got a big lake, there you've got a dam, but I don't think there's any hydro there.

On Richardson Lake we have a little dam and maybe that could be hydro. It is owned by Florida Power. But I don't think they're as obtrusive as something up in the air that's in your face.

Thank you.

THE CHAIR: Thank you. Governor King.

FORMER GOVERNOR KING: Thank you, I'm delighted to be here. I'm here as a citizen tonight. I came up from Brunswick this afternoon.

Is Fred still here? Fred, the State House is in fact heated entirely by hot air. I can verify that, and rumors, rumors also are an energy source.

Before I begin, a bit of full disclosure. I am affiliated in my title of "Of Counsel" to a law firm in Portland called Bernstein Shur, which is involved in this project on behalf of the Applicant.

Of Counsel means you have an office, you're there occasionally, but if you attempt to draft a will, an alarm bell goes off in a senior partner's office.

But seriously, because of my feeling about this project, I have refrained from any conversation with either the Applicant or the counsel that's working on this. I told them all I wanted to know was when the hearing was. I'm in no way representing the Applicant.

I'm here really because of two promises: The first I made almost exactly five years ago when meeting with my colleagues from the six New England states and the five eastern Canadian provinces.

That promise involved an aggressive real change making process of dealing with the issue of global warming.

We committed ourselves at our meeting together that

summer to begin a process of dealing with this issue.

I think this case that's before you now presents a classic example of a particularized burden and a generalized benefit.

This is not a typical application that involves economics on one side and environmental concerns on the other. In my view, this is an environmental project and that's why I'm here.

It's the same as taking 25,000 automobiles off the roads. It's 260 million kilowatt hours a year, enough to keep all the city with light, provide electricity to all the houses in the city of Portland.

I worked in the area of electricity conservation. My project that we developed here in Maine in the early to mid '90s was at that time -- and I think still is -- the largest single energy conservation project in the history of the state of Maine and one of the largest in the country. That project involved 48 million kilowatt hours.

So we're talking about five times the energy displacement, if you will, because of this project. This is not an insignificant contribution in the fight for energy independence and against global warming.

All energy projects have impacts. I had to be amused when the prior speaker talked about hydro, because I've been in rooms just like this with just as many angry people advocating

hydro projects in the state of Maine. That was in a former life.

So there are impacts to any energy project, and I think if you compare the impacts of this project to others, they compare favorably. There is no such thing as a free lunch.

The second promise that brought me here tonight is one I made 36 years ago this week to a little boy born in the Skowhegan hospital, my oldest child, and the promise was that I was going to do everything I could to hand the earth off to him in better shape than I found it.

I think a project like this really puts us in the cross hairs of history where we have to decide are we willing to accept some inconvenience, some change, some undeniable impacts that may not be desirable in exchange for trying to change our course of history in terms of the burning of fossil fuel.

Unfortunately over the past ten years New England has made what I consider a bad debt, and that is to go so thoroughly and so deeply into natural gas as the energy source of choice. We've learned that that has both environmental and economic dangers.

This project, once it's built, is essentially free. There's no fuel costs for the next 20 or 30 years. And it will help to stabilize rates in a region in an area of the state and

in our state and in New England where energy and energy independence is a very precious commodity.

So I'm here, as I said, because of two promises. This is not an easy decision, and I don't minimize the heartfelt testimony that you've heard tonight. I've hiked in these mountains with Bob Cummings. I value the mountains. I value the views. I value the unspoiled nature.

But I also value the lives of our people and the environmental impacts of our continued obstinate excessive reliance on fossil fuel.

If we're going to stop, we're going to have to make some changes and perhaps even some sacrifices, and I think this project gives us an opportunity to make statement.

Yes, we'll see the windmills, but when I see them from the top of this mountain, they'll say to me, we, in the state of Maine, are doing something real to deal with one of the single issues of our generation.

Thank you.

THE CHAIR: Governor King, you subject yourself to questions when you come before us, and the Attorney General apparently has a question.

FORMER GOVERNOR KING: Yes, sir.

MR. PIDOT: I'll call you Angus because I did before you were governor and you're not governor anymore, although I hope you are once more in the future.

FORMER GOVERNOR KING: No, I think I gave up that opportunity tonight.

MR. PIDOT: Three times in the last two years I think, but one day I'm hoping to prevail. Maybe when your kids get a little older.

I'm also asking you this question because on a number of occasions when you were governor you grilled me with questions. I just have one for you. It's a rather long one.

You're not only a past governor and of course a greatly dignified man, but also you're a lawyer, as I am, and so as I listen to you and many this evening and many today and for the time I was here last night, many then, I have to think that to this Commission this is not about global warming.

It isn't about wind power, it isn't about alternative energy, it isn't about energy independence. It isn't about acid rain. It isn't even about the majesty of mountains.

It's about this Commission, whether this proposed project meets the Commission's legal requirements as set forth in its regulations that were approved by the legislature as they must be and its comprehensive plan as approved by you.

So wouldn't you agree with me that that's really what the Commission should be focusing on in the legal sense as against the very important, much more important to the world and even to me, issues that you and others have talked about. In the legal sense, the decision is guided by the law.

FORMER GOVERNOR KING: That's right. I agree completely, and as I understand the legal standard, the key phrase in this whole proceeding is undue adverse impact or undue adverse effect, and I think that's a very powerful phrase.

I would point out that legally the legislature knows how to say no adverse effect. In fact, the Rivers Bill, which has been mentioned tonight, says that in certain places for protected areas where it's essentially zero impact standard.

No undue adverse impact is a different standard, and to me the word, the key word, is undue, and that's where you get to talk about global warming because it implies -- what it implies is a balancing test between what are the impacts.

And I would argue, what if this project were advocated by a nonprofit organization that wanted to do something about global warming? This could be portrayed as an entirely environmental project because of its removal of fossil fuels, and therefore the impact is not undue because there are positive impacts environmentally in other parts of the state and indeed in this area.

So if the standard is no undue or no undue adverse impact, I think that's exactly what the discussion has to turn on; but I think the factors that have been brought forth both by the proponents and the opponents -- the majesty of the mountains, the unspoiled nature of the trail, and also the

impact on the air and water and lives that we live -- are perfectly relevant and important in weighing that legal decision.

MR. PIDOT: I completely agree with you, Governor -- or Angus -- but there are in fact about a dozen standards that this proposal has to meet, not just the one you mentioned.

We can talk about that later if you want.

FORMER GOVERNOR KING: Thank you. Thank you very much.

THE CHAIR: We are going to take a little break for the benefit of our court reporter. Five minutes, and we're going to start back up with Terry Tesseo and Dick Fecteau will be the next two people. Please come down front and get ready.

Thank you.

(There was a break in the hearing at 7:59 p.m. and the hearing resumed at 8:07 p.m.)

THE CHAIR: I missed Kyle Duckworth. I'll let him go first.

Are you Kyle? Terry, there's one fellow that I missed. Could you just take a seat, please, and I'll get right to you.

Where is Kyle? Come on down.

Go ahead. Folks, please, if you want to talk, go out to the lobby, please. Either that or sit down.

Folks in the back of the room, either sit down and be

quiet or go out in the lobby and talk. One or the other, please.

MR. DUCKWORTH: I want to thank the Commission for being here tonight taking the time to hear all of our views.

My name is Kyle Duckworth. I'm from Bar Harbor. I consider myself an environmentalist and realist. I'm not affiliated with anyone in particular, although I did have the pleasure of meeting Harvey Lee once about seven or eight years ago.

The first thing I would like to address is some of the talk that I heard about the big bad energy developer coming in to ruin our scenery and steal our land and take the money back to California.

This project is the brain child of a man named Harley Lee who is a resident of Maine, and his motives for doing this are pure.

He's a visionary who started a small company over a decade ago to realize his dream of seeing clean renewable power. He named his company Endless Energy Corporation.

Now, I feel confident that whatever reasons he had to align himself with an out-of-state corporation were good ones, and you've got to admit that $150 million is a lot of money for one little guy to come up with.

The second point that I would like to talk about is the opposition of the project by some of the environmental

organizations. I came here tonight prepared to use the "H" word, but after hearing a lot of heartfelt testimony from people opposed to this project, I don't think I'll use that word.

But I will ask folks who feel that way to step back and take a look at the bigger picture of things, the bigger picture of -- and I don't think it's a stretch to call our current situation a crisis.

Anybody's who's bothered to read the facts about global warming would have found the evidence to be compelling and overwhelming, and we have been getting away with an unsustainable energy policy for a long time; but the day of reckoning is coming up pretty quick. I heard a number of people talked about their concern for their grandchildren, and that's the kind of concern that we need to have.

I've heard some folks talk about biomass as an alternative. Biomass is burning. Burning produces carbon dioxide, and that's the greenhouse gas that we're worried about.

So to address this huge problem that we're faced with these days is going to require a change in the way we live, a change in the way we think, and a change in what we consider is important.

Everybody here, everybody around the country, is going to have to give something up. They're going to have to

make some sacrifices if we're to change our future.

Here in Maine we're being asked to sacrifice a view. We can talk about all the other factors that we've talked about tonight, but basically we're talking about a view. What has disappointed me is that people who in other ways would call themselves environmentalists are unwilling to walk the walk when it comes time to walk the walk.

I think it requires a new way of thinking where we put our own personal wishes aside for the good of all.

I think that this is an opportunity for us rather than a problem. It's a chance for us to participate in a project that can demonstrate -- help to demonstrate the practicality of wind power. It will serve to show all those people out there in the country, in the northeast, who want to do the right thing who are just looking for someone to show them and lead the way, and we can be part of that.

By saying that we are unable to make a sacrifice of our pristine mountains, which I fully admit is saying that we're going to let someone else worry about the problem, we're going to let somebody else make the sacrifices to help solve it.

Finally, I would like relay my one experience with wind power, wind turbines.

Driving across rural Pennsylvania last Christmastime through -- you call it country side of fields and farms and

woods -- and there off to my left was a mountain ridge, a wooded mountain ridge, with tower after tower, a couple dozen at least, of wind turbines slowly turning in the wind.

I can't stand here and lie to you and say that those wind turbines enhanced that bucolic landscape, but I can tell you that they didn't bother me one bit. I looked at them and had a good feeling inside.

I felt hope, I felt hope that we can make the changes that we need to make, I felt hope that someone was leading the charge into a new way of thinking.

And I submit to you that three years from now if these things go up you're going to see hikers on the Appalachian Trail and you're going to look off in the distance and to rational thinking people, they're going to feel the same way I did.

Thank you for your time.

THE CHAIR: Terry.

MR. TESSEO: Terry Tesseo, Coplin Plantation. We've lived for a couple of years now. I've lived in Maine my whole life, I was born in Bangor. I lived in Oquossoc for 27 years.

My wife and I purchased our property up in Coplin. My wife said to me, she said, gees, is this where they're putting the windmills? I said, I'm not sure, I'll check into it.

So we did, of course, and we found out that the

windmills were going to be tried to be put in this area, but we got the little red and green, the Commission's standards book, and we looked in there, and said, those mountains are protected, they'll never let them do that.

So we purchased the property and we built our house. A couple years later now comes the -- we saw a release in the paper where they were sending a permit to you people, and they said that it would fit harmoniously into the natural environment, and sure enough in this green book, that's one of your criteria.

I just don't see how 30, 400-foot tall wind turbines that are 40 times higher than those treetops, flashing at night, flickering in the daytime, could ever fit harmoniously into the natural environment.

As far as people saying about people who live here who object to this raping of our mountaintops, I can only say, these are hard working people. Try living up here, it's tough, very tough, not only financially. It's tough, tough duty. I respect these people. They are hard working, honest-to-goodness people, Maine people.

If I had my druthers, I would rather leave those mountains alone to my grandchildren and my kids than leave them with these monsters that will probably all turn to rust in 20 years.

Thanks very much.

THE CHAIR: Dick Fecteau.

MR. FECTEAU: Good evening, my name is Dick Fecteau. I currently live in Farmington but I was born in Skowhegan.

First, I want to thank everyone for being here, especially the Commissioners, for their interest and attention to this rezoning application.

I have nine minutes of testimony. I cut it down. I said, okay, I can do this in five minutes. That last three speakers -- including Angus and the question that Jeff had for Angus -- I might as well tear this up.

Jeff, you asked about undue impacts. Maine and in the United States, sure we need to find a solution to burning fossil fuels for energy but not at the cost of rezoning the Maine mountains for industrial wind power. This is about rezoning the Maine mountains.

During the past few years we have seen a movement towards removing hydro power dams because we've realized the damage that was done with damming rivers. They affected the natural ecosystems. They hurt the balance of the rivers, and expense to the dams themselves.

We should not -- people have spoken about their grandchildren -- we should not leave to our grandchildren a mountain that's been altered to put these turbines up that they will then have to take down in 25 or 50 years because we realize that it's altered the ecosystem.

A mountain is not going to renew itself like a river does. A mountain is going to take a lot more money. These alpine zones -- I mean, moss doesn't grow on the mountains in ten years. It's going to take a long time for these mountains to come back.

So I would say that the undue impacts, that criteria -- that one criteria that they have to meet is totally unacceptable for these mountains.

Now, these high elevation zones that are in the protected zone, the Maine legislature created LURC in the 1970s and then in the 1970s LURC created the protected zones.

In 1975 the protected area zoned elevation was raised to 2,700 feet, but it hasn't changed. It's still 2,700 feet and has stood the test of time. It should not be changed for this project or for any other project in the mountains.

There were many speakers last night who were bused up from southern Maine by Endless Energy. They all spoke about this project doing something for global warming.

I would suggest that this project is going to do something for global warming because it could very well be that this project is not going to create energy but it's really going to take more energy to build this project than it could ever, ever produce.

There's been questions raised about this project, you know, can it live up to the developer's dreams. It's still

going to take the manufacture of all these plants. They're going to have to be put on the mountain. The mountain's going to have to be blasted, all the fossil fuels that that's going to take. If this project doesn't produce, it could end up adding to the global warming instead of doing anything about it.

Now, at the break I went up to Angus and I asked him, you really didn't talk about energy conservation, that was your field. He said, well, I did the biggest project that was ever done in the state, and that was only one-fifth of what this project is.

But on National Public Radio earlier this week I heard a talk, and there's expert testimony, and a fellow was saying that this country could conserve its way into energy independence. Conservation technology that's out there now could completely delete the need for 40 planned plants, I mean, plants that are much larger than one that Endless Energy is proposing. This country needs conservation leadership such that we haven't seen since the 1970s.

MR. WIGHT: You've got half a minute.

MR. FECTEAU: You've heard a little bit of mention about the 1972 Maine Mountain Conference. Bob Cummings and I are co-chairs of the Maine Mountain Conference that's planned for Saddleback Mountain, October 21st this fall, and there was also mention made of the proceedings of the 1972 conference.

Those are available on-line for anybody to download. They're in a .pdf file, and it's the Maine Appalachian Trail Land Trust website. That's matlt.org. You will find information about the conference and pretty soon we'll have the agenda out for the conference, and I would encourage anyone who's interested in the mountains to come.

MR. WIGHT: You're out of time.

MR. FECTEAU: I'm out of time?

MR. WIGHT: Yes.

MR. FECTEAU: Yes. Thank you. I would ask if you have any questions of me, I would be happy to answer them because you did mention that it wasn't a bad thing to raise a little ruckus once in a while.

THE CHAIR: You can leave the nine minutes with us if you'd like to.

MR. FECTEAU: I intend to do that.

THE CHAIR: Thank you. The next are David Small and Hellmut Bitterauf.

MR. SMALL: Good evening. My name is David Small and I live in Norridgewock, and I appreciate having this opportunity to briefly express my thoughts and concerns about the Redington/Black Nubble wind power project.

My family owns a piece of property in Carrying Place Town Township, which is not likely to be directly affected by this project, it is in the general area and could be affected

by the regional impact of the development.

We also own property on the coast in Harpswell, so the development of wind farms in the coastal region could potentially be of concern to me.

However, for a number of reasons I feel that placing wind turbines on the ocean 15 to 20 from land would be a more acceptable option than undeveloped ridgelines and mountaintops.

The people of Maine, indeed our political leaders, continuously profile the quality of life issues and the attraction of special places as drawing cards which naturally attract tourists and visitors to our state.

These same special qualities are the very things that make Maine different from other states and provide a quality of life that makes Maine as out adopted motto says, The Way Life Should Be. And yet we seem to be intent on destroying these very same places that make Maine such a unique place and so attractive as vacation land.

Anyone who thinks that this mountain range with wind turbines along these ridgelines will be as attractive to ecotourists and visitors as they are in their natural state, are fooling themselves and trying to fool the rest of us.

Please don't misunderstand. I am a strong advocate of wind power generation and view it as one important element of our future energy policy in this state and nation.

However, as with any development, the benefits must

be weighed against the harmful effects it would treat. There are, I believe, many locations in Maine which would support wind power generation facilities without causing the damage that this proposal could create. That includes an area in my own back yard on Beach Hill in Norridgewock which already has communication towers in place.

I hope that the Commission will consider this application very carefully, keeping in mind that there exist other locations that are as viable for power generation and are much less destructive to the surrounding area than this proposal is.

Again, I thank you for the opportunity to speak of my concerns on this matter, and I wish you success in your deliberations.

THE CHAIR: Following Hellmut, Martha Sharp and Frank Melber.

MR. BITTERAUF: My name is Hellmut Bitterauf, and I live in Farmington.

Thank you for the opportunity to address this forum. May I draw your attention to a point of interest.

Currently it stands at 2,700 feet. This altitude, give or take a few hundred feet, is called an alpine region. This region personally interests me and the alpine lands remind me of my youth. I should mention that I was born and raised in the German Alps.

Moving to Farmington in 1978, I continued my hobby of hiking in the mountains. I was surprised to find alpine vegetation at 3,000 feet, while in the European Alps, one finds this at 6,000 feet or above.

The harsh weather here in the northeast creates an alpine environment at a much lower elevation. This fragile nation of this landscape was alluded by previous speakers and the question is, is that suitable for industrial use.

Appalachian Trail is concerned with erosion damage the trail might suffer through an increase in numbers of hikers, and this is only addressing an activity that is environmental friendly as hiking.

So do we know what happens if huge wind turbines are placed in this environment? Excavation will cause massive erosion and filled-up streams. Does this construction have an effect on the aquifers supplying us with precious and now famous water? Bird and bat migration will be affected. The question is, do we really know the ecological consequences?

Furthermore, have the wind turbines been tested to withstand harsh mountainous conditions, and how long will they last?

Why put the wind farm, using the benign phrase, into this fragile environment when so much developed land is available?

That's where the wind is, right? Wrong. Looking at

the wind chart of Maine, the red areas are parts of Maine where the measured wind is suitable for wind power. The white/red band is on the coast as one might suspect. Small sprinkled areas are seen in the western mountains representing the peaks.

Many people spoke of the beautiful wind towers they have seen in foreign countries. I'm asking, are they all mostly on the coast or in the plains? Did they find any in the Alps?

Thank you for the opportunity to voice my concerns about the location of the wind towers.

THE CHAIR: Martha Sharp.

MS. SHARP: I'm here as an interested local citizen. I'm not -- I don't have lots of facts and figures, so I'm very brief.

My name is Martha Sharp. My husband Matt and I live on Gray Hill in Phillips. We purchased land here in 1995 and have lived here full time since 2001. We run a small business selling model trains, specializing in models of narrow-gauge railroads, particularly the railroads that ran in this area -- Sandy River, Rangeley Lakes, Carrabassett, and Dead River, Phillips, and Rangeley.

My first exposure to this area was when I was 13 years old in the late 50s on a camping trip with a group from a girls' camp on a small portion of the Appalachian Trail.

I will never forget the impact that trip had on me,

the beauty and remoteness of the area, the wildlife, the rugged terrain.

I was raised in New Jersey but my mother's family had all come from Maine dating back to the first settlers. It was my dream from a very young child to live here. I moved to Maine in 1970, and when the opportunity came to move from the coast to Franklin County, my husband and I jumped at it.

He was born and raised in Maine, and we both felt that this area was one of the most beautiful in the state.

And I agree with others who have spoken. I've travelled all throughout this country, and I think these mountains are as beautiful as any in the country that I have seen.

After living here for several years, I realize now how important the natural beauty of this area is to its survival economically. Our natural resources and the tourists they attract are paramount to the economy of this area. Destroying that by erecting towering windmills on some of Maine's most pristine mountaintops is a mistake.

My husband and I wonder why this area with the significant natural beauty and fragile environment has been singled out. Is it because it's a poor area and developers feel that local people would not speak out?

For the people of this area to bargain away one of their greatest resources is incredibly short sighted. If I

were a tourist and were shown pictures of areas to travel to and relax at, one with wind farms and one without, I would choose the one without.

We have driven cross country several times and have seen wind power from the interstate on top of barren mountains and hills. There is absolutely nothing aesthetically pleasing or beautiful about them.

We believe the negative environmental and economic impact of wind power in this area will far outweigh the positive impact wind power can offer in a different location.

Therefore, we are opposed to this project.

THE CHAIR: Thank you, Martha. Frank. Is Frank here? Following Frank we have Ted Hershberg and Kenneth Jodry.

MR. MELBER: Good evening. My name is Frank Melber. I presently reside --

THE CHAIR: Frank, put the mic up just a bit and step right up to it so we can all hear you.

MR. MELBER: Good evening. My name is Frank Melber. I presently reside in Freeman Township. I'm retired, I live there with my wife on a beautiful scenic piece of property overlooking one of Maine's most magnificent mountains, Mt. Abraham.

Personally I will not see these wind towers when they're erected on Redington Ridge and Black Nubble Mountains. Nevertheless, I'm here this evening to speak in opposition of

this project -- and I stress, in opposition of this project -- at this time, for I truly do believe that ultimately wind power, solar, hydro, biomass, diesel are all part of the answer to ultimately solve America's problem with fossil fuel pollution.

However, there is a time and a need for everything, and I believe this is the wrong time for this project and it is not needed.

Why do I say that. Let me read my brief prepared statement.

After listening to both sides of this wind farm proposal, I have concluded that the real issue is not an increase in electrical generating capacity for the state of Maine but rather a reduction of pollution by fossil fuels.

Therefore, I suggest that Maine implement honest -- and I stress honest -- conservation methods such as tax incentives to individual Mainers versus corporations from away for the installation of more energy efficient appliances, furnaces, lighting, and solar panels.

And then -- and again I stress then -- then when we actually need increased electrical generating capacity in Maine, we consider first hydroelectric generation, which is presently, which is presently underutilized, as we have previously heard from Duluth Wayne.

Rather than needlessly developing more of Maine's

precious wilderness, remember Flagstaff Reservoir already exists. Its environmental impact is a settled issue. Let's utilize its potential to generate clean energy before destroying more of Maine's hidden jewels.

Thus I hope LURC exercises wisdom once again -- and I stress once again -- as it did in protecting many of Maine's undeveloped lakes from development. If my memory serves me correct, I believe you designated them as gem lakes by denying the rezoning petition for this needless project.

Thank you for this opportunity to speak my mind.

THE CHAIR: Ted, are you here somewhere?

MR. HERSHBERG: Right in front of you. Hi, my name is Ted Hershberg, and I'm here tonight as the president of the Mooselookmeguntic Improvement Association. In my civilian life, I'm a professor of public policy and history at the University of Pennsylvania, and I direct a little center that looks at regional issues, which I find key on this subject.

The MIA, as we call ourselves in shorthand, celebrates its 50th anniversary tomorrow. It was founded by 13 year-round and summer residents on Mooselookmeguntic and Cupsuptic Lakes, but in 1974 the board broadened its mission and its membership to address a broad range of regional quality of life issues.

We had a very passionate but principled debate on our board on this subject, and we reached two conclusions: First,

we opposed the project for many of the reasons that you've heard, outlined particularly by the Appalachian Maine Club and we voted $2,500 to defray the legal expenses of those fighting the project.

The second conclusion we reached was to make clear that we support wind power, but because we have no track record let's make this clear. The board also voted a $2,500 contribution to support research on alternative sites for wind power in Maine.

Early tonight I heard somebody say, Why be in a policy mode that's reactive? If someone owns some land, let's put some wind farms here. Create the criteria, put it into law. Now you know where you can have wind power.

Now, NIMBY, we have absolutely no qualms in facing this issue directly. To us the quality of this region is summed up in two words: Accessible wilderness.

We have consistently fought to preserve this quality, and it's absolutely clear to us that the Redington Wind Farm project isn't compatible with this goal.

Fifteen years ago the MIA catalyzed the establishment of the Rangeley Lakes Heritage Trust. This organization has been enormously successful. Now some 33,000 contiguous acres of land are protected; and last year and the year before when the Pingree Forest Legacy Project was completed, an additional 144,000 acres in this part of the state are now protected.

We urge you to reject the wind farm proposal, and in so doing help maintain the uniqueness and quality of the Rangeley Lakes regions and the western mountains that is so vital to this area's economy and its people.

Thank you very much.

THE CHAIR: Kenneth Jodry and then Doris Jodry. I assume there's some connection here. And Lindsay Rushad, I believe, if she's still here. She spoke to me earlier.

MR. JODRY: Good evening. My name is Ken Jodry, and my wife and I live in Alder Stream Township. We're the only year-round residents in the whole township, and I hope mine is not one of the 40,000 houses you expect to sell power to.

We have lived without electricity for the last 15 years, and if you ran an extension cord from your tower to our yard, we would not plug it in.

We also do not burn fossil fuel, and we drive a small car that probably gets twice the mileage than most of the cars I see out in the parking lot get.

I feel we're doing our share to relieve the global warming problem. Now you're asking me to give up my mountains also.

Last night someone said -- and I heard it again tonight -- the only ones against this project are the ones who don't want it in their backyard.

It looks to me like the ones for it are trying to

keep it out of their backyards.

I have not seen an environmental impact statement, but I'm sure someone has gussied one up. What impact will blasting 12 miles of trench through ledge have?

I live on Route 27 where they're renovating the road, and the last three years a section not much longer than what was trenched what they're proposing here is, and to straighten out a few curves in the road, they've been blasting up there for three years now.

It seems that those from away want to have their cake and eat it, too, and they want us to bake it for them.

Make your own personal sacrifices. Don't expect someone else to make them for you.

Thank you.

THE CHAIR: Thanks, Ken, appreciate that.

MS. JODRY: As you know, I'm probably his mother.

THE CHAIR: Just tell us your name.

MS. JODRY: Doris Jodry.

I am a Native American living in Alder Stream, population two. We are in the third section of the state outside of northern Maine, Central Maine, and southern Maine.

We are only popular when people look for places to put their nuclear waste, drop sludge in the woods, and to develop our beautiful mountain. We have snowmobiling, ATV, fishing, all the good stuff.

We do not need wind towers to scar the landscape, some things that we didn't call for or need. All the extra power is going to be shipped out of state anyway.

We have to save this for our children's children, children. I'm the fourth generation here.

We cannot save electricity or oil because your children and their children are the ones that are wasting it -- now listen to this -- their high powered SUVs, computers, their lit-up yards, and heated Jacuzzis, and pools. So, please, don't blame your elders. We did not have all of these things.

I can say you can live without electricity because my husband and I have for 12 years. By the way, I have ten children.

MR. WIGHT: He said 15.

MS. JODRY: He's only retired since -- I forgot when. When you get older. And I'm not setting down so my memory is not --.

By the way, I have ten children, 22 grandchildren, and 16 great grandchildren, and most live out of the state because they're working.

Here's a picture of my neighbor.

THE CHAIR: Thank you, Doris.

I take it that Lindsay is not here. Stan from Rangeley Plantation followed by Linda Hellie from Lang, and then Harry Tiffany.

MR. GRZYB: Hi, I'm Stan Grzyb. I'm speaking -- I'm representing my home in Rangeley. I'm a resident of Vermont.

I wasn't going to address any issues about Vermont but I noticed two other speakers did, and I think that the Commission should understand that the Searsburg project in Vermont is not talking about apples to apples with this project. It's at a much lower elevation and the towers are much lower.

The other thing that you probably know is last week the Public Service Commission in Vermont denied a permit for a wind project not dissimilar from this one and just two days ago denied a second permit very similar to this permit that you're deciding on.

I would like to -- I'm not a politician, I'm just a regular guy who's been hiking these hills for about 40 years, and I would just like to read what I would like to speak to you about.

I oppose the request to rezone the Redington/Black Nubble area to allow the installation of a major wind power complex.

My personal history with these mountains is reasonably long. I've had a residence in Rangeley Plantation for over four decades, I've had the opportunity to hike these hills in all seasons, and I know them well from the Bigelows to Bemis. There are only a select few areas in the northeastern

United States that still capture the kind of experience that we have here.

This area remains relatively pristine and should remain that way.

I have to remind some of the people here because they weren't part of this. Thirty years ago the citizens of Maine, specifically those in Franklin County, fought a very hard battle to preserve the Bigelows from intense development.

I feel very strongly that we should demonstrate that same wisdom now in maintaining this segment of our beautiful mountains.

We have been given a spectacular area that should be preserved for future generations.

My four sons have been able to spend countless days hiking, fishing, paddling this relatively unmonished terrain with me. My sincere desire is to convince you to protect it for their children.

I'm not a scientist. I can't substantiate all of the scientific data that others have presented to you regarding the inappropriate siting of this wind power project. I can only speak from the heart and hope that you consider such sentiments when you make your decision.

Some of us go to these mountains and can briefly escape the harsh incursions of our otherwise industrialized hectic society.

People need these islands of natural beauty to balance their lives.

Please do not allow these mountains to fall victim to the pressures of industry. Save them for what they are and future generations will be richer for your efforts.

Thank you.

MS. HELLIE: Good evening. My name is Linda Hellie, and I moved to Lang Township just over three years ago because of these pristine mountains.

I am against the rezoning of Redington Ridge and Black Nubble or any mountaintop.

Do you believe the mountaintops in Maine would look like they do if they were not protected?

I believe they would be clearcut and developed by now, which is what will happen if you approve this rezoning proposal.

Your decision will set a precedent for future use of our mountaintops. With the new eminent domain law that was passed by the Supreme Court at the end of last year, opens the door for many commercial uses for our Maine mountaintops and other areas. If this rezoning is approved, I believe you will be approached by many other investors to develop our mountaintops and other areas.

I also believe that it won't be just windmills. It will probably be condominiums, hotels, and many other issues

that you will be challenged on if you deny it. This is setting precedence for what's coming up in the future.

Last night Endless Energy Power said that we, the Mainers, would receive first dibs on the energy. Yes, we probably will receive first dibs, but if they can get a higher bid for the energy in another state, where do you think they're going to sell that energy?

It's not going to be sold for less. It's going to be to the highest bidder.

I also heard last night a number of times how the electric wires that they want to tie into are near them so they can hook up easily. I'm not sure how close they are, but that's what they said.

I believe the 30 turbines that are over 400-plus feet tall is just the beginning. I'm sure before you know they will be asking for approval for more of them because they will be saying all the lines are tied in, our roads are built, so we just want another 30 and maybe another mountaintop.

I am strongly against this, and I ask that you turn it down.

Thank you.

THE CHAIR: Following Harry is Lindsay. Are you there? Come right down front so we don't miss you.

And then after Lindsay is Garret Oswald. If he would get himself ready, too.

Please go ahead.

MR. TIFFANY: My name is Harry Tiffany and my wife is Jane Tiffany, who is sitting over there.

We are flat landers. We've only moved to the state of Maine 12 years ago after 30 years of looking over all the areas in New England north of Route 2 for a place to retire to.

We have seven children, 14 grandchildren, five great grandchildren, and we think we picked the best place. We live in Freeman Township, an unorganized territory.

This area is dear to our life. We have skied for 34 years throughout this country. We've made Sugarloaf our main No. 1 place, and since moving here, I've tried to ski it at least once a week, especially the timber line trail, which views these beautiful mountains in this area.

I come from -- and my wife comes from -- small towns born and raised, but we moved to the Philadelphia area where we spent most of our life.

I was employed by the Philadelphia Electric Company, one of the largest electric utilities in the state of Pennsylvania. I worked 37 years with this company. I was in the plant accounting division. I was responsible in the later part of my tenure with this company to deal with Public Utility Commissions, Federal Power Commissions, Nuclear Power Commissions.

And I have agonized over this particular project for

quite a while, and I've written something, which I would like to give as my testimony to put into the record, but I am not going to read it.

The reason is, I cannot be as eloquent as a lot of people in the last few nights that have spoken here. I'm not as knowledgeable of this area as most of these people who have spoken, but my knowledge lies with one thing: We've talked about the energy crisis and our dependence.

The problem is not here. The problem is with the Federal government.

Private investor utilities were people who planned for the expansion of energy until deregulation. At that time the power part of the energy was taken out of the public's eye and given to investors.

Now, certain types of energy have not been profitable in the past, but we need this energy, so the Federal government had passed an energy bill recently that gives incentives which comes from your and mine tax monies, from our kids' tax monies.

Now, I was with the public utility for 37 years. We fought constantly with the Federal government on its policies, so I recommend anybody in this room that wants energy and wants it now not to address this forum but to address your Federal people in the Federal government.

Get out your pens, your computers, and deluge them with information that you want action on clean energy. It's

available. There are ways of doing it that they are sitting on.

So that's my comments.

THE CHAIR: Thank you, Larry. Lindsay. I guess we got to you finally.

MS. RUSTAD: Thank you for not overlooking me. I do appreciate that, and I appreciate the chance to make a few comments. As my predecessor said, I will not be as eloquent as some folks, and my comments are written on a place mat from Red Onion in Rangeley, so I promise to try to make them quick.

Again, my name is Lindsay Rustad. I'm from Cumberland, Maine. My training is as a forestry ecologist. I also have a camp in the Rangeley region, I am a former Appalachian Trail through hiker.

As a forest ecologist I spent a lot of time since the early 1990s actually studying the effects of global climate change on northern forest ecosystems. I currently also run an international consortium of over 300 scientists from 24 different countries, and I'm also leading a synthesis of kind of a regional effects of global climate change in our northern forest ecosystem here in the northeastern US and eastern Canada, where the consortium has some 40 US and eastern Canadian scientists.

So I speak from the science perspective, and it is just absolutely unequivocal that global warming is the most

important environmental issue of the 21st Century.

I think there's complete consensus on that, and global warming is caused by increased atmospheric $CO_2$ and other greenhouse gases, and those are coming from increased fossil fuel emissions, as well as changes in land use.

So within the last century we can now again with complete consensus -- never complete consensus -- but a pretty good consensus from the scientific community saying that we have seen an increase globally of about .69 degrees C, and regionally, here in New England, here in Maine, about one-half a degree C, a little over 3 Fahrenheit.

And I know when I make these comments people roll their eyes and say, what do we care about that. But within the last five years, we have been able to link this change in temperature, slow as it's been, to very dramatic changes across the landscape, including an increase of heating degree days, which, of course, we kind of like.

Also with those, increases in ocean surface temperature and in lake temperatures, and earlier ice-outs -- which many of us are probably familiar with -- changes in the growing season, changes in synology, and change in species distribution.

So these are things that we really learned in the last five years that we can put our fingers on.

The projections are for an increase of 2 to 5 degrees

C, or about 3 degrees C, 5 degrees Fahrenheit -- play the numbers around -- and that is actually a huge amount. That would put our climate here in Maine similar to Baltimore, Maryland. Barry Roth, from the University of New Hampshire has said this many times -- of course, they're having 103 degree temperatures right now.

Along with this, our science also suggests that these kinds of changes are going to have very profound effects on our ecosystems, including changes in species diversity, changes in forest productivity, changes in wildlife, changes in pests and pathogens, and changes in the ability of our forests to sequester carbon and mitigate against climate change.

So in that context, it is a question -- as Angus King said -- about climate change or at least it comes into the question.

I am very -- I'm an Appalachian through hiker, a local landowner, I've spent a lot of time and energy -- I, too, care very much about our birds, about our bats, about our endangered species, and our fragile ecosystems.

But as a global climate change scientist, I also worry that some of these habitats are going to go away. These species are going to go northward, they're going to go higher up in elevation, and they're going to run out of elevation.

So I think it is a question about the care for the environment, but I think it's a bigger question, not so much a

local issue.

I am very sympathetic to the question on the view shed. I'm an Appalachian Trail hiker, but I also have to say that it's such a personal -- I particularly think that wind turbines are majestic and they're beautiful across the landscape, and as an Appalachian through hiker, if I saw one wind turbine, 30, 40, 100, I would feel very positive about that.

In general, also I think the US is woefully behind some of our international colleagues in terms of clean energy production. I've actually spent a fair amount of time in Europe over the last five years, and there is almost around every corner, there is now a wind turbine and a wind farm. It's very accepted over there, and again, they're just beautiful across the landscape.

So I personally believe we need to put our money where our mouth is, step up to the plate, and begin to work on some of these clean energy resources here in the US.

Thanks.

THE CHAIR: Garret Oswald.

MR. OSWALD: Yes, sir. My name is Garret Oswald, and I'm from New Portland.

MR. WIGHT: Could you put the mic up.

MR. OSWALD: Again, my name is Garret Oswald. I'm a resident of the town of New Portland, which is just a little

bit south of here. I'm the director of the Maine Jobs Council and staff to the governor's workforce cabinet, as well as a registered Maine guide.

I come here tonight as a concerned local resident who opposes the Redington wind plant project for reasons that have been stated last night and again here tonight that briefly I'll just run through.

It's bad for our economy, the tourism, natural resource-based economy will be impacted. Restaurants, motels, gas stations, and guide services. People won't come back every year to see blades turn. I just don't believe that for a minute.

No new local jobs will be created by this project. The installers will be from away, and the office jobs will be somewhere else. Thanks to technology, they don't need to be here. They could be in some other state like California.

It's bad for the mountain environment. There's negative impacts on birds, bats, wildlife, we've heard all of that. Most importantly, Maine already leads the nation in clean renewable power generation, and we export a surplus of power into the New England power grid.

So when hear last night and again tonight a lot of the comments about global warming, we need to be clear about that.

Again, I'm not against wind power; I'm against the

placement of this particular project.

We certainly need to address global warming. We certainly need to develop alternative sources of energy. But to start that process in undeveloped in a back country recreation area that is one of the finest east of the Mississippi seems ridiculous.

I and others choose to live here in this area for a reason. We live here for what's here and what's not here. What is here is mountains, rivers, forests, and wildlife. What's not here is industrial development and all that goes with it.

We settled here for that reason, for the natural beauty, the recreational opportunities, the quality of life that currently exists here. I would urge you strongly to give consideration to the culture, the heritage, and the value of these local people.

If we do this, we will alter forever the character of the western Maine mountains.

Thank you for your time.

THE CHAIR: Ken Haley, followed by Susan Stowell and Bill Hewson. Are those folks here?

Please go ahead.

MR. HALEY: My name is Kenneth Haley. I appreciate the opportunity to speak here tonight. I've heard a lot of comments here, and it looks like it's pretty much unanimous in

the room that everybody is in favor of the wind projects or wind power.

There's also a lot of talk about hikers, and I too am a hiker. I have hiked a lot of these mountains like a lot of us. I'm from Rangeley Plantation. I've spent most of my life here in Maine, and I've hiked the Appalachian Trail in Maine from New Hampshire/Maine border to Mt. Katahdin.

During that time there's several things that stuck out in my mind. One of them is the beauty of the area and the whole, all the mountains, the valleys. There's a lot to make it an experience that I love to do and I'll continue to do.

I started hiking on a trip one time and this bull moose came across Saddleback the second week in September and hit a whiteout blizzard where I couldn't see anything. But the thing that stuck out in my mind was getting over here to Sugarloaf Mountain. We took a side trail off the Appalachian Trail, half a mile on top of Sugarloaf. The old gondola building has 360 degree views, and again it was in the middle of September, the restaurant at Sugarloaf and the lights were all lit up bright, and what a beautiful view it was from that 360 degree gondola building. There was probably about 20 of us up there in that building that night.

It was -- some of the stories everybody shared concerning the mountains and the things that they remembered, a lot of the hikers commented on hiking through Vermont and some

of the ski areas there where they had the nets where they catch you when you come off from the chair lifts so you don't fall, coming off and they stayed there for extra days because they enjoyed that part of the Appalachians and that part of the hike, which is not just a natural beauty with nothing on it. It's the ski areas that had the trampolines and things they used them for and they used them to rest.

One of the things that I remembered about it was -- the biggest thing was hiking Bigelow mountains. My wife and I hiked them over Labor Day weekend, and when you get on the Bigelow and you start hiking north, when you look to your left as far as you can see, you see Flagstaff Lake and all the mountains and very little development on the left side of that view there from the Bigelows.

You look to the right and you see all the ski trails at Sugarloaf and you see the buildings and the restaurants and the lodge right here, and again, that's just as beautiful as looking from Flagstaff with very little development on it.

I think someday -- three or four years down the road, whatever it's going to be -- the hikers hiking that Appalachian Trail and loving these mountains like most of us here do, they're going to be taking side trips over to Redington/Black Nubble to see those wind towers and consider that a thing of beauty.

I want to move on from a hiker to a little different

aspect. One March morning over at my house in Rangeley I received a phone call from a friend of mine, and he said, have you ever looked at the Endless Energy site on the Internet and seen what those wind towers are going to look like from Rangeley. He reminded me that I was a partner in a large subdivision on Bald Mountain, which I am -- I'm glad I am, it's one of the most exclusive subdivisions in the Rangeley area, and we were very fortunate to sell seven of our 14 lots almost immediately.

The wind power is going to be visible from those lots that we're selling and there's going to be a lot more lots to come on that Bald Mountain subdivision, and I guarantee that people are going to be seeing that and seeing the wind towers and think that is a thing of beauty also.

What brings me to that, those people that bought those lots and those people who are going to continue to buy those lots are not the working men and women of North Franklin County. Those people who bought them bought those lots to have beautiful second homes on to come up here to enjoy our beauty, snowmobiling, skiing, hiking, or whatever.

And it brings me to the economic impact of this project that I think is so important to North Franklin County in this area, and that is this: I've only been involved or looked at a small part of the project, approximately 12 percent of it, and of that 12 percent of that project, there's just the

construction part, the clearing of roads, and the turbine sites, there's over $5 million in wages that are going to go to people in this North Franklin County area. When you take the economic multiplier of that $5 million, it's going to have a 30, $35 million dollar economic effect on North Franklin County.

I appreciate it, thank you, and I'm here in support of the Redington wind tower project.

THE CHAIR: Thank you, Ken. Susan.

MS. STOWELL: Good evening. My name is Susan Stowell, and I have some questions for you folks to ask yourselves when you make your decision.

First of all, I assume you ended up on the LURC board because you have common sense, at least we hope so.

So assuming that, I would like to ask you these questions and make the comment that I feel what we're discussing, the project, is a business effort. It is an economic decision you are going to make and help answer this economic problem.

I want to ask you a couple of things, but first of all, you must change the zoning if you're going to do this.

How is LURC going to maintain its reputation if you create, as you did, a statement and zoning protection, then you turn around and change it?

How is LURC going to be presented down the road if

you make a statement, somebody will say, just wait, they're going to change their mind. So you've got to be very careful in making this decision.

How are you going to make your decision to change your mind for this passage? If you think about the impact, either visual or no untoward impact, what's going to make your decision for the passage? Is it going to be the project must be successful in order for it to pass?

Does Endless Energy have contracts ready to sign with power people? Are they going to be accepted readily into the power grid? For how long and at what costs?

I believe the power is going to be very expensive to buy. Maybe the powers at be in the power grid don't want to buy the power because it is too expensive. That happened to somebody that I know that had hydro power. The power grid would not buy it, it was too expensive.

So how do we know how long the contract is going to be and will the power grid buy the power? What's going to happen to the business if the Federal tax credits are cut? They are shortened.

Is the business going to be able to keep going because they don't have this money? What's going to happen? That's an impact that needs to be considered.

Next is the cost of tourism here. Now, people -- a lot of people don't like the idea of the power of tourism.

Right now I believe it's the largest in the state for income.

I was on the Maine Tourism Commission representing Arts and Heritage. This part of the county desperately needs jobs. Ecotourism has been suggested. We're the perfect place to do it. Those jobs that might be here for building the roads, that would just be a certain amount of time.

Will that overcome the jobs that might be lost because of ecotourism not being able to continue? People not coming back because they don't like what they see?

That's something that you have to ask yourselves.

I'm surprised your eyes aren't glazed over with all the people commenting, and I thank for listening.

I think everybody in the room agrees that we want to save electricity, we went to save energy.

My question is: What are other states doing to help themselves as we have produced enough electricity for ourselves? Do we need to produce for other states that maybe aren't helping themselves?

Ask yourself that question. Should we will the top of our mountain to help other states? Are they helping themselves?

Live with yourself, with your answer if you change what you have stated with LURC's comments.

Can you live with yourself with your answers?

That is all. Thank you.

MR. HEWSON: Good evening. Thank you. I'm Bill Hewson, I'm a resident of Kingfield, and some of my friends consider me an environmentalist and I am a hypocrite. I say that in jest, and I say that in your position also.

A little bit of background. I have served on the planning board in the Town of Kingfield, I know the difficult position you're in, and I also know this issue very well having done a lot of research on it, and I think with this issue I find the more you know, the more difficult this issue becomes.

I have spent my life working to protect the wild places of Maine. I actually spoke at my high school graduation and on an essay on the value of wilderness. I work very hard to fight the Big A dam and actually guided this Commission down the West Branch of the Penobscot way back in the 80s.

I was recently awarded in 2002 an environmental award for my work to protect wild places in Maine by the Natural Resource Council of Maine, and I'm currently serving on the board of directors of the Natural Resource Council of Maine.

As a registered Maine guide, I have spent my life trying to instill a sense of place, and that is certainly what you're hearing tonight. I would like to take some credit for it but I don't think I've guided any of these folks, a few thousand others.

It's very easy when you're connected with a place to want to protect it, and certainly the western mountains of

Maine are a place that are worth protecting and certainly that is part of your job.

The difficulty with this issue is that the western mountains of Maine are in danger from more than development. I drove today and I've been guiding recently on a lake in northern Maine that you have well protected. It is not developed. It's gorgeous for nights on the lake, and it's a very big lake in northern Maine.

I saw no lights. Absolutely gorgeous. But at the same time I have to tell my children that they can't eat the fish out of the lake more than once a month. That's real. That's mercury pollution. Where does that come from? It doesn't come from Maine, it comes from out-of-state coal-fired power plants.

Global warming is real, mercury pollution is real. These are difficult, difficult issues.

Your job is to balance and protect the areas of the state of Maine that you are charged with, as Governor King said, used the words no undue adverse effect.

The difficulty with this issue is I feel that the mountains of western Maine -- as the lake that I just came from this morning -- is threatened by more than development. There is undue adverse impact from sources other than development.

So this is a very, very difficult decision. I've lost sleep over it, as I'm sure you will. We have wrestled

with it.

The Natural Resource Council of Maine has come up with a viable, what I consider is a viable, third alternative.

I guess I'm the only one here to speak to it tonight, but I think that it allows us to balance both.

Redington is about 4,000 feet. It is clearly within more of a wilderness area. The Applicant owns it. If it was to be put into permanent protection by the Applicant, I think you could meet a lot of the needs of the people speaking so eloquently tonight opposed to the project.

I also think that Black Nubble is a more viable alternative. Black Nubble is further from the Appalachian Trail, it is lower in elevation, and will make a significant and viable contribution to renewable power in the state of Maine.

I would ask all the people present tonight -- the great thing about tonight is that you're hearing people from both sides who are here trying to fight to protect Maine. What a great thing.

But I would ask people from both sides tonight to consider an alternative, to place Redington Mountain into permanent protection and at the same time to not only support, but encourage, wind power in the other parts of the state, to encourage and support as actively, as you are tonight, come out and actively work towards renewable energy and conservation.

Thank you for your time.

THE CHAIR: We're looking for Ann Marsh followed by Peter Garrett. Is Ann here?

After Peter is Bob Brown and Rose Lowell.

MR. GARRETT: My name is Peter Garrett. I live in Winslow, Maine; I'm an environmental scientist, actually a geologist. I'm a builder of an energy efficient solar home and a member of the Natural Resource Council that you just heard from, and I'm a developer of trails, too, in central Maine, and an avid hiker like many other people here.

I've come to make a couple of comments, one of which was made just not far before me but I would like to make it again, and the other is comment that I haven't heard yet.

One is to describe an experience that my wife and I shared this summer in Denmark, namely, staying with friends who looked out of their windows at wind turbines.

They were recently installed in farm land. We learned about how they came along and how some neighbors were opposed to that.

We also shared with our friends the beauty of these structures. I'm surprised to be telling you this, but it's so. They are not only some of the most elegant man-made structures that we had ever seen, but their slow winding we also found very, very peaceful and inspiring.

Seeing and living with these wind turbines was one of

the highlights of our brief visit to Denmark, as much as it was the Baltic Sea, the fascinating farms of Bon home island, and the singing of black birds and nightingales. They were a beautiful part of that trip.

So you've heard a little bit about how other people have also found out about these wind turbines.

I would also like to describe an experience from this last weekend when I was on a field trip with the Geological Society of Maine in the boundary mountain a little bit to your northwest.

Frankly, I was appalled at how these mountains are not pristine. The clearcuts, of which there were many, were ugly, the slash seemed to be everywhere, the woods' roads were almost as wide as Route 27. These are industrial mountains and forests already.

So in short, I'm in favor of this proposal. It will not cause undue environmental harm to this area, and it will produce a considerable amount of clean energy.

Thank you for the opportunity to speak to you.

THE CHAIR: Thank you. Bob.

MR. BROWN: Good evening and thank you for this opportunity. My name is Robert Brown. If you live locally you know me as Bobby Brown. I'm a Kingfield resident. I am currently the interim director of the Stanley Museum and also a marketing director down in Farmington for a publishing house.

When I came here, for the first three and one-half years I was actually the marketing director here at Sugarloaf.

I'm also on the board of directors of the United Way, I'm founding member of the Kingfield Pops. I'm on many affiliations for tourism councils and advisory groups.

I mention this because when I moved here for the job at Sugarloaf, I also fell in love with the area but I also fell in love with the community. Having worked in the community as a volunteer and still gainfully employed there, I understand the balance.

My concerns are with the emphasis on tourism, of which certainly I was a steward of that. It was my job to bring tourists here. The challenge of increased fuel costs that the tourism base would come from is a challenge.

We do not have the amount of tourism to support this area.

As a local resident, I am concerned that banks now have products. Banks only sell products that they know they sell. We now have loans for people to buy oil for the winter -- 5.99 percent if you're interested. This is a concern to me that you have to actually take a loan for oil.

The wind farm, I understand, is a nature-based business. It is nature based and it is a business. If there is any business that you would understand that is a balance, it is something that is nature based, and I think that we should

be for it, for the conservation folks who say that it is in the way of what they come from.

I lived in the city. I lived in Boston, New York, and LA, and I understand the environment; but if there's anything that they should celebrate is the fact that they are in an area where they come to get away and they're also part of the solution.

Now, speaking from the community side of the organizations that I volunteer for, it is a challenge to live here to provide the infrastructure that they so enjoy. As a business person that is dependent on traffic at the museum, there is not a lot of traffic, it -- we don't see the people coming in droves. There are challenges to get them here.

For those who do live here who might have to take out a loan for oil, who need to have a couple of jobs, who depend on tourism, the current model is not working as well as it should.

If the state of Maine does this correctly -- I understand the arguments about the roads -- if any state in the Union can get building roads correctly after all the years of working with the forestry land, of going to farm, forests, and build the roads correctly, it's the state of Maine.

I just -- I'm just -- there's a disconnect with not being able to celebrate the fact that there are wind farms in areas where people so enjoy the preservation of the land.

I hope this project goes through. I hope that we get a chance to market it to the people who want to conserve the woods, because I think that if you did have that choice, as someone previously testified, would I go to this park or this park, I think marketed properly, of course they would come here because it is exactly what we're looking for, the balance of people who want to live and enjoy the land, finally someone's making a difference about the problems that we have today.

So thank you very much.

THE CHAIR: Thank you, Robert. The next speaker is Rose Lowell, and I have Lars Janssan from Gilead. And Donald Bradshaw and Marcia White.

So go ahead, Rose.

MS. LOWELL: I'm Rose Lowell. Thank you for listening to me.

THE CHAIR: Rose, just tell us your name so this lady over here can get it correct, okay.

MS. LOWELL: I'm Rose Lowell. Thank you, committee, for listening to me tonight. I want to start. I think this project is a bad idea. I am one of the future adults of this generation. I will hopefully live here and raise my children.

My family has lived here for over 200 years. My great grandfather, James E. Batchelder, was a farmer and owned a lot of the land that is facing the Redington and Black Nubble where these wind towers will go.

My grandparents, Basil and Harriet Powers, now own the land that still faces the Redington ridges.

It has been nice to see the ridges of the natural trees. If you put these wind towers in, when I visit my grandparents I will have to face these towers; but where I live now, these towers will be also in my front yard. I live on Route 16.

Redington Ridge and Black Nubble are also in my front yard. This upsets me. I already listen to the trucks and cars on the road. I do not need to listen to the blades swishing in the air 24/7 or the bright lights flashing so I cannot see the stars that shine over it in the sky.

I want to be able to listen to the birds sing and the chipmunks and the squirrels chattering.

Please, please do not let this project happen. I am one of the future generation, and I will always and continue to fight the project to keep our wildlife and the beautiful views and preserve.

THE CHAIR: Thank you, Rose. I appreciate it.

Lars, are you here?

MR. JANSSAN: Good evening, Chairman and members, my name is Lars Janssan, and I live in Gilead, Maine. I'm opposed to this proposal.

After see the simulation over there, I'm also not only opposed but also severely depressed about this prospect.

Now, I do also find myself in the global energy debate and it's probably clear -- there's no one in this room that is opposed to alternative energy and don't understand that we have a big political and ecological crisis going on, however, I don't think this is really about alternative energy, it's about the future of the mountains in Maine.

I do have a question of the Commission. Can I address you?

THE CHAIR: You can just say it.

MR. JANSSAN: Is it correct -- is it true that the primary task of the Commission is to address land use above 2,700 feet?

THE CHAIR: We're land use from zero feet to 2,700 feet -- and above, and all land use.

MR. JANSSAN: So also this application, is that considering also below 2,700 feet?

THE CHAIR: Oh, yes, it's the whole project from top to bottom.

MR. JANSSAN: Thank you very much.

But the main concern here is that it's going to change the region a lot and people talk a lot about the wind turbines, but also the other issue is just the roads and the transmission lines. They're going to go right in front of Bigelow Preserve, which is not going to be -- they're not very nice to look at.

I'm also a trained engineer. I'm not going to testify as an expert, but I have some engineering common sense, and this obviously is a difficult task to pull off.

I remember 25 years ago when I got my degree from Rawlings Institute of Technology in Stockholm, Sweden, someone mentioned Denmark, and at that time these things were experimental, and I remember they had a lot of issues getting these things to work.

Now, we have to understand that this was in Sweden and Denmark, which actually has a lot more milder climate than Maine has, and it's also flat as a pancake.

So I do have some concern pulling this off in Maine, and you have to put these things where the weather is. The only thing you're interested in is the wind, unfortunately if you put them at this altitude and at this latitude, you also will get the ice and the snow and the cold.

And so my concern is that this is probably going to have a lot of down time in the winter when we really need this, and you'll probably find that this is -- there's probably a more suitable location for this.

My other concern is what if this fails. Are we going to have in the application for maybe ridge top condominiums along here since we've got the infrastructure in? I'm sure the banks and the investors want their money back here.

And so I -- in inclusion, I am opposed to this

application for rezoning.

Thank you very much.

THE CHAIR: Is Don Bradstreet --

MR. BRADSTREET: Thank you very much. I think we have an example of a certain kind of sustainability here, which is the sustainability in terms of time. So thank you very much for that.

I am here in favor of the project, and I think it's very unfortunate that we have to put windmills up, but let me talk just a little bit about what's going on.

No. 1, ISO New England -- I was at a meeting with the chairman just a couple weeks ago -- and they hit a new peak for 27 million kilowatts this week. There's a great concern over natural gas supplies competing in the winter time with heating and with electricity production.

Maine now gets 51 percent of its electricity from natural gas. It used to be mostly renewables. Renewables is down to 38 percent right now.

LNG siting is a key issue along the entire coast. Massachusetts is having difficulties in Fall River, and here in Maine I think there was a rejection on the coast of an LNG facility.

We want to get our natural gas in places like Algeria. I might prefer a windmill as opposed to bringing natural gas in from Algeria.

There are plans for 125 new nuclear power plants in the United States. Right now there are five nuclear power plants under construction in the southeastern United States. There are plans to put a new nuclear power plant at Millstone and Seabrook in terms of meeting our electrical energy supply requirements.

Big expansion of coal power. Coal power is more than half of the power that's generated in the United States. We already heard about the mercury impact on fish that we can't -- kids and pregnant ladies can't eat more than one serving of fatty fish per month. That's only going to increase in the terms of the mercury emissions going forward, and that's of grave concern, bio accumulation.

So what's the impact? In 1990 in the power plants in Maine we emitted 5 million tons of $CO_2$, two years ago we emitted 7 million tons of $CO_2$.

Our cars in Maine -- there are 1 million cars and light trucks -- we have emit one pound per mile per car that we drive.

The people in this room, just to run a rough calculation, 150 people, we are responsible for emitting 2,250 tons per year of $CO_2$ equivalents.

We have to try to see if we can reduce that. If we signed up for Toyoto, we'd have to reduce our $CO_2$ emissions from 7 to 5, which would be very difficult. It would be more

natural gas and more other resources that are non renewable.

So what's the impact? The US Navy has helped in terms of the global warming analysis because they've actually been analyzing the thickness of the arctic ice so they can keep their Trident submarines and crash up through the ice or send missiles through the ice. They need air to breathe in those submarines.

In the 60s they measured the thickness of 5 meters of arctic ice. Currently we're down to 3.5 meters on average of the arctic ice, and it's expected by 2030 that there will be no arctic ice cap.

That won't raise the sea level, because it's actually already floating in the ocean; but Greenland is a concern. The ice is 5 miles thick on Greenland, it's beginning to melt, and the fresh water has an impact.

And what's the impact? There are 350 right whales that spend their summers in the Gulf of Maine. They are having difficulties surviving. They're going to be an extinct species pretty soon because of the krill.

The krill has difficulty when water salinity changes. They'll be going up and down the water columns, and consequently, with the increase of fresh water -- which is now occurring in the Gulf of Maine -- it's expected that the whale population is going to decline because the crill's having difficulty in living.

So there are direct impacts from all these plants and global warming on the Gulf of Maine, fisheries, for example.

I think that's it for my comments. Thank you very much for your time.

THE CHAIR: Excuse me, Don, could you just state your name again. I don't think our court reporter was able to get it.

MR. BRADSHAW: Donald Bradshaw, Scarborough, Maine.

Thank you very much.

THE CHAIR: Thank you. Marcia White. Are you here?

MS. WIGHT: Good evening. My name is Marcia White, and I've lived in Wyman Township with my husband and family for 30-plus years.

This project is in our backyard. Our land comes to within about 200 yards of the aforementioned power line, which currently runs from the biomass in Stratton to Bigelow Station, and we're less than half a mile from the Appalachian Trail.

We are long-time members of the Natural Resource Council of Maine, Maine Appalachian Trail Club. We're staunch supports of American Lung Association of Maine. I've ridden in the last eight trips across the state, five of them with my son. I was glad when they came out in support of this project.

I'm also the vice president of the local United Way board and realize the economic impact that this project could have on this area for hikers, mountain bikers, skiers, golfers,

and we love this area very dearly.

We've raised our two children here and continue to support their pursuits at the University of Maine at Orono and Bates College.

For 24 years I've been the children's services director here at Sugarloaf, which means I've been privileged to care for two generations of children of local families -- from Kingfield to Eustis -- as well as all the children, thousands of them, of visiting families to the area.

In the summer my job is directing outdoor adventure camp, which happens here in Carrabassett Valley. We take care of kids in the day camp program from ages 4 to 13. We average 80 to 100 children a week, 60 percent of them from the local area and 40 visitors or second home owners who come up now for several weeks in the summer.

This week our theme is Earth Week. We assign a letter to each day. Monday was give me an E. We talked about carving a footprint, environmental impact, all kinds of things. Tuesday was air. Wednesday R for reduce, reuse, and recycle. Today was T day, think and talk. Think about things you can do to improve the environment and talk to your family about what you're going to start doing now.

Tomorrow is H, it's going to stand for H2O, and we're going to address water conservation and all those issues.

Back to Tuesday and the air. We asked the kids to

brain storm things they can do to help improve the air that we breathe. We got some great answers as you always do when you ask kids questions.

Ban SUVs. Plant trees, no more logging or lime trucks on Route 27. Stop cutting down trees. Don't allow anyone to smoke anything anywhere.

But out of the four groups, three of them also mentioned wind power. The oldest group said straight out, build the wind towers -- not build wind towers, build "the" wind towers.

The 6- and 7-year-olds, a little more cut and dry, make everyone use wind and sun for electricity.

The 8- and 9-year-olds said, we need windmills.

After this week in conversations with the campers, I've come to realize that today's kids are nervous and a lot of them are down right scared for what the future holds for them environmentally.

Few, if any of us in this room tonight, will live to experience the full impact of global warming and what it will bring to this planet. All of us here are guilty of contributing towards it.

This project, I feel, gives us the opportunity to maybe pay some of that back. Our children will be impacted and their children surely will lead very different lives because of our footprint.

I'm a hiker and I cherish the views from The Horns, Eustis Ridge, Table Land, Mt. Abraham, all peaks that were mentioned earlier tonight.

I would not be offended by the site of wind towers producing clean renewable energy from any of these viewpoints. I feel by supporting this project and doing what I know best, and that's helping to take care of our kids.

THE CHAIR: Thank you. I think that concludes our public testimony for tonight.

We are -- we're not done, however. The Commission is not done, and we're going to ask -- we're going to ask Peter from NRCM and his witness to come down here. We're going to conclude our cross-examination so we get this part of the hearing out of the way.

PARTICIPANT: May I have one minute?

THE CHAIR: I'm sorry, John, you spoke last night. If you have something else to give us, you can do it in writing.

PARTICIPANT: This is a new subject.

THE CHAIR: I'm sorry, no. No, no, no. No. I'm sorry, John, you spoke last night. You had the run of the place last night, you put me to shame.

Tonight I've got -- I've got other people that -- we've been here for 14 hours now, and I've got another hour or two to go. I need to get done.

PARTICIPANT: The closing costs, decommissioning.
THE CHAIR: John, sit down, please.
PARTICIPANT: Why don't you sit down.
THE CHAIR: Because I'm running the meeting, not you, so please sit down.
PARTICIPANT: All right. No closings costs.
THE CHAIR: No closing talk, I'm sorry.
PARTICIPANT: No closing cost. Who's going to pay for closing this plant?
THE CHAIR: Peter, would you come up, please.

EXAMINATION

(Of Mr. Winer)

BY MR. THALER:

Q. In your financial analysis of giving up Redington, did you include a value on the mountaintop of Redington either from a conservation buyer or as an outright sale to defray costs of the Black Nubble project?

A. I did not.

THE CHAIR: Steve, do you have a question? We're going to let the Commission ask their questions of these folks before we turn it over to Jim, and I'm assuming -- I don't know who else of the intervenors wants to ask questions.

MR. THALER: I have the list.

THE CHAIR: Jeff, go ahead, please.

BY MR. THALER:

Q. Mr. Winer, just to quickly try to summarize your testimony, are you suggesting that Edison or some other major wind company would invest whatever the cost would be for a smaller project, say $100 million, with no fixed price, ten-year power contract?
A. No, I didn't say that.
Q. Wouldn't that be the practical consequence, that Constellation said it couldn't increase, wasn't willing to increase 25 percent?
A. No, that's not correct.

First of all, there's more than one way to reach the 25-percent difference, and I outlined some of those ways in my testimony. Not supposed to have complete solution, but we've talked a lot about tool boxes and their financial tool boxes as well.

Those would include ways to trim the costs back from $105 million project; attempts to improve the revenue stream, and those would involve some increase in the pricing; and perhaps as part of the cost trim back, working with the suppliers to see if there are ways to bring those costs down as well.

One of the things I noted when I reviewed your material was that you've got 150 kV line, which is needed because you have 90 megawatts. If you cut back to a 54-megawatt scenario, 34.5 kV line would normally be

sufficient; and I think if you do the cost analysis of that, you'll find that the reduced installation costs more than offset some slight increase in electrical loss you receive along the line.

I'm not an electrical engineer.

Q. I was about to ask you that. If you could just let me ask my question and answer them.

A. You gravely mischaracterized my earlier answer, though.

Q. Well, I apologize if you think I gravely mischaracterized it.

But in fact, you're not an electrical engineer; correct?

You're an attorney; isn't that right?

A. I'm an attorney and a financial person; that is correct.

Q. Is it true that a 34.5 kV line would have more line losses, in other words, it would lose more energy, electricity, electrons as the electricity moves through it than a 115?

A. There would be additional heat costs, as you say.

Q. Is it also true that if this project, for example, changed, this project configuration, from 115 kV line to what you suggest, 34.5, that that would be deemed a material modification under the ISO New England tariff rules? Are you are aware of that?

A. No; but I did talk to the ISO people about what would happen if you adjusted the project from 90 to 54 megawatts.

Q. Well, you just said people. Your testimony, your written testimony, said some unidentified person you called at ISO New England; isn't that true?
A. There are people there, that's right.
Q. There's a difference between person and people, would you agree? Sir, is that true?
A. I spoke with several people at ISO. In the process of talking with them, my question was referred to an expert who came back on the line and said, if you go from 90 megawatts to 54 megawatts -- he didn't say that.

He said, if you go from one size to a smaller size -- I did not identify the project for obvious reasons -- that would not cause a problem, you will not lose your place in the queue.
Q. Did you look at Schedule 22 of the ISO New England tariff that Mr. Garwood talked about earlier?
A. I did not.
Q. By the way, you said that in order to do a smaller project, consumers or whoever was buying the power would have to pay more for it under your tool box scenario; correct?
A. I'm -- that would be a likely outcome. If you could negotiate a lot of other benefits, maybe you would be able to avoid that; but I give you the likelihood that you would need to increase the price.
Q. Right. And the price increase would be therefore absorbed

by the Maine customers if they were willing to pay that extra price; correct?

A. Whoever Constellations sells the output to would pay that extra price; that is correct.

MR. THALER: Let me move quickly to Mr. Didisheim since I'm short on time.

EXAMINATION

(Of Mr. Didisheim)

BY MR. THALER:

Q. Peter, you showed an exhibit to the Commission that had a list of 4,000-foot mountains in Maine, and you pointed out that all but two of them are already under public protection; do you recall that?

A. Yes, I do.

Q. And the two that weren't are both privately owned; correct?

A. That's correct.

Q. One of them is Sugarloaf, where we are now, and the other is Redington; is that right?

A. 517 acres are owned by the Applicant, and the rest is owned -- but yes, a private timber company.

Q. Right. Is it also true that -- are you aware of any conservation groups who made efforts to buy Redington before Endless did in 1998 in order to conserve it?

A. No, I'm not aware. I do know it was a high priority for

the Appalachian Trail Land Trust.
Q. All right. But it was on the market, it could have been bought by conservation groups, and preserved back in the '90s; is that correct?
A. Sure. It could have been preserved. My point was that it's a significant feature on Maine's landscape and according to LURC policy, it would seem to be the type of resource that you want to try to protect and currently is protected from development through its zoning.
Q. I'll talk about the zoning in a minute, but let me move quickly.
You're not a landscape architect, are you?
A. I'm not a landscape architect.
Q. Okay, Mr. DeWan is a licensed landscape architect, a man that you've employed before; correct?
A. We absolutely have.
Q. Would you agree that you respect his professional skills and integrity?
A. For the project that we hired him for, we have respected the outcome, yes.
Q. So when you say that a Black Nubble-only project that you're suggesting here would "significantly reduce visual impact" on the current project, have you done an actual mile-by-mile assessment of the views from the Appalachian Trail comparing a 90-megawatt project to a 54-megawatt project?

A. We have looked at every single photo simulation that everyone has done, including Terry DeWan, and proponents of the project.

We have Photoshopped out turbines on Redington, and to the layperson it is obvious that there is a substantial reduction in individual impact in some locations, priority locations, such as Sugarloaf Cirque, they disappeared completely. You cannot see Black Nubble.

Q. Mr. Didisheim, isn't it true that Sugarloaf Cirque is the only place that both Mr. Crews and Mr. DeWan have shown where there would be views of the project where it would make a difference that Sugarloaf Cirque, you would have that positive visual impact changes suggested, but everywhere else that 9 percent of the trail -- 9 and 10 percent of Mr. DeWan and Mr. Crews has said where you see some part of the 90-megawatt project, the only change from reduced project would be at Sugarloaf Cirque; isn't that true?

A. No, we disagree with that. Reducing the number of turbines is a reduction of visual impact at all locations from our perspective.

Q. Have you offered any expert evidence in this case to back up what you just said?

A. I have not but --.

Q. All right, thank you.

Let me ask you, you were questioning Mr. Lee earlier

and then mentioned to the Commission that back in 2002 what he was looking at at that time was a project size 50 megawatts of 29 turbines; do you recall that?

A. Yes, I was at that preapplication hearing, as you were as well.

Q. It was a long time ago. Since then, the current project is one more turbine 30 megawatts -- sorry, 30 turbines but an extra 40 megawatts to 90; correct?

A. Yes.

Q. So the project currently is one more turbine, 40 more megawatts. Would you agree that the extra 40 megawatts -- I understand the issue about size and scenic impacts -- but from the perspective of avoided emissions and production of clean renewable energy, that the 40 megawatts is a substantial increase?

A. Increase in what?

Q. Well, the 40 megawatts --

A. There's more power. Yes, that's my point.

Q. The mathematical proposition is 80 percent larger, 90 megawatts to 50; correct? Then you have to do the kilowatt/megawatt hours.

A. You've gone from a 1.5-megawatt machine to a 3-megawatt machine. Everything is larger, the scale, the size of the turbines, the visual impact, and the power generation.

Q. I think you also mentioned, you were talking earlier in

your written testimony about hydro and other options.

Are there any proposals for new hydro facilities in Maine that you're aware of? Any substantial hydro facilities?

A. No. Greenfield Hydro, there is repowering underway, some of which NRCM has been involved with and supported and helped facilitate. They're just increasing power generation out of existing dams.

Q. Right. Let's talk quickly on wind, and again you've mentioned and showed some information about the classes of wind.

Class 3 wind, would you agree that a project that was sited where there was Class 3 wind would require more turbines to generate a comparable output to a project that's in a Class 6/7 wind regime?

You don't know the answer to that, do you?

A. Turbines in a Class 3 would require more turbines to produce the same amount of power as the number of turbines in a Class 7, is that the question?

Q. The question is, isn't it true that a site with Class 6/7 wind compared to a Class 3 wind location with the same number of turbines in each location would generate more power than Class 6/7?

A. Everything else equal, yes.

Q. Let me just ask you -- let me move to my final remarks in the interest of time.

You talked about the zoning for LURC right now in terms of Redington. I assume you mean the PMA zone?
A. That's correct.
Q. Are you aware of the land uses currently allowed in the PMA district?
A. I'm aware that a wind farm is not allowed in a PMA district.
Q. Are you aware of the uses that are currently allowed in a PMA district under the land use plan and zoning for LURC?
A. Generally, yes.
Q. Would you generally agree that those uses include some roads, trails, timber harvesting, signs, certain utility facilities can be allowed by special exception, including structures associated with public utilities, radar, radio, television, other communication facilities, transmission lines, or things like that.

Are you aware of that under the current zoning?
A. Yes, those are allowed and a wind farm is not.
Q. That's why we're here for rezoning. I would agree with you on that.

And last, let me just show you an exhibit that I'll pass out to the Commission, but you may remember you made a presentation to them back on December 7, 2005.

Do you recall doing that?
A. Certainly.

Q. Do you recall that -- let me just quickly offer hopefully the right number of copies for the Commission -- thank you, Mr. Wight -- do you recall -- this is portion of what you presented. I didn't copy everything in the interest of saving color toner, but do you recall these having been presented to the Commission by you in which you talked about wind power and perspective?
A. I do.
Q. If you look at the first page, you were presenting this in order to explain to the Commission why Maine has air quality at times that is unhealthy for some of its younger and older and middle-aged citizens; correct?
A. Yes.
Q. If you turn to the next page, August 14, 2002, is that a view, I'm guessing, is that Camden Harbor?
A. Yes.
Q. From Megunticook?
A. Yes.
Q. Did you show that to the Commission to show the haze and the ozone sometimes that we have in Maine that impairs visibility?
A. Yes.
Q. And that often comes from and is generated by fossil fuel power emissions contribute to that?
A. Yes.

Q. The next page you told the Commission that Maine has one of the highest asthma rates in the US; is that correct?
A. This is correct.
Q. And one of the causes of that high asthma rate, as we also heard from the American Lung Association of Maine last night, relates to the emissions from fossil fuel plants; correct?
A. That's correct.
Q. You go to the next page, you also told the Commission about power plant pollution and its impact in Maine and the health effects on people in Maine; is that true?
A. Just looking -- I mean, they've all seen these presentations, and you've left some pages out. Some of them are purposely left out.
Q. That's fine. If you want to submit your full packet again, it's on the LURC website, I'm sure they can find it if they really want to.

Did you, by the way, have you looked at this study about mercury contamination for Bicknell's Thrush, the impact on the Bicknell's Thrush?
A. Yes, I have.
Q. We'll just move along quickly, again, in the interest of time.

You showed the Commission a carbon dioxide emission table. Do you agree that the people who talked about natural gas being a clean source of power, do you agree that natural

gas does emit a substantial amount of carbon dioxide, which has a similar impact of coal or oil that we've heard about?
A. Well, it's a fossil fuel, with a lower level of carbon emissions; but absolutely, it's still a carbon fuel.
Q. And it's still substantial. I mean, it's not much below gasoline, diesel fuel, or oil; wouldn't you agree?
A. That's correct.
Q. You showed them some photo simulations of Redington/Black Nubble and then Mars Hill.
Where did you get the photo simulations from?
A. The ones of Black Nubble and Redington are from the website of the Applicant; the one from Mars Hill is from the developer of Mars Hill.
Q. And threats to birds in the US, do you agree that wind power facilities compared to the items you have there as a very small source of threats to birds in the United States?
A. Yes, you're walking me through my presentation.
MR. THALER: I have nothing further. Thank you.
MR. DIDISHEIM: But you left out some pages.
MR. THALER: If you want to argue, Mr. Didisheim, you can do it outside later. Thank you.
THE CHAIR: Are you all done?
MR. THALER: Yes.
THE CHAIR: If I'm reading my notes correctly, the Conservation Law Foundation wanted to have a crack at you.

Is that true?

PARTICIPANT: We waive.

THE CHAIR: The next one was the IDPM group. Do they still want to take a crack?

MR. WILBY: I'm Dave Wilby, executive director of the Independent Energy Producers of Maine, and I'm part of a consolidated group, as you probably know, Maine Interfaith Power and Light, Maine Energy Investment Corp., and Ed Holt Associates.

I have one clarifying question to Mr. Winer, and then some questions for Pete of NRCM.

EXAMINATION

(Of Mr. Winer)

BY MR. WILBY:

Q. Mr. Winer, I believe you testified in your comments this afternoon that your cost estimates for the 54-megawatt NRCM proposal did not include permitting costs. You didn't figure permitting costs in your calculation?

A. That's not correct.

Q. So you did look at permitting costs?

A. I took the number -- let me make it clear. I took the number that the Applicant provided to us.

Now, if it turns out that that didn't include permitting costs, okay; but the number at 105 million for 54 megawatts is just under $2 million a megawatt.

That would include permitting. And in our model, when we priced out various components, when we would look at them, it seemed like it should include that.

Q. Okay. I just wanted to know --

A. If I did say something along those lines, then I apologize because that was not intended.

Q. I appreciate the clarification, that's why I asked that.

A. The number was intended to be an all-in-cost and then what we look at was if you take 105 million, other ways to economize to help bring that down, and that could include any of the costs potentially.

So I might have somehow mentioned permitting in there, but I don't think I did.

EXAMINATION

(Of Mr. Didisheim)

BY MR. WILBY:

Q. My first question, Pete, is can you persuade the trails groups, the National Park Service, the Friends of Western Mountains, and the folks that we've heard from this week to support your 54-megawatt proposal?

A. I'm trying really hard, I've got to tell you. I think yes, because it's sensible.

Q. Since you proposed it, who has joined in NRCM in supporting this proposal?

A. Well, we announced this fairly close to the hearing. I

have to admit that people were pretty locked into their testimony positions.

But I would like to believe that people will think carefully about the benefits of modifying their position and moving to a compromise.

MR. WILBY: Thank you. Nothing further.

THE CHAIR: Thank you. This process has stimulated me to ask a question or two. It's now my prerogative.

EXAMINATION

(Of Mr. Didisheim)

THE CHAIR:

Q. We've heard a bit of discussion, it seems ironic to me for a whole other reasons that maybe you can address or maybe you can't but now all of a sudden hydro is a wonderful thing. Your testimony provided us examples that compared this to hydro projects.

What is the status -- what is going to happen to hydro in the state of Maine, and what is the NRCM's position on this renewable resource and what's happening? Because there are hydro stations being eliminated.

A. Our expectation is that there's an amount of hydro power that will be generated in Maine. It's probably fairly stable.

We have built a thousand dams in the state of Maine. We have 102 that are generating power. I believe that we have tapped most of the significant gradients that can be tapped for

new hydro, and we have zoned -- protected areas that need to be protected.

There may be some, 50 megawatts perhaps, of repowering that could be gained through hydro.

NRCM was very involved, and continues to be involved, in the Penobscot project where, yes, we are in the process of reaching a settlement with Pennsylvania Power and Light to buy three dams, remove two of them, increase power generation at five dams, put a fishway around the third dam, and open up 500 miles of habitat to upstream migration.

It's an incredible project with no net loss in hydro power generation. It's a creative solution, and we think that there's probably opportunity through hydro power to continue with hydro solutions.

Q. I'm just trying to make sure that there's no dimunition of hydro-generated power given the context of what were talking about here, because you're promoting -- you can't be promoting one and not the other.

A. It was very important to us and to many of the parties who negotiated the Penobscot project to ensure that there was no net loss in hydro.

EXAMINATION

(Of Mr. Winer)

THE CHAIR:

Q. Mr. Winer, there always seem to be little extra revenue

strings popping up in this electrical business, and the one that I would like you to just briefly explain to us is the electrical capacity market.

Nobody talked about that earlier, so I would like to know what that is.

A. I thought I had a couple of notes. But the concept is this: We are used, as individual consumers, to seeing a bill based on kilowatt hours, which is basically the mix of the amount and the time component. If you run one kilowatt for an hour, it's a kilowatt hour. So that's the energy piece.

But that does not necessarily recover the capital costs behind the plant that's used to generate the kilowatt hour. There's a lot of complicated pricing. We touched on that a little bit here.

The point is that capacity markets, until very recently in New England, were showing almost no value to capacity even as energy prices were clearing sometimes in excess 10 cents a kilowatt hour. It's just the way market system is set up. We keep wrestling with this. You've probably heard about this for years.

Maine, in particular, has been struggling with what locations of this capacity payment system.

Without a capacity payment system, the only way a capital intensive project can work is if the energy component is deemed or expected to cover both the installed the costs,

the capacity, and the operating cost, the energy. It's not an exact match.

The various people around the region who are more deeply involved in this whole set-up than I am have been struggling with how do we provide some incentive that is more of a fixed, more stable-based payment to increase capacity to come on line when we need it.

The system as a whole, it keeps going up a little bit, it's not steady but it's going up year after year, there's adjustments.

So we need some payment system -- at least this is the current thinking -- that provides an incentive to construct.

So this would be -- and I think in my testimony I touched on this, maybe not exactly -- paid on dollars per kilowatt or dollars per kilowatt month.

And so the system that was just approved by the Federal Energy Regulatory Commission has a schedule that says that existing and new generation will get paid according to an agreed-upon schedule.

The settlement was approved, and that will provide revenues to both existing plants for being there and delivering instantaneous power and to new projects, including new renewable projects and including new intermittent renewable projects.

I hope that that's somewhat responsive to your question. If not, I'll try again if you like.

Q. It's a revenue stream -- it's a true revenue that flows to the owner; is that correct?

A. It would go to the owner or the owner of the capacity rights.

Q. And it's basically a fixed amount; it's not time dependent or volume dependent, if you will. It's fixed cost -- it's a fixed revenue as opposed to variable revenues driven by kilowatts?

A. Yes, that's correct. For an intermittent, such as wind, the way in which the valuation would be calculated would be based on -- let's take this project and let's just assume for round numbers -- that it has a 30 percent capacity factor.

That factor would be put into the formula computing the amount of payment that would be received because it's not available 100 percent of the time.

But you're right, it would establish a monthly level of payment that you can then mathematically translate and say, well, in our estimation it's 5 to $10 per megawatt hour, .5 cent to 1 cent per kilowatt hour in value.

The schedule is set into 2010, and after that there's a formula that goes forward.

Experts I've talked to on that have basically said, yes, there will be an auction but the way the system works, you

can expect to receive a certain amount of dollars there.
BY MR. WIGHT:
Q. Is this paid by the rate payer?
A. Yes. But I might add, there's a certain revenue requirement for each of the projects that operate, and there can be an interactive effects.

In a wind project, if you have a developer and they're going to get a certain amount for the energy and a certain amount for their capacity, then you would expect in somewhat a competitive market that the REC price -- we've been talking about -- could be effected if the revenue requirement is more than satisfied.

THE CHAIR: Marcia, go ahead.

MS. SPENCER-FAMOUS: Please bear with me. Bart brought the subject up. Pete, I have a quick question for you just to help with my thinking in terms of hydro power.

When was the last time a new hydro facility was built in the state of Maine?
A. Angus, are you still in the room?
Q. I think it was Paris, Maine, possibly in the '70s maybe?

MR. THALER: That's about right.

EXAMINATION

BY MS. SPENCER-FAMOUS:
Q. And before that, do you know when one was built before that?

A. I don't know, but there's others in this room who do know.

MR. WILBY: Monty Station in Lewiston, I believe, built by Central Maine Power, I want to say in the late '80s maybe 1990.

Q. Okay. So before Monty Station?

A. Hydro Kennebec in Winslow was fairly recent, 15 megawatts. But, boy, you're going to ask me to sort of go backwards on all the hydro facilities in Maine. I can't do that.

Q. I guess I was just trying to establish, you know, really is this something that's an active thing, or is it more something that is diminished?

A. Building of new hydros?

Q. Yes.

A. I can answer that. Currently there has not been any major hydro development, new development of new facilities, as Pete said earlier, in a long time, in the generation.

The last major proposal that I'm familiar with was Basin Mills proposed by Bangor Hydro in the late '80s, early '90s, and that was permitted by DEP, I believe, but never built.

There's none on the drawing board.

MS. SPENCER-FAMOUS: Okay, thank you.

THE CHAIR: I think that with that I thank you very much for sticking it out with us this late at night, and I hope you get home sometime tonight.

Thank you for staying with it and all of you for staying with us, and all of the intervenors for letting us get this far tonight. We're not exactly back on schedule but we're pretty close.

So with that I'm going to recess this hearing until tomorrow morning at 8:30. We'll see you all then. We'll get started very early.

Thank you very much. Good night.

* * * * *

(The hearing was suspended at 10:19 p.m. on August 3, 2006.)

* * * * *

(The hearing resumed at 8:32 a.m. on August 4, 2006.)

* * * * *

THE CHAIR: Good morning, everyone. We're going to get underway here in just a few minutes with the usual administrative material that I have to read into the record, and after that we're going to get started with our continuation of direct testimony.

Just for the record, my name is Bart Harvey, I'm the chairman of the Commission. Commission members present are Steve Shaeffer, Steve Wight, Gwen Hilton, and Rebecca Kurtz; and Commission staff, Marcia Spencer-Famous and Melissa Macaluso, and Fred Todd is somewhere here, and Jeff Pidot, our counsel from the Attorney General's office.

As before the hearing is being held pursuant to the Title XII MRSA 685-(a) and our Commission's rules that are found in Chapter 5.

And we're continuing to receive testimony in the matter of zoning petition ZP 702 in the case of Maine Mountain Power, LLC, request to rezone 1,000 acres of Redington Township, Franklin County.

As I stated, we'll be continuing our hearing with direct testimony from intervenors and the cross-examination of them and their expert witnesses.

Marcia, are you going to do a little overview or are we going to dispense of that this morning?

MS. SPENCER-FAMOUS: I was going to make the statement about the new criteria.

THE CHAIR: Thank you. As before, after your presentation, the Commission and their staff will have an opportunity ask questions if they wish, and then we'll proceed directly to cross-examination by the Applicant in this case.

As before, all witnesses must be sworn and we ask you to state your name and your affiliation before you give your testimony.

Please make sure to use the microphone so the court reporter can hear you clearly.

And Marcia's brief comments will be in the context of making sure that all the testimony is relevant to the

Commission's criteria for this rezoning.

I should have read that last night probably.

We'll talk at the end of the hearing. We'll talk some more about the hearing record remaining open, but in the interim, it will be a couple of weeks with rebuttal time built into that.

At this time I would like to swear in all the witnesses who we'll be hearing from. I would appreciate it for today, this afternoon, and this morning.

Would those people please rise so I can see who you are.

(PARTICIPANTS SWORN EN MASSE.)

THE CHAIR: Marcia.

MS. SPENCER-FAMOUS: I'm not going to read the entire staff statement, but I am going to remind everybody that this is a rezoning. It is from a high mountain subdistrict to planned zoning subdistrict preliminary plan, and the review criteria particular to that process for a planned development subdistrict is contained in Section M-21-G-8 that defines and describes the relevance submittal and also the relevant review criteria for the Commission to make a decision.

So I refer you back to that to read that again to read about the development criteria.

THE CHAIR: With that I think we're ready.

We're going to -- this morning we're going to try and

get done the National Park Service direct testimony and the ATC/MATC/AMC intervenor group, as they both have people that we have to try to get out of here at some point.

Is everybody happy with that? Probably not.

That's what I'm going to do, okay.

Since Jeff tells me that I am in charge, I'll be in charge.

So the National Park Service, whoever your spokesperson is, you can come up. We will proceed.

MS. UNDERHILL: I'm happy to go ahead and get started while he's moving those.

Good morning, Mr. Chairman and members the Commission. My name is Pamela Underhill. I am the National Park Service manager for the Appalachian Mountain Scenic Trail. My office is in Harbor, West Virginia.

I have worked for the National Park Service on the Appalachian Trail for almost 28 years and have served as the superintendent and park manager for almost the last 11 years.

My existing staff and I combined have 126 years of experience in protecting and managing the Appalachian Trail.

It's my pleasure to be here this morning representing the National Park Service and the Appalachian National Scenic Trail, and I have to tell you my favorite thing about this hearing so far is that it's your hearing and not my hearing.

Somebody once said and it has oft been repeated that

the National Park idea was one of the best ideas the American people ever had.

Yellowstone was our first designated National Park in 1872. This are today 390 units of the National Park system. All represent some national and significant aspect of our national and cultural heritage. The areas that now comprise the system and those that will be added in years to come are cumulative expressions of our single national heritage.

The units represent the very best of our nation's natural and cultural heritage. They are a legacy that we must protect and leave for future generations, and they warrant the highest standard of protection.

Maine is blessed to have two units of the National Park System here in this state: Acadia National Park and the Appalachian National Scenic Trail.

The section of the Appalachian Trail in Maine that traverses the state is some of the wildest and most spectacular landscapes of the entire Appalachian Trail.

The section here in western Maine provides visitors with the very best of what the trail has to offer: Outstanding opportunity for, observation enjoyment, and exploration of the natural world, a sense of remoteness and detachment from civilization, a sense of being on the height of land, a feeling of being subordinate to the natural world, and unparalleled views of the surrounding western Maine countryside.

I appreciated Mr. Pidot's comments yesterday with regard to representations by the project proponents and their experts that views of the wind farm wouldn't only involve 9 percent of this 32-mile section of the trail.

In my opinion, everything about it cannot be reduced to percentages, and especially in an effort to try to diminish the impact and effect of this project on the experience of people hiking this section of the Appalachian Trial.

People come to our national parks as special places like the Appalachian Trail because there's a sense of place there and because they want to experience and be part of that.

It's an overall experience, and you can't portion it out and try to diminish the impact of a project like this on that experience by reducing it to percentages.

In addition, I think as Mr. Pidot pointed out, hiker behavior is such that there's a tendency to stop at viewpoints and spend time there and look. That's a big part of why people are there.

The National Park Service entered into an interagency agreement with the USDA Forest Service to conduct a visual analysis of the proposed project. We have Eric Crews here with us, a landscape architect with the US Forest Service, and his testimony will -- you will hear shortly.

Based upon that testimony, the National Park -- and based upon his analysis -- the National Park Service has

concluded that the proposed Redington Wind Farm project would have an unmitigated negative impact on the resources and values of one of the most scenic and remote sections of this treasured unit of our National Park System.

It has been suggested by some that beauty is in the eye of the beholder and that in the future visitors to the Appalachian Trail in western Maine can get a sense of their cultural landscape by looking up over the Redington Wind Farm.

I would like to suggest that there will be plenty of opportunity as time passes for people to go places and get a sense of their cultural landscape. There will be ever diminishing opportunities for people to go to places to experience the natural world.

We are starting to raise generations of kids who have no exposure or experience to the outdoors and the beauty of nature. Some of you may have heard of a book called, The Last Child in the Woods, by Richard Louv, saving our children from nature-deficit disorder. It's an important concept and the Appalachian Trail has a big role to play in helping to save our children from nature-deficit disorder.

Obviously we have to change our ways to create a more sustainable existence for ourselves on this planet.

We have been somewhat glutinously consuming of a nonrenewable resource to generate energy for far too long; but as we retreat from our love affair with petroleum, let's not

compound our shortsightedness by skittering off into a panic and sacrificing our most precious places and resources to achieve more sustainable ways of generating energy.

The Appalachian Trail is one of those most precious places as a unit of our National Park System, as the world's most famous long-distance hiking trail, as the grandfather and flagship of the National Trail System, and as the extraordinary gift of thousands of volunteers to the American public.

In closing, the American people have invested heavily to protect the Appalachian Trail. I would like to just close by reading a statement from the comprehensive plan for the Appalachian National Scenic Trail.

Because the National Park Service, while it has been entrusted with these most special places to preserve for present and future generations, the National Park Service cannot take care of these places solely by itself.

The comprehensive plan for the Appalachian Trail states, It is clear that the long-term protection of the Appalachian Trail rests not so much with acquiring tracts of wild land as with the relationships, which are established with National Forests and Parks, State and local agencies, and the people who own land or reside along the trail. The trail that needs to be perpetuated includes more than a narrow footpath, and the scheme for protecting these values must thus be broader than simple ownership of land.

Trail clubs, the Appalachian Trail Conservancy, the Forest Service, and the National Park Service share equally in the responsibility for creating a climate of concern for the trail and for finding the conversions of interest between trail users, entities, and communities.

Only through the continued use and growing recognition of the Appalachian Trail as a valued resource with actions and policies backing that recognition will trail values be perpetuated.

And so as I said in my written testimony, the National Park Service strongly hopes that Maine will be part of a continuing climate of concern for the Appalachian Trail here in western Maine.

Thank you.

MR. CREWS: Good morning. My name is Eric Crews, and I'm a landscape architect with the US Forest Service. I have served in that capacity for 15 years, and in that time have been a scenery management specialist of forests.

I've also led efforts to establish a standard software for use across the agency for simulations of terrain modelling and have taught the scenery impact analysis techniques and terrain modelling techniques on a routine basis.

The Park Service asked me to conduct a scenery impact analysis of this project from the Appalachian Trail using a digital management system, which you've heard others refer to

yesterday.

The visual management system, and its subsequent update, the scenery management system, were developed by Forest Service landscape architects. The original systems goes back to the mid-70s and has been in continuous use by the Forest Service since that time.

Using the visual management system to inventory and analyze the potential impacts of this wind farm, I conducted a field survey and a GIS analysis and prepared the simulations from several viewpoints. Three of the viewpoints I actually visited on the ground. Other viewpoints are known vistas inventoried by the Appalachian Trail Conservancy or analyzed by Mr. DeWan.

There are three factors considered in the visual management system: The viewing distance, the sensitivity level of the ground from which the area is viewed, and then the landscape character of the project area.

In my written analysis -- testimony -- you'll see that landscape character is described, including the existing human modifications to the landscape, such as the timber harvest, the ski areas, roads, and other development; and that is taken into consideration in our overall analysis, though they may not be depicted in the exact detail in these simulations.

The sensitivity level is based on the observer

concern levels and from the Appalachian Trail the users come to the trail expecting to see beautiful scenery, natural appearing landscapes, and this area certainly has a natural appearing landscape.

Even though there is timber management in the area, the overall appearance of the landscape is natural appearing, and that is evidenced by the four figures -- photographs -- that are in my written testimony.

The third factor is the distance, the viewing distance. The closer you are to the activity, the more potential impact there is from it.

There's been some discussion of foreground/background as related to linear distance from the viewpoint.

It really needs to be emphasized that it is more related to the perceived textures or patterns on the ground, like, for example, if you look out this window to the Avery Peak across the way here, that's 6.5 miles away.

It would be considered background if you just measured that out. But if you can see, on that mountain, there is a fire tower up there that I understand is about 20 feet in heighth and you can clearly see that on the ridgeline from 6.5 miles away.

So considering these three factors, I inventoried this area Sensitivity Level I in the visual management system, the details of which are in the written testimony. The

viewpoints are middle ground and background. There are no foreground viewpoints from the Appalachian Trail. And the landscape character is what we call a Biradi Class B.

Using those factors in the visual management system, the area would be inventoried and managed as what's called a partial retention field quality objective. That's a management goal for any activities that would occur on the land to meet the criteria of quality retention, quality objective.

The partial retention visual quality objective is to find those activities that bar from the form line common texture of the existing characteristic landscape to such a degree where they remain a subordinate feature in the landscape, but they do not dominate the landscape based on those components.

After doing my field review -- and I visited Sugarloaf Cirque, Sugarloaf Summit, and Saddleback Junior -- and from all three of those points, there are open vistas of the project area.

Then I also did a GIS analysis to try to determine how much of the trail, this 34-mile section and the side views, would offer potential views of the project area and found that -- the way I did that was with a scene area analysis from the project area projected back over to the Appalachian Trail route, and then used digital orthoimagry to identify open areas of vegetation, and where those overlapped potential views,

intermittent or open views.

I found that approximately 3.8 miles would offer views.

Those locations are dispersed throughout that entire length of the 34-mile segment. So anybody hiking this section of trail would have potential views throughout their entire hike.

If it took them four days to hike this section, they would have views of this project area at least every hour and many of these views are open vistas.

I modelled seven non viewpoints and one potential viewpoint that is the North Crocker Mountain viewpoint. I've not been to that site. Terry DeWan's report had indicated that there was an intermittent view there, and I modelled that view to demonstrate the dynamic nature of the environment here.

The vegetation there could be -- now it screens the view, as Terry pointed out yesterday, but with one ice event, it could wipe that whole screening vegetation, foreground vegetation, out.

And the wind farm is a long-term proposal and, if not permanent, so the consideration of viewpoints that may have the potential and at some future day, it should be considered.

That's why I modelled that viewpoint and put it in the testimony here.

I would like to point out, as Mr. DeWan did, I show a

road in Viewpoint G simulation, and that was taken directly from the Endless Energy CAT file, which was this source data from us in the simulation. Apparently that is a route that was evaluated and dropped, and as Mr. DeWan said, it was dropped for scenery reasons, yet the only place you would see it is from the North Crocker viewpoints or the South Crocker viewpoints, which he says are now grown up.

So that's something to consider.

If I may take the microphone over and show you the simulations.

The four viewpoints that I have simulations done from here are Saddleback Junior, which is an open outcrop and alpine area. This is Mt. Abraham submit. This viewpoint here is Spaulding Mountain summit, which both of these are side trails, blue-blazed side trails of the AT, and this is Sugarloaf Cirque.

The viewing distance of these various locations is indicated on the images. One thing that is critical in producing any sort of simulation is that you have to know the field of view of the simulation, and it's also referred to as equivalent focal length.

All of these simulations are produced using a 50-millimeter focal length, which is 38.6 degrees field of view, and all these images are printed to the same size. From this edge to this edge, it's 38.6 degrees field of view.

And using that information, you can -- and your output image size -- you can then calculate the distance you must stand away from the image to get a real world scale, to get a sense of what these things would actually look like out there on this viewpoint.

The images in my written testimony would be viewed at 21 inches away to get that real world scale. These images are twice that size and would have to be viewed 42 inches away to get that real world scale.

Now, the resolution on these images is twice that of a 6 megabyte visual camera. It's 4,500 pixels wide, which the resolutions, when you're looking at simulations, it's also a very critical item because there's no way to replicate the clarity of the human eye.

Our highest resolution portion of our vision is within a 40-degree trump of view. When you get outside of that, the peripheral vision is blurred, it's not as sharp, and so when you produce wide-angled images like these down here, it tends to make the project area appear smaller because you're showing a much wider area.

From these viewpoints -- from the Saddleback Junior viewpoint, there are 16 turbines visible on Black Nubble and 12 visible on Redington. It's an open view. The distance to the nearest turbine on Black Nubble is 4.1 miles; the distance to the nearest turbine on Redington is 4.6.

Mt. Abraham, all 30 turbines would be visible from this location. The nearest turbine is 4.1 miles away. Again, as I said, Avery Peak is 6.5 miles away.

So when you step outside, you get a sense, this is 2.5 miles closer.

Mt. Spaulding is another side trail, it's got an open view. It's about 100 yards off the Appalachian Trail, and from this location you see 30 of the turbines, and they're visible at a distance of 3 miles.

From Sugarloaf Summit -- I mean, Sugarloaf Cirque, there are 12 turbines on Redington visible, and they're visible at a distance of 2.9 miles.

Now, in Mr. DeWan's exhibit over here, even though he indicates that they visited this section of the trail that goes from Saddleback Mountain across the Horn, down to Saddleback Junior, to Poplar Ridge, and Abraham and Spaulding, he failed to include any images from the Horn, from Saddleback Junior, from Mt. Abraham, or from Spaulding Mountain. In my opinion, these are the most critical views in the analysis. They're viewed at a distance 3 to 4.1 miles, and the towers will be quite noticeable from that location.

Down here he shows the image from Mt. Abraham, but it's looking back to the east. He shows some of the timber management activities, but there is no photograph or simulation showing the project area, so these were omitted from this slide

here.

The Horn, Saddleback Junior, Spaulding, and Abraham were all looked at for this analysis that is displayed here.

Another very critical item in these images, these I understand were taken over a period of time, some of them dating back to the '90s. I'm sure various cameras were used to capture these images. They appeared to be digitally stitched together. Whether they were 50 millimeter or 54 millimeter, focal lengths, as I believe is shown in his analysis, to get this wide an angle, these images would have to be digitally stitched together.

By doing that you create a very wide field of view, thus making the project area appear much smaller. It serves to diminish the impact or the perceived impact.

Also, by stitching those images together, it corrupts their original data that can be used to calculate the view distance from these images.

I cannot stand here and tell you how far away I need to stand to view these images to get a real world scale because they've been stitched together and I no longer know how much overlap there was to be able to determine the printed width and use the trigonometry formula to calculate the distance the view is from.

Another point, I used the latest, most advanced 3D terrain modelling software. I was part of -- or headed up a

committee to study all the software products available on the market for the agency and to identify the one that we wanted to adopt as a standard for the agency.

I was appointed that position by our chief landscape architect in Washington, and the result was this product is called Visual Nature Studio. It is far more advanced than the techniques used here.

I've been doing photo simulations in Photoshop for 15 years, and I know very well that you can manipulate to get whatever results you want. If the turbines appear too bright or too visible, you can simply make that layer a little more transparent and get the results you want.

I feel like these simulations in this presentation are misleading.

The results of my analysis conclude that these turbines and the associated road system would represent an unacceptable modification to the landscape and would certainly be an undue adverse effect.

If I may from the visual management system, there is -- I have the definitions -- unacceptable modifications. It's not a management goal. It is a description in the visual management system of what not to do to any landscape, and those definitions are that the size of activities is excessively or poorly related to the land form and vegetative patterns and the characteristic landscape.

The overall extent of management activities, excessive activities or facilities that contrast in form, line, color and textures are excessive, and the duration of visual impact persists or continues for ten years or longer.

This project meets all of those definitions. In an individual management system, it's described, you only have to meet one of these for it to be termed unacceptable modification. This project meets all of them.

The contrast with the characteristic natural landscapes surrounding in the project area is so contrast in form, line, and color that it is not repeated anywhere else in the landscape, is such a contrast that the scale and the extent of the project area would just overwhelm the view.

I can't see how anyone could view this project and make the claim that it would have no undue visual impacts.

Thank you.

THE CHAIR: Steve.

MR. WIGHT: If I may, I would like to ask a couple of questions at this point.

I'm Steve Wight. In my other life I've run a recreational outdoor business and I'm a community activist, and as a self styled community activist, I'm heavily involved in trying to procure land for the public and ensure that in the future there will be places for people to go to see natural areas.

I'm the president of my land trust; I'm involved in a lot of things.

But the reality in Maine -- Pam, I'm glad you're here, I understand you've been here a lot dealing with the same issues -- the reality in Maine is that 94 percent of the land is privately owned, even though it's nice that we have Acadia and we have the National Scenic Trail.

So my question, when I go back home I'll be jumping into an incredible political nightmare of people who are fighting against scenic byways, they're fighting against natural heritage areas, they're fighting against national parks, and the reason is, they're afraid that with all those things come Federal control of private land.

So my question is, what is the legislation that allows the National Park to regulate the private land beyond the park; and the second is, what are the differences among the various types of units of National Park. Is a National Park a National Park? Is Acadia the same as the trail? Or are there various categories of park lands?

MS. UNDERHILL: There are various categories of park land, but I think that I listed some of them off in my written testimony.

But I also made the statement in there that there is no cap system within the National Park System. All units of the National Park System are considered equal and collective

national heritage.

So there's no hierarchy. You know, because something is called a National Park versus a National Historic Park or the National Battlefield, or a National Scenic Trail, there's no hierarchy to that.

With regard to regulating private land, the National Park Service has no ability. The Federal government does not have the ability to regulate private land, which is precisely why I'm sitting here today trying to share information with you about the Appalachian Trail so that we can engage you as a partner in helping to protect this area of the Appalachian Trail.

I think it might also be worth pointing out that the Appalachian Trail is managed unlike any other unit of the National Park System.

The Trail truly was created by the people, for the people, and it is continues today to be managed by citizen volunteers like the volunteers of the Maine Appalachian Trail Club. There are 31 of those clubs up and down the likes of the trail from Maine to Georgia.

There are about 5,000 active volunteers who contribute some 200,000 hours every year to the management and maintenance of the Appalachian Trail.

And the National Park Service, actually back in 1984, formally delegated management responsibility to the public

lands that we were acquiring as part of the Appalachian Trail corridor to the Appalachian Trail Conservancy, who in turn had sort of sub assigned those responsibilities to the volunteers, the Trail Club.

So this trail truly is -- I have a staff of nine people in the National Park office for managing the Appalachian Trail. The National Park Services had acquired close to 110,000 acres of land outside of many other public land jurisdictions as part of this protected corridor for the trail.

So it's really a very unusual unit in the way it's managed. We very much respect the tradition of volunteer stewardship that the trail has, and believe our volunteers are one of our most precious resources on the Appalachian Trail.

MR. WIGHT: And I have been involved in that effort in various ways, and I applaud your efforts.

The concern, of course, is how much can you control your view.

I tell my neighbors, if you want your view, you've got to own it, because the guy who owns the land has rights as you have rights.

I'm not normally a property rights' activist, but I'm beginning to see that there is some truth to that.

Eric, the blue-blazed trails, side trails -- I understand how they operate -- are they also part of the National Park corridor, the trail corridor?

MR. CREWS: Some of them are within the ownership of where the Spaulding viewpoint is. The 9-acre count viewpoint is there.

MR. WIGHT: How about the top of Sugarloaf? There's a blue-blazed trail that goes from the trail up.

MR. CREWS: That's correct. I think the ownership of the National Park Service goes about halfway up the mountain.

MR. WIGHT: I walked that trail the other day. It's nicely maintained.

What percentage of the 200 -- I guess what the number we're using is 2,170-mile Appalachian Trail offers only natural appearing landscapes, which is what you said is the goal.

MS. UNDERHILL: I'm sorry, I don't have those kind of percentages, you know, at my fingertips.

The trail goes through a variety of landscapes, obviously from Springer Mountain down in Georgia on up through the Smokey Mountains National Park. It goes through six other National Park units. It goes through eight National Forests. It goes through a variety of State game land, State parks, and State forest lands, and then there are the acquired corridor land that the Park Service acquired outside, which generally is an average of 1,000-foot-wide corridor. It definitely wiggles a bit, depending on the values.

So, you know, the trail was originally conceived by Brent McKee as a ridge top trail along the crest of the

Appalachian Mountains, but clearly it has to come down and cross through valleys and cross over rivers and cross over highways.

So although we have never actually formally zoned the Appalachian Trail as such, there clearly are areas that go through more developed portions of the landscape and areas that are more remote.

Your part of Maine is some of the wildest and most remote.

MR. WIGHT: Thank you.

MR. PIDOT: In your testimony, Ms. Underhill, your written testimony, you mention that there were -- have been a number of wind power projects. I think you mentioned seven -- but I may recall that incorrectly -- that are near the Appalachian Trail but that the Park Service decided not to oppose.

I gather that this is the first time that the Park Service is opposing a wind power project in the vicinity of the trail.

I was wondering if you could distinguish for the Commission between those two categories of things, why you didn't oppose the others and why you do oppose this.

MS. UNDERHILL: It very much has to do with the kind of characteristics and qualities that Eric was describing in his testimony that are the basis of doing an additional

analysis, analysis that has to do with the character of the surrounding land of the trail, it had to do with the remoteness of the trail, and it has to do with the distance of the proposed project from the trail, and our professional judgment as to what the impact of that is going to be on the experience of the visitor.

So, yes, there have been seven wind farm projects proposed that were within 10 miles or so of the Appalachian Trail, and for any number of reasons based on where they were located and the distance from the trail, it was our judgment that they were not going to have a significant adverse impact on the experience.

That is not the case here. This is one of the most egregious sort of "in your face" major industrial developments on one of the most scenic areas of the trail.

So we felt we needed to take a stand.

MR. SHAEFFER: I just -- this is kind of a point of reference for the next couple of hours, but for the 34-mile section, the average hiker would take how long to traverse that assuming normal.

MS. UNDERHILL: I think we would estimate three our four days.

MR. SHAEFFER: Three or four days with like 30, 40 hours of hiking, 30 hours?

MS. UNDERHILL: Yeah; I think people tend to hike,

you know, 10 or so miles a day.

MR. SHAEFFER: Just hiking straight ahead without stopping to look, so that 10 percent figure, or 9 percent, would be four hours of exposure to the wind farm without stopping and admiring the view.

Is that about right?

MS. UNDERHILL: I guess.

MR. SHAEFFER: I guess -- and is there a weather factor that we can apply to this, just a rough idea?

MS. UNDERHILL: You mean if you were up there and totally socked in and couldn't see anything?

MR. SHAEFFER: Yeah. Is there a rule of thumb for hiking this section of the trail visibility throughout the course of the summer?

MS. UNDERHILL: I guess I don't know the answer to that.

MR. SHAEFFER: Okay. All right. So it would be three to four hours of exposure --

MR. CREWS: I would like to say that in doing the impact analysis, one wants to consider the worst case scenario.

If you're in an area that has move-through frequently, you want to do the analysis at the time when the visibility is the greatest.

You consider the average situation, but you certainly want to conduct the analysis considering worst case scenario.

MR. SHAEFFER: Thanks. I just wanted to try to come up with.

MS. KURTZ: I have a couple of comments and somewhere work in some questions.

In looking at the statutory requirements of rezoning, 685(b)-4 of the statute, and it talks about adequate provision putting harmoniously into the natural existing natural environment to ensure that there will be no undue adverse impact on the existing scenic character and natural resources.

What struck me about that is the word "harmoniously" and your description of using the contrast in line, form, color.

In my mind contrast and harmoniously are diametrically opposed, they're not at all -- they're two different words with two entirely different meanings.

And I'm just wondering, is there anything else in that view shed already that would fit harmoniously with a 400-foot tower with 150-foot -- diameter or radius?

So 400-foot structure, is there anything else in that 9 percent for our height period that fits harmoniously?

MR. CREWS: The landscape from most of these viewpoints is a natural appearing landscape. You do see some of the logging roads and timber management activities from summit locations, such as Sugarloaf summit, the side trail you see, the communication towers you see, the terminus at the ski

lift out there and buildings up there.

From the Appalachian Trail itself, I have not visited these locations, but I understand there are a couple of places in particular where you see the Saddleback ski area.

In terms of these turbines fitting into the landscape harmoniously, no, Ma'am, I don't think that's possible even no matter the color or -- I can't think of any mitigation that can be applied, other than just removing the bridge, that would allow it to fit harmoniously into the landscape. The contrast is just too great, too great a scale.

MS. UNDERHILL: But I think your question may have been more about whether any of the other existing human modification out there could be considered harmonious?

MS. KURTZ: Well, whether it's human modification or a natural, any trees, that resemble the shape, line, color of those.

In your experience -- I think you had been out there hiking -- how tall are some of the natural features? How do their shapes relate to the line, color, and contrast of these particular items?

MR. CREWS: The trees in the upper elevations were spruce. They appear to be 10 to 30 feet in height in areas, like, for example, hiking up to the summit from the Appalachian Trail up to the summit of Sugarloaf.

And, no, the forms of the trees and no other features

in the landscape that I noticed resembled the form of the turbines in any way, and particularly when combined with the contrast in color and line, no, I didn't see anything up there that resembled that.

PARTICIPANT: As a follow up to that question, what would be your -- I think I know -- if these turbines were located in agricultural land along the AT -- I'm not sure if your trail goes around farm fields -- how do you view that from aesthetics.

MR. CREWS: When structures such as these are incorporated into a landscape of an urban character where there may be other power lines or other structures and features, they would tend to blend more with the existing landscape character.

In this case, the landscape character is that of a natural appearing landscape, and there's nothing there that these things would resemble.

MS. SPENCER-FAMOUS: I did have one question.

THE CHAIR: I've got one and Catherine has one.

How did -- the Applicant and others, you know, pointed out perhaps one of the reasons they chose this area is -- other than obviously the physics of the area, I guess the winds and all that sort of thing -- is that the word major disturbances, which include the ski area and Saddleback, and those obviously are historic, much more historic in the sense than obviously a brand new if facility.

But how does that fit into the context of that whole thing? Because obviously, this area here particularly, I assume, is quite visible from the Bigelow range, since we can look right at it from here.

How do you view that sort of thing? And obviously there seems to me a fair amount of new stuff being built here that is quite visible, at least from the mountains, I honestly don't know whether you can see them from the trail but you certainly can see the mountains from here -- the new construction.

MS. UNDERHILL: I've been on Saddleback Mountain many times, and we've had protracted negotiations with the former owners of the Saddleback ski area in an effort to secure a protected corridor for the trail across Saddleback Mountain. It's actually probably lower by now.

The existing ski area in the smaller bowl that it's in is visible for only a very short distance, and it's sort of off, you're hiking north on the trail.

It was of great concern to us that there not be ski lifts and ski trips crossing over the Appalachian Trail on Saddleback Mountain. It was also very important to us that the large bowl of Saddleback ski area, you know, not be developed in higher elevations.

We are just tickled pink with the new owners of Saddleback and the way they're developing that mountain in a

way that seems to be sensitive to the values that we're trying to protect along the Appalachian Trail. We're very happy for the people of Rangeley that the ski area went into new ownership and that they have invested in it when they have.

So we just consider that -- you're talking apples and oranges because we have succeeded in protecting the upper elevations there on Saddleback to prevent the ski area from being more visible or intruding more closely on the Appalachian Trail experience there.

Does that answer your question?

THE CHAIR: It's an answer. I'm not sure that I can expect much different.

MS. UNDERHILL: I would try to do more if I knew what you wanted.

THE CHAIR: I'm sure that the view here is going to be subject to cross-examination, so I suspect you'll hear from someone more on this issue.

MS. UNDERHILL: Okay.

THE CHAIR: You know, just in trying to keep balance here that, you know, we do have -- I think we have to acknowledge we do have a fair amount of intrusion on this particular part of the trail that you've expressed some very serious concerns about.

MS. UNDERHILL: Yeah, I think it's minimal.

THE CHAIR: We have to -- you know, that's kind of

what I'm trying to get from you. How do you view what we already have to deal with?

MS. UNDERHILL: And we view it as minimal.

THE CHAIR: Okay. Marcia, why don't you go ahead.

MS. SPENCER-FAMOUS: Actually, a question for you.

Do I understand you're from North Carolina?

MR. CREWS: Yes, ma'am.

MS. SPENCER-FAMOUS: Asheville?

MR. CREWS: Yes.

MS. SPENCER-FAMOUS: North Carolina has been developing quite extensively, especially in the mountains, up the hillsides, et cetera.

I am familiar with that and I am also familiar with the sense of remoteness that's been lost there and the sense of remoteness that remains here.

Maine remains a very poor state, that's a fact, so we have to face that.

I hear you use the term unacceptable, and I guess I was curious as to what your context for unacceptable is and unacceptable to who and in what way.

Maybe you could elaborate on the use of that word.

MR. CREWS: First of all, in North Carolina, unfortunately, we don't have a mountain protection zone or any ridgeline protection policies, and it's taken a devastating toll on the scenery in the mountains of North Carolina.

Many of those developments I would consider unacceptable modification but there is no protection for them.

The term unacceptable modification is directly from the Visual Management System Handbook, and it is defined, as I read earlier, activities that contrast with the natural landscape in form, line, color, texture to such an extent where they appear to be excessive on the landscape. Those are the types of activities that would be considered.

It's a terminology straight from the handbook.

MS. SPENCER-FAMOUS: This is the handbook for assessing the Appalachian Trail?

MR. CREWS: It's the Visual Management System Handbook. It is the Forest Service system for inventorying and assessing scenery impacts for all types of potential management activities on landscape.

MS. SPENCER-FAMOUS: For the Forest Service?

MR. CREWS: For -- well, it was developed for and is used by the Forest Service and has been adopted and modified by other Federal agencies as well.

MS. SPENCER-FAMOUS: All right. Thank you.

MS. CARROLL: Good morning, Mr. Crews. Thank you for your testimony. I'm Catherine Carroll, and I've been Commission's executive staff member, and I have two questions for you.

Somebody that is pretty well known once said that

education is painful -- of the obvious, and I probably have -- I have two questions that have two obvious answers, but for my own clarification, I need to ask them.

The Commission has the hardest job here in this room to make a decision on this proposal. I have the second hardest job here in that it's my responsibility to formulate a staff recommendation based on the Commission's review criteria for this project.

My first question has to do with your presentation and referring to certain vista points, for instance, the Saddleback, the Horn, Saddleback Junior, Spaulding Mountain, et cetera.

Are those points that are on the Appalachian Trail?

MR. CREWS: Saddleback Mountain, the Horn, Saddleback Junior, Sugarloaf Cirque are all on the Appalachian Trail.

Spaulding Mountain is about 100 yards off the trail. It's a blue-blazed side trail; Mt. Abraham is a blue-blazed side trail, that is on State-owned property, of course; and then the Sugarloaf Summit trail is a blue-blazed side trail.

The ones that are actually on the Appalachian Trail or that have analyzed in my written testimony are Saddleback Mountain, the Horn, Saddleback Junior, and Sugarloaf Cirque.

MS. CARROLL: Thank you. My second question ties more into as I'm listening to testimony and thinking about the Commission's review criteria and tying it altogether and the

staff analysis of this project, your reference to this visual management system -- and forgive me if this isn't related to it -- but the ridgeline protection policy, you made a very few -- presented your analysis and conclusion based on this visual management system, and as I'm always in the mind of preparing a staff recommendation here, help me try to tie this visual management system with the LURC criteria.

Is this visual management system some kind of a regulatory regime? Does the Applicant have to meet provisions of this system?

Does the Applicant have to apply for, you know -- help me connect the dot between this visual management system and your analysis and conclusion, and how do I tie it into or fold it into the Commission's criteria for deciding on this proposal if you can.

Thank you.

MR. CREWS: I'm going to comment and then Pam may have some comments, as well.

The visual management system has long been viewed as the system to inventory scenery and to analyze the impacts to this area.

It is -- it was used by Mr. DeWan, and the scenery management system is an updated version of the visual management system.

But unfortunately, Mr. DeWan referenced the

terminologies and methodology used in the visual management scenery management system in his analysis and Dr. Palmer referenced it as well.

The link -- it is simply the accepted system by which we inventory and analyze impacts. There is no regulatory requirement for anybody to follow these regulations outside of our forest plan standards for each forest in the National Forest System.

The link to your mountain protection zone rezoning criteria -- or as Ms. Kurtz stated earlier, the contrast or the fact that there is not the harmonious blend of these structures to the landscape -- the contrast is excessive, and using this system and the definitions and the terminology of this system, it helps to prove that that criteria is not being met or would not be met in this project.

MS. UNDERHILL: I'll just add that basically it's a tool. It's a tool for, you know, conducting a visual analysis.

And our whole reason for being here today is, you're right, you all do have the toughest job in the room. We're here simply to provide you with information about the Appalachian National Scenic Trail, significance, and what we believe is an accurate assessment of what the visual impact of this project will be on the trail.

THE CHAIR: Thank you.

MS. KURTZ: I have another question.

THE CHAIR: One more. We've got to move on. We've got a lot of ground to cover.

MS. KURTZ: You used the word cast system with the National Park Service entity. You said there is no cast system.

I'm just sort of listening here and look at the statutory criterion, there's been a lot of emphasis on the economics and the natural resources.

But scenic values seem to get short drift, and that's because it's something you can't really touch. It's in the eye of the beholder.

But I think -- I'm wondering, do you have in your background information that can put -- place some value on scenic resources that is tangible?

I guess my impression is scenic aspects in terms of taking a look at what we have to evaluate, scenery is not considered as much as the natural resources.

Do you have any kind of data that suggests value of scenic remember resources in economic terms?

MS. UNDERHILL: I don't have handy any hard data. I think there started to be some studies done about the economic value of, for example, of hikers using, you know, resources like the Appalachian Trail.

In terms of putting -- in terms of putting a value on scenery, it is -- it's difficult to do. The enabling

legislation for the Appalachian National Scenic Trail is the National Trail System Act, which talks about scenic trails being established to conserve the natural, cultural, and scenic resources of the places through which they pass.

So in our enabling legislation, scenic values are placed right up there with natural and cultural resource value as something that is worthy of preserving.

As you say, it's kind of intangible, and different people are going to have different ideas of what is scenic and what is not.

To some extent it's objective, but, you know, Congress, in its wisdom, decided that it was worthy of having a category of resources called National Scenic Trails, and the Appalachian Trail is the premier National Scenic Trail.

So clearly in a traverse from Maine to Georgia along the ridgeline, you're going to see all kinds of things, and I was involved in this project throughout, all of the land acquisition for the trail, and it soon became obvious that you could not, nor should we, be buying everything -- the Federal government -- that you could see from the Appalachian Trail, nor could we expect that the landscape out there was going to stay unchanged for the next hundred years.

But we are trying to provide an opportunity for people to have a quality outdoor recreation experience in the eastern United States.

As I said, there are going to be diminishing opportunities for that kind of experience, and there is value, we believe, to the natural world and to scenic values, and the Appalachian Trail epitomizes that.

MS. KURTZ: In the absence of that data, perhaps the best tool we have is the visual management system.

MS. UNDERHILL: It is a qualitative way to analyze it.

MS. KURTZ: In some regards it's the best tool we have at this point.

MR. CREWS: It is a means of quantifying the quality of the landscape through the inventory process, and it's based on research that dates back to the '70s, as based on research of recreation users and their expectations of scenic quality at recreation sites to visit.

So it's all based in research, visual management system. It means to quantify in a sense of how it relates.

MS. KURTZ: One more comment.

THE CHAIR: We've got to move on, Rebecca.

MS. KURTZ: I realize that.

This is sort -- I realize that you're here on the part of the National Park Service and you're focusing on the Appalachian Trail, but I just wanted to remind -- I guess myself as much as anything else -- I think I got off track with the testimony of what we're really here to decide in terms of

the statutory requirements.

And even though you're talking about the Appalachian Trail, what this does concern is scenic feature in Chapter 10 as practicable.

To the Appalachian Trail, we're talking about any, you know, visual impact from anywhere, whether it's on that AT or blue-blazed trails or Route 4 or Route 27 or east to the Madrid Road, something just to keep in mind.

Thank you.

THE CHAIR: All right, we'll begin our cross and the Applicant goes first.

Mr. Thaler.

EXAMINATION

(Of Ms. Underhill)

BY MR. THALER:

Q. Good morning. Like Mr. Plouffe yesterday, I have very little time, so I'm going to try to keep my questions focused and I appreciate you keeping your answers focused. I don't mean to be curt, but that's the time limits we're facing.

Is it true that there's no scenic easement associated with the Appalachian Trail in this area?

A. There is no scenic easement over Black Nubble or Redington, Redington/Rangeley, if that's your question.

Q. Also, in terms of Mr. Crews, Miss Hilton asked you a question about an agricultural setting, and your response had

to do with power lines being an urban portrayal.

The simulations that you show up there on the board, as well as in your testimony, didn't show existing power lines, logging roads, haul roads, State roads, biomass plants, ski areas; is that correct?

A. (Eric Crews) from these viewpoints, the logging road data that was in the CAD file is actually in this model.

Q. Excuse me, but the question was: Did any of your simulations depict what's actually out there in terms of existing roads, manmade changes in the landscape?

A. They are not depicted exactly as they appear in the landscape, but in the written testimony there are photographs from these viewpoints, and there's a description of the existing landscape character.

Q. Okay. So you're saying they're in your photographs but not in your simulations; correct?

A. They do not appear exactly as they appear on the landscape. The scenic landscape that is out there is a natural occurring landscape and some of those features are there, they're subordinate to the total character.

Q. You talked about worse case. Is it true that what you were doing in your simulation you were attempting to portray what you would describe as a worse case view?

A. No, I attempted to present a typical example. The haze element is an average distance. The lighting situation is

1 o'clock p.m. on June 1st.

The software itself produces the light and shadow on the objects, and the cloud shutters as well. So there's no -- there's no attempt to control the output of each individual simulation.

Q. Let's talk about your computer situation for a moment because I think there's a saying, if I remember, about with computers garbage in, garbage out, meaning, sir, what you put into them can impact what you get out of them.

In fact, you described in your prefiled testimony program settings, meaning what you fed into the computer, in order to have it start developing these simulations; correct?

A. Yes, that's correct.

Q. And is it true that you were using, for example, tree densities in the area of 300, 350 stems per acre; correct?

A. That is correct.

Q. And that would be approximately 1 tree every 13, 15 feet or so on a grid?

A. I've not done the math on that.

Q. You also used as your input for tree heighth in these simulations 10 to 25 feet; correct?

A. Actually, that's a type. It's changed to 35 feet, and that is based on field observations.

Q. When you say field observations, did you go up Redington or Black Nubble Mountains?

A. I went to similar elevations on Sugarloaf and Saddleback Junior, and J. T. Horn. The Appalachian Trail Conservancy had been to Redington and informed me that the tree height there was a maximum of 35 feet.
Q. Is it your testimony that you didn't go on either Redington or Black Nubble?
A. I have not been on either Redington or Black Nubble.
Q. Did you hear the sworn testimony yesterday that going up Redington or Black Nubble in the areas that you were depicting there, first of all, in terms of the density, it is substantially greater than 300 or 350 trees per acre?
A. Yes, I guess I didn't hear that.
Q. In fact, did you also hear the testimony that on Black Nubble the tree height is generally up to 50 feet on average?
A. I heard the testimony. I don't know that -- I don't know if that's true or not.
Q. You don't have any personal knowledge?
A. I've never been there. I would say, however --
Q. Excuse me, I'm short on time. I'm sorry. Mr. Plouffe will be questioning you if you want to talk more about what might be on top of Black Nubble.
Ms. Underhill started off her testimony this morning saying, Shouldn't use numbers to describe the Appalachian Trail experience.

But you, along with Mr. Plouffe and Mr. Palmer, are professionals who do rely upon numbers to try to explain to people visual impact; correct, Mr. Crews?

A. The visual management system attempts to quantify the scenic character of the landscape and in fact assumes.

The only numbers that I cited were the GIS analysis, which identified the potential miles of trail use.

Q. Well, you also used a number of approximately 3.8 miles out of the 34.5 where there might be some view, some type of view, of some part of the project; correct?

A. That's what I just referred to; yes, sir.

Q. That 3.8 percent is roughly 10, 11 percent of the 34.5-mile segment; correct?

A. Including the side trails, yes, sir.

Q. Right. That's roughly what Mr. DeWan said in terms of 9 percent of the same segment; correct?

A. That's correct.

Q. And Mr. DeWan -- strike that.

You haven't hiked the whole segment of the AT that was depicted in your large map that was an exhibit to the Commission; correct?

A. That's right.

Q. As a matter of fact, you've only been to three of the viewpoints that you describe and then did simulations for; correct?

A. That's correct.
Q. And also, in fact, therefore you don't know of your number, 10 percent, of the time you might see some of the project whether the hiker would also see other manmade changes or structures, like roads, transmission lines, or ski resorts; correct?
A. That's based solely on the GIS analysis.
Q. So you personally or professionally can't disagree with Mr. DeWan that, say, of 10 percent, only 2 percent of the time would somebody be able to see part of the project and not the other man-made changes; correct?
A. As I've said, I've not walked the whole segment, but even if it's just 1 percent vista, the nature of the impacts would be significant.
Q. Well, let me ask you about this 1 percent because I was interested in your prefiled that according to the system that you use, there are four either/or situations where it might create what's called an unacceptable modification; correct?
A. That's correct.
Q. And one of them is if there's a structure that you can see that would be lasting more than roughly, I think it's 10 or 15 years; is that correct?
A. That's one of them.
Q. Right. Well, that's one, it's a sufficient one so that -- again, any one of those four variables would be enough to

trigger something to be considered an unacceptable modification; correct?
A. That's correct.
Q. And that structure could be the stack of a biomass plant, it could be a ski tower, it could be a cell tower, correct, if it lasts more than ten years and it's visible from the trail?
A. It depends on the scale, line, form, color, texture rule.
Q. Right. Let me just ask you a couple more questions before I turn to Ms. Underhill.

In terms of -- I have a question for you.

You walked over to the simulation boards over there and I think I heard you sort of suggest that Mr. DeWan was trying to mislead people about the simulation.

Is that the gist of your testimony?
A. I feel that those simulations don't accurately represent potential impacts.
Q. Have you -- but those simulations on those boards are only part of many simulations proposed by Mr. DeWan and Ms. Segal have submitted to the Commission, both in the application and their prefiled; correct?
A. The question again.
Q. Have you reviewed all the simulations that Terrance DeWan & Associates submitted both with the application and their prefiled?
A. I've looked at them. The ones that I was referring to in

my comments are these on display here.
Q. And only those on that display, correct, in terms of what you think might be misleading?
A. The comments I made earlier were in reference to these displays, yes.
Q. Are you aware that submitted with the application and the prefiled were digital photos that were not stitched together, that had been reviewed by LURC's independent consultant, Mr. Palmer, and commented upon by him?
A. I saw some of those images. They failed to identify the output image size and the distance at which they should be viewed as to scale. Then they're basically these same images except cropped or they're narrower.
Q. All right. Mr. Palmer can talk about his impression of those and the Commission can hear what he thought about them.

Let me turn quickly to --

MR. THALER: Let me just ask, how much more time do I have?

MS. MACALUSO: (Indicates 5.)

MR. THALER: Okay, thank you.

EXAMINATION

(Of Ms. Underhill)

BY MR. THALER:
Q. Ms. Underhill, you used some numbers in your testimony and written and oral today that I wondered about.

You mentioned in your testimony that this project involves 29 turbines.

What were you reviewing at the time that you prepared and signed your testimony concerning the project?

A. I apologize that I referenced 29 turbines instead of 30.

I was -- my staff and I worked together on my testimony and it came -- it was just an error on the part of my staff. I apologize.

Q. You remember that actually 29 turbines was an earlier configuration from some years ago on this project; correct?

A. It was just a mistake. I apologize.

Q. When you were preparing your testimony, had you personally reviewed the application?

A. No, it was reviewed by my staff.

Q. When you were preparing your testimony -- by the way, do you recall filing comments with the Commission back in April in which you said that the visual management approach -- let me just make sure I find the words correctly here -- that when you filed your comments, you said that the scenery management system, the SMS system, was the industry standard?

A. Yes.

Q. And that's not consistent with Mr. Crew's views that he's talked about here today; correct?

A. It's the same system. It's just an evolved -- it's an evolution --

THE WITNESS: It's the same system, is it not, Eric?

MR. CREWS: That's correct.

BY MR. THALER:

Q. Aren't the two systems different as to how they define middle ground, foreground, low ground, background?

A. (Eric Crews) They differ in the definition of the distance portion of it.

Q. That's what I asked.

A. The definition of the perceived textures, they are definitely the same.

Q. The SMS uses 4 miles as the edge of the foreground, whereas the VMS uses 3 to 5; is that correct?

A. Background.

Q. Background.

A. That is considered the visual management system, the middle ground extends from 3 to 5 miles, depending on the perceived texture and detail.

Q. (Ms. Underhill) Ms. Underhill, in your written testimony you compared this project location to being like the rim of the Grand Canyon.

You're not suggesting, are you, that millions of people come to this portion of the trail to look at the Redington/Black Nubble view shed, are you?

A. No; but you may be aware that just recently ABC Good Morning America, National Geographic Adventure Magazine

designated the Grand Canyon and Appalachian National Scenic Trail as No. 1 and No. 2 outdoor recreation experiences in the United States.

Q. Thank you. Speaking of that, you've talked about only the Appalachian Trail.

The Pacific Crest Trail is also a scenic trail that was created at the same time as the Appalachian Trail; correct?

A. Yes, it is. It was placed under the administration of the Secretary of the Interior, and the AT was placed under the administration of the -- I'm sorry -- the Pacific Crest under the Secretary of Agriculture, and the AT under the administration of the Secretary of the Interior.

Q. But you have no cast system, so is the scenic trail just like the Appalachian Trail, the scene trail; correct?

A. It's a scenic trail. It is not a unit of the National Park System.

Q. It's not even in the National Park System.

So it does run through a large wind farm in California; correct?

A. It sure does. It's pretty ugly.

Q. Okay. And the International Appalachian Trail Maine went through, a wind farm is being built right now; are you aware of that?

A. No, I was not aware of that.

Q. Have you ever heard of a place called Mars Hill in Maine?

A. I've heard of it.
Q. Were you aware that the International Appalachian Trail runs over it?
A. The International Appalachian Trail?
Q. Yes.
A. The International Appalachian Trail is not my responsibility.
Q. You've also talked in your testimony and again today about 40-story structure of this facility.

Do you know how high the tower is of these turbines?

A. My understanding that the tower with the blades is 400 feet.
Q. Do you know how high the tower is?
A. I think I heard about 160 feet.
Q. It's roughly 80 meters and it's only when the blade would be pointing straight up would you get the 410 feet.

Were you aware of that?

A. Yeah, because that blade keeps turning; right?
Q. Right. They usually do.

Let me just ask you --

MR. THALER: How much more? 2 minutes? 1 minute, okay.

BY MR. THALER:
Q. Were you aware that the -- there's a system, hut and trail system trying to be developed in this area called the Maine Hut

and Trail System?
A. Yes, I am.
Q. Are you aware that they're seeking and want to run their trail through the wind farm project here?
A. I just heard that recently.
Q. One last question. Mr. Crews has had some criticisms about Mr. DeWan and Miss Segal and the quality of their work.
You've worked with them before; correct?
A. Yes, I have, which is why I found it particularly astonishing that Mr. DeWan seemed unaware of the fact that the AT was the end of the National Park System.
MR. THALER: Let me just mark, Mr. Chairman, as an exhibit, and that will conclude my questioning.
BY MR. THALER:
Q. A letter that you wrote dated August 29, 1999, and your letter had to both Terry DeWan and Amy Segal, who are here and testified to this Commission on this project and a number of projects, praising them and the quality of their work.
Do you recall writing them that letter?
A. I don't recall right off hand writing that letter, but apparently it makes a difference who you're working for.
Q. Are you suggesting that Mr. DeWan and Miss Segal would corrupt or manipulate their presentation to this Commission under oath depending upon who they're working for?
A. I am not suggesting that. I just am very surprised at the

results they presented.

MR. THALER: Thank you. I will pass this to the witness and provide copies to the Commission and the parties.

Thank you, Mr. Chairman.

THE CHAIR: Mr. Plouffe, are you planning to cross here?

MR. PLOUFFE: Just very briefly, Mr. Chairman.

EXAMINATION

(Of Mr. Crews)

BY MR. PLOUFFE:

Q. Eric, how long have you been doing visual assessments for the United States Forest Service?

A. Fifteen years.

Q. And about how many visual assessments have you done during that period of time?

A. Hundreds. I do 10 to 15 of them a year.

Q. What generally are you evaluating for the United States Forest Service when you do these visual assessments?

A. I evaluate all special uses, such as communication towers, highway projects, including four-lane DOT Federal highway projects, roads, timber sales, potential land development for land exchanges or lands that we're acquiring to determine feasibility of those lands.

Power line corridors, just the whole gamut.

Q. These are activities within a National Forest that you're

evaluating?
A. Yes, sir, or potential exchange plans.
Q. And the Forest Service lands are multiple use management?
A. Yes, sir, that's correct.
Q. Could you briefly explain the difference between the visual management system and the scenery management system?
A. The scenery management system was an updated visual management system primarily to address some of the problems with incorporating in the forest plan language.

There was a change in terminology in the plan, but essentially the definitions are the same.

It does -- it does address some issues with how to conduct inventory to better incorporate enforcement plans.
Q. Would the type of analysis that Mr. DeWan did in this project satisfy the criteria of the United States Forest Service in evaluating Forest Service impacts?
A. The methodology or the conclusion?
Q. The methodology that he used.
A. It would -- it doesn't follow the visual management scenery management system methodology exactly in the process that I would use, but it's similar.
Q. Do you have any observations as far as why, if you use a similar methodology, to reach such a different conclusion from you?
A. I would say that one , the simulations that were produced

do not, in my opinion, accurately represent the impact. His conclusions were based solely on those simulations and his field visits. That would be one reason.

Other -- other reasons, I would rather not say.

MR. PLOUFFE: Thank you.

THE WITNESS: I would like to clarify the thing about the tree line on the ridge.

MR. PLOUFFE: Yes, sir.

THE WITNESS: The tree height on the ridges in the mountain simulations were set to heights that were information provided to me by J. T. Horn, Redington, and the height is 35 feet, but the tree height has no bearing whatsoever on the impacts from the turbines themselves.

Whether it's a 35-foot tree or 50-foot tree, the scale of the turbines and the overall impacts is unaffected by that.

The vegetation is a means by which you compare the scale of the turbines to the vegetation and to the land forms, but the mere fact that I used 35-foot trees on the mountaintop trail or 50-foot trees, would not alter the outcome of my findings.

MR. PLOUFFE: Thank you.

THE CHAIR: I think at this point we're going to do Mr. Plouffe's group.

Are you ready?

MR. PLOUFFE: I thought we were doing Mr. Palmer next?

THE CHAIRMAN: He said in deference to you that you could go first. If you prefer not to, that's fine, too.

MR. PLOUFFE: I would prefer that Mr. Palmer go first.

THE CHAIR: All right. If Mr. Palmer is ready, we'd be happy to hear from him.

MR. PALMER: My name is James Palmer and I'm an expert hired as an independent consultant by the LURC Commission.

I'll start out first with looking at the conclusions based on the criteria used in the DeWan prefiled testimony.

As I understand it, LURC has three primary criteria that they have to evaluate. The first has to do with whether a reasonable effort has been made to minimize the visual impact and make the project fit in with the environment. One aspect of that under normal practice would be to conduct an analysis to see if the site is the appropriate site.

This is somewhat difficult in the current situation, that is, you could require an Applicant to evaluate all the sites in Maine or under the LURC jurisdiction and identify why this particular site is important.

That may be too onerous. I think the State needs to do something like that because this is something that's going

to come before them again and again.

What we heard is that the site is suitable because it combines two factors: It's a high ridge with lots of wind and it's close to power distribution.

I accept that, and I don't know how rare that is because you've not been told that, but neither of those characteristics have to do with visual impacts. We don't know anything about whether there are other areas that have somewhat similar characteristics and whether they might be further away from sensitive receptors, and I would really like to see something like that and I assume you would like to see something like that.

The second criteria is that it needs to be placed in locations least likely to block views. If you take that literally, "block views," the turbines don't block views by and large when they're seen from far away. They're far away.

On the other hand, this is a strange project for a power project. It's not like a nuclear plant or a gas-fired plant where it's one big object. This is a big object, it's the whole farm on two ridges, but it's individual pieces that are widely dispersed.

So I actually don't have guidance for you on how to interpret what "block" means. The normal meaning would be that it blocks the view, and it doesn't block the view in my opinion.

On the other hand, this is a big project that occupies a pretty big portion of a view, and it's going to have a significant impact because of that, but it's not blocking the view.

It's something that I'm assuming you haven't had to deal with before. It's going to be difficult, so you've got to interpret what was the intent of that particular criteria.

The third is to preserve the natural character of the ridgeline.

We have been presented with the assertion that turbines are going to be have to be located on ridgelines or maybe on the coastline, that's the other area in Maine.

I don't know that we're in a position to evaluate that, but if one accepts that assertion, then there is no way to have a modern turbine on ridgelines without having them be problems.

They're huge, they're out of scale with the trees that are going to be on that ridgeline, they're going to be back lit at some time, they're going to be prominent.

So this particular Applicant, it seems to me, has done what they can to reduce the visibility of the roads between the turbines, the clearings around the turbines, the access roads, the power lines roads.

While there's a lot more that we might want to know about all of that, they're clearly trying their best to reduce

those impacts, but none of that changes the fact that these are huge turbines. So they're going to be visible on a previously natural area.

Now, it's my understanding that somebody could apply to harvest land on these mountains and they could apply for a special permit to harvest land above the 2,700-foot level and perhaps be granted that.

So it's not like these particular ridges are protected in the way that land that the National Park Service owns on the Appalachian Trail is protected; it's private land, it's in a working forest.

A large clearcut would be a significant modification under the scenery management system. That would be a major impact, and it would be not a partial retention-type area, it would be a modification of classification if that was allowed to zone.

So again, I don't know how to guide you in that except to say that it's going to be a major impact. They're big turbines. Everybody knows they're going to be visible, and all sides agree on that.

This project, as I understand it, started out with shared responsibility with MDEP, so the Applicant had criteria stipulated to MDEP. As things progressed, these criteria were no longer required but were kept because they relayed good information.

The MDEP approach is much more similar to the approach that we heard from Eric Crews. It's closer to that lineage. Your criteria are much -- it's not that they're vaguer, but they require much clearer -- there's more judgment, opportunity for judgment, in the three criteria that you have.

As I understand the MDEP criteria, they're more defined, maybe, and relate more to foremost. I'll wiggle a little within that constraint, but I think that's the intent.

The first has to do with landscape compatibility and basically it's a four-line color texture assessment, which is very similar to the VMS that we just heard about. So what it's looking at is whether the introduced impact contrasts along those four characteristics as a way of evaluating fit.

I talked about the color of the turbines being gray. In the version of the submittal that I had, they were gray. Apparently that's an earlier version and now they're white.

When they're in bright sunlight, they will be white, if they're white; when there's cloud cover, they'll appear light gray.

So in some ways my comments still will be appropriate. On cloudy/hazy days they're going to appear light gray.

That's a good color. White's not a particularly bad color. Certainly in the winter it's going to work pretty well and it's not going to be real bad during the summer.

The form of the turbines contrasts. They contrast. However, the basic form of the farm isn't too bad. It follows the ridgelines pretty well, it mimics that shape. Nonetheless, the turbines are going to be an introduction of a new form.

Under lines, there's a lot of use of existing roads and lines. That's good. It seems to me that that's being done to the maximum extent possible.

The lines of the turbines, again, mimic the lines of the ridges; that's also good.

Texture. The turbines are interesting elements in this landscape and actually they don't have much surface texture. They're smooth.

So I'll get to the definitions and background in a bit, but from a foreground perspective, texture on the turbines itself is what would give it foreground. There isn't much foreground.

The immediate foreground would be where you can hear them or in other way sense them. My guess is you can probably hear them farther away than you can see any surface texture on the turbines.

So the definitions that we go by are awkward, they're a little incongruous, and I'll get to that in a minute.

In the middle ground these elements -- the turbine elements are going to be large enough that they're not going to become a normal forested texture. In fact, they're going to

remain visible as objects a lot longer than the surrounding trees are because they're so much bigger and they stand up. They're going to be back lit, they're up above the ridge, they're clean lines.

Again, it creates a somewhat incongruous situation and they remain as objects visually from a lot farther distance than the forest does.

The next criteria would be scale contrast. The DeWan assessment evaluated this by looking at the contrast, the turbines to land form.

It's not probably what I would have -- it's not in my testimony, what I get. I would say that the most common object in the landscape are trees, and that's what I would consider the scale comparison to be to.

In that comparison, clearly the turbines are much, much larger than the surrounding trees, so it's a huge scale contrast.

From a far, middle, or background kind of view, I can understand -- when you've seen the whole project -- I can understand how you might make the scale contrast in comparison with land form. In that situation, DeWan's probably correct that it's not as severe. It mimics that land form, it lays on that land form in some sense.

But the fact that you can still see those individual turbines as objects is going to make the scale contrast in my

opinion significant.

The last criteria is spacial dominance. In this area it seems to me that there would be three co-dominant large projects, the two ski areas in this project. They're visible from each other sometimes. No three are visible all at once, so I've not done a rigorous study of that.

You certainly don't see them all unless you're in an airplane from one point in the same distant zone.

But I would say that within the region there are three -- if this project is built -- three major areas of moderately comparable impact.

I would actually say that the proposed wind farm is not going to be as much impact as the two ski areas, particularly if their anticipated expansions go through.

In summary, this project clearly has a significant impact on the landscape. I don't think anybody's really disagreeing with that. The issue is interpreting what that means.

Impact is a balance of sort of costs and benefits and whether the benefits and the efforts to mitigate the costs to the environment are adequate.

I have some general comments that I would like to say.

One is, to refer back very quickly, I'm concerned about the justification for location, and I understand that you

have to make a decision on a particular application, but I'm anticipating, as in the state of Vermont where I come from, you're going to be faced with more and more of these applications, and it seems to me that there should be a statewide assessment that includes both the mountainous and the coastal areas because there's a tradeoff there, and you're going to get whip sought because you don't have jurisdiction. Whenever it's a coastal thing, they'll say, put it in the land. They'll never say to put it on the coast.

This is something that just needs to be done.

It's not uncommon when I've testified in relation to gas-fired plants, the visual impacts of gas-fired plants, particularly in an urban area, to require a decommissioning plan, and in particular to require some kind of a trust to be set up that accrues funds to decommission.

The projected life of these turbines was somewhere around 20 years minimum, which is about what a gas plant is projected to be. These turbines may go longer. It may prove profitable enough that they'll be replaced in the next ten years by some newer technology such as what we said yesterday.

It may prove to be a bust. It may prove that the climate is too severe. Somebody may go up and get hit with a chunk of ice and get sued and they have to close the thing down.

You can imagine -- you can make up scenarios, crazy

scenarios, that might be disastrous to the project. It would be disastrous if these turbines were built not producing power but still on those ridgelines.

I would suggest some provision needs to be made for that.

A lot of the testimony from both visual consultants deals with distance zone. The Forest Service has a rule of thumb with rigid distances and that's to make things easy to understand.

The distance zones are a function of perception, and we should think of them in that way. We have to use sort of rigid distances, because we have to move forward, we have to have common vocabulary to talk about it. But it's important to understand where the idea from these distant zones come from.

The foreground has to do with the textures on the surface of objects. So that's like the leaves on the trees or the bigger, the branches of the trees, the clusters of branches.

In buildings, it would be the moldings and the windows, or the molding around the door, or even the windows and the doors, or the cracks between the bricks. You can see that it varies depending on that kind of context. If you're an environment with big leaves and they're moving, it's going to be further away than if it's a very fine, textured needle.

The new VMS also has an immediate foreground, and

that has to do with where you have other senses that come into play. So it's where you can, in particular, hear what's going on. The turbines what the foreground of a turbine is. The turbines have a smooth texture and yet they may be heard farther away from that.

It's an industrial product and it doesn't fit neatly with this kind of system, which was really created to describe the natural environment.

In any case, these turbines, unless we put a trail up over the edge, aren't going to be in the foreground view of anything that's being considered so far but it may be the foreground in the future.

Middle ground is where you can no longer see that surface texture but you can distinguish objects in the landscape, and it's because of that that it becomes visually the most important.

Middle ground is the distance that we start associating meaning with landscape and we start interpreting things. When we start talking about a natural or a rural landscape or a forested landscape, that's going to become more important to us in the middle ground because we can see a context in the middle ground.

In the middle ground these objects form the texture on the landscape, so you get a feel to pattern that that's what becomes important. You're not seeing cabbages or corn

anywhere. You're seeing a pattern of fields.

In the background, colors or objects become greatly muted for lots of reasons, one of them because it's too far away to see the object well anymore, but also the farther away we get, atmospheric haze [inaudible].

The Blue Ridge, for instance, is named after that haze. The ridges are blue because there's this haze. Well, we've got the blue ridges up here, too.

I see days here that are crystal clear and bright, even if they're cloudy. Yesterday we had some weather like that. The field trip that we went on with an illustration of a day where we didn't really have much visibility because it was so -- the atmospheric humidity kept that from being visible.

That haze affects where the background starts. Obviously you can't have middle ground if you can't see the object, if you can't see the texture.

Visual acuity. It's important to understand what we can anticipate seeing and recognizing in the landscape.

We can -- our threshold of actually sensing a high contrast background is something like 1/32 of an arc. If you had an all white background and you've got a contrasting black image, you could maybe see 30 seconds, maybe even a little less than that under ideal lighting conditions.

I think within the context of visual assessment, better thresholds would be recognizing an object so that those

measurements are a little different.

You're all familiar with a standard eye chart, which is what the next view is, and it's constructed so that the lines that form the letters are a 1-minute arc, and the object, the letter itself, is a 5-minute mark, that's how big it is. That's the standard.

In the United States we stand about 6 meters away from that chart, and that's what 20 -- that's about 20 feet. So 20/20 vision is you can see something where it's that 5:1 ratio, and then you go further away or closer, depending on what your eyesight is.

It seems to me that that's a reasonable kind of standard for us to look at here.

This is based on dimensions of these turbines that we've been presented with. The tower height is given. The blade in particular is very interesting. It's 44 meters long, but it's less than 4 meters thick at the base, and at the tip it's pretty skinny.

So ostensibly as an object, the height just to the nodule -- not the whole turbine -- but up to the solid part, the not-moving part, theoretically we should be able to see this thing, it's an object, 34 miles away, a long way.

There may be special lighting conditions or something that actually make that possible, but under normal circumstances, that's not what would happen.

The tips of the blades aren't going to be visible from that far away. I'm using the 1-minute threshold here just like they would on the letter "E" for the legs in the E, but it's going to be less than a mile.

It's going to start diminishing. You're going to see maybe a blur or a movement, but you're not going to see that tip from very far away.

The top of the tower is also going to be seen within the distance of some of the trail views that we've seen, but it's not going to be seen from up along -- a huge, long way away, and the nodule you're going to see from maybe 8 miles away.

So the 10-mile threshold that Jean Vissering suggested she would use is actually pretty reasonable as a distance threshold to do an analysis of turbines. And this project, using a 15-mile threshold, is really quite feasible.

So I would say that things were well done within that.

The reason the resolution is important is because you want the resolution of the simulations to be sufficient to capture the 1 minute worth of arc.

I think that the resolution that you mentioned in the images used here weren't sufficient to do that. As long as a camera was lined up right on a nodule, so you've got the turbine stack, and the pixels are the little sensors, and if

it's right on that and it's 1 minute, it will capture.

The problem is that it never lines up right. So you really want double that resolution, and the problem there is that while there are a few cameras that are approaching the 17-megabyte threshold for an image, that's not commonly available. They're very extremely expensive.

So we're moving into an era where we run into visual assessment on objects, and we don't really have the equipment to adequately do that. That's a problem.

One of the strengths of Eric Crews' analysis is that he doesn't worry about pictures, he cites his picture, so in fact he's not limited by that spatial.

Simulation accuracy. I was only able to evaluate the accuracy of one of the simulations. It was with the simulation on Saddleback, it was accurate. It matched up, you could hold it.

In the future where you have sensitivity where you're concerned about this, I really suggest that they print them on clear acetate so that you could hold it up like a window. You could really see. It's somewhat hard on paper to go back and forth.

I didn't have a ruler with me, but it appeared to be -- it was a 17-inch-long paper, so I could sort of guess about how far I was viewing it. It appeared that in fact the simulation was as represented and the height of the turbines

were appropriate.

If you look at the DeWan simulations and the ones that are in Jean Vissering's report, and Eric Crews' report, they're all about the same size.

I mean, I feel pretty good about any of them in that regard. I don't feel that any of them are trying to mislead us. They have different ways of doing their work or they have different skills and time, but they're all pretty much the same.

Color is a different issue. The Vissering turbines are a lot darker. They don't show the atmospheric haze that the actual images show.

While there's a lot of advantages to computer simulations that Eric Crews did, it's clearly not a real seed. It's a composed seed.

So the vegetation is modelled vegetation that's just picked out of a catalog essentially that he has to represent things.

So in particular if you -- I suggest you look at the Sugarloaf simulations as one simulation that every report has a before-and-after image.

So in DeWan, it's image 6-4 A, B, and C; and in the Vissering report it's Exhibit D, 3-a and -b; and then Crews, it's Figure 2, which is a photograph, and then Simulation G.

They're different. It's not that any of them are

dishonest, I truly don't believe that. But the DeWan photograph shows lots of context, that is, it shows the ski area. The other two don't show that.

One of the questions is in evaluating visual impacts is that context important.

I can understand why, if you're trying to represent the Appalachian Trail as a wilderness kind of experience, you don't want to show that context. But in fact it's really there and it does affect the judgment of the scene.

If you look at the ratings of the DeWan scenes without -- I think there are four viewpoints where the survey was done in this the field he was doing a before-and-after impact rating with people who had been hiking or were going to be hiking the Appalachian Trail.

You can see that the scene for Sugarloaf is significantly lower, the scene without the turbines, because it has this context.

So if you take the context out, it artificially boosts up the scenic quality.

I've done a fairly major study of the visual effects of clear cutting in the White Mountain National Forest and published the results of that in a peer review journal, and that was a major problem.

The simulations all were looking at a particular little valley, and they were from a viewpoint -- there were two

viewpoints, but the viewpoint I'm talking about maybe had a 270-degree panoramic view with some of the Presidentials, Mt. Washington, just outside of the simulated view, and there was no relationship between what people rated the actual on-site view and the view of the photograph.

Even though he was sitting there, they knew where the photograph was, they identified it, we talked to them about what was happening in that scene, they knew that Mt. Washington was not in the scene and yet they couldn't help but look at Mt. Washington.

I tell that story and it helps and hurts both sides. The context is important in the ski area; on the other hand, when you're looking at Black Nubble and Redington, those are the dominant mountains in the area and your eyes are going to be drawn to them. It's important. That's part of the context.

THE CHAIR: This is probably a good time to pause and ask a few questions so we know exactly where we're going here.

Rebecca.

MS. KURTZ: It's not really a question, it's a comment. Some of it was up over my head but it was very interesting.

I guess the one thing is when you talk about the criteria you said that the extent practical -- blah-blah, blah-blah -- you indicated it won't block the scenic view and it doesn't interrupt -- it just seems to be a distinction made

there.

MR. PALMER: In most cases it's the back ridgeline. So what's behind it, which is one of the reasons they're so visible.

In a literal sense, I would still say no. But it's really thinking about what the intent was in meeting that particular criteria. They're going to be very noticeable.

MS. KURTZ: Well, I think one of the words you used was incongruous. Some of these words are very important.

MS. HILTON: What about a view of the sunset? It's a place that people often come. Is it blocking the view of a sunset?

MR. PALMER: It's certainly changing -- it's changing that view.

I mean, when I was teaching, I lived in Cazenovia, which is near turbines, like 2 or 3 miles away.

My memory is that there was a phone book that had a picture of the turbines in the sunset.

It's a difficult thing to evaluate. Some people are going to think that it's making a mistake and others are going to be really upset. It's an industrial artifact in a natural looking landscape; but then clearcutting is an industrial practice, too.

MS. HILTON: Actually, the other question was the one -- what about the lighting? I haven't heard too much about

lighting and aesthetics related to the lights on these turbines.

Is that something that you looked at?

MR. PALMER: I don't know how bright the lights are, so I don't know how to evaluate that.

In the winter in comparison to what I would anticipate -- I haven't seen the ski area lighting, I would assume that it's lit at night, other ski areas that I've been on, it's not -- the night glare is going to be from the two ski areas, I would anticipate, but I haven't actually seen that, seen that effect at other areas.

I would anticipate that it's going to be like 15 communication towers, so it's going to be noticeable, it's going to be a blinking red light. If you were camping in an area where you could actually see it, you would see it.

I wouldn't anticipate people to camp so much in the open on the ridge, though, but perhaps.

MS. HILTON: Do you think that kind of lighting would have an effect on the view of the land?

MR. PALMER: In comparison to the lighting in this area?

MS. HILTON: I'm asking you what you think.

MR. PALMER: I don't know what the lumens from this is, but I know that the lighting on the ski area is almost certain to have an effect on the night sky.

MS. KURTZ: Have you ever seen the lighting on Saddleback Mountain.

MR. PALMER: No, I haven't seen any night lighting here at all.

MS. KURTZ: Maybe someone can answer this.

MR. WIGHT: Depends on how the lights are, up or down.

MS. KURTZ: I just ask --

MR. PALMER: The difficulty of the winter lighting is that even if you put it down, you're putting it down on the snow.

There just isn't a nice solution to that. On the other hand, people aren't hiking the Appalachian Trail as much in the winter. It's a different use. But there are skiers and stuff that look at the skies, too.

MS. KURTZ: Are there lights -- I know there aren't lights on the towers on Saddleback, I'm not sure about Sugarloaf.

I'd have to caution against --.

MR. PALMER: I'm talking about the lighting on the ski runs for night skiing.

MS. KURTZ: They're not lit. There is no night skiing on Sugarloaf or Saddleback.

MR. PALMER: I was not aware of that.

MS. KURTZ: That won't be an issue. So it's just the

parking lights.

THE CHAIR: Steve.

MR. WIGHT: I was fascinated by the notion of form, and it appears to me that these towers, while they're much smaller than the trees, are at least vertical with the trees.

I wonder if you could characterize the difference between the scene that we're looking at here in the simulations and the scene, say, of the Sherman Adam Center, whatever it's called, on the top of Mt. Washington, which appears as a horizontal line in a lot of views.

Just talk about form in those regards. I'm not familiar with that.

MR. PALMER: I'm not familiar with the situation, but the issue here is that where you can see the turbine blades, you've essentially got a rotary-type of form. It's obvious that it's very different. It's obvious that it's a manufactured-type thing.

I mean, there isn't anything to do to hide that.

Actually, the strength of the turbines is that they also symbolize something that's positive. In past eras in this country, skyscrapers were a symbol of progress and now we might get upset about it.

Well, we're split, as you've heard, on turbines whether they're industrial intrusions -- and there's no doubt that they're industrial -- or whether they're a symbol of

responsible stewardship, and that kind of interpretation is actually important.

If we were talking about putting a gas-fired plant, power plant, there would be no question that it wouldn't be acceptable.

This is a different situation. Both of them would have significant visual impacts.

MR. WIGHT: Thank you.

THE CHAIR: Marcia.

MS. SPENCER-FAMOUS: Jim, I was thinking about the lighting subject. That is something that hasn't been clarified in the testimony. Of course, one has to go back through experiences and think about if I saw lit towers, how much did they effect the night sky.

In my own experience in my adult life has been a couple different circumstances. One was long distance where I could see the Cutler towers, which as we all know are roughly 1,000 feet tall and are lit, and can be seen from a long distance, that is Down East; and then in another case there's a cell tower that is a couple hundred feet tall about a mile from my house, but I couldn't see the tower and the lights right over the top of the hill.

So clearly the lights should have affected the sky. In both of those cases while they were lit and lit for obvious reasons and significantly so, I had no problem ever seeing the

entire Milky Way in the Down East area regardless of those lights.

So I don't understand -- I guess the type of lighting -- do you know anything about the type of lighting that's used? Does that reduce that glow? I'm more familiar with the city glow because I grew up in the city, and you cannot see the night sky.

But in the cases of lighting on towers for aviation, I haven't had the experience of it varying the view of the night sky.

Do you have any insight on that?

MR. PALMER: It's not an area that I've actually studied in great detail, but the lumens will effect, if you're looking right at a light, that will effect your eye, so it may affect the visibility of anything right around those areas.

But it's not going to have the same kind of lighting impact that a city does or the ski runs would, if they were lit. It's not going to have that incredible impact.

But again, it's not something I've studied in great detail. I've not evaluated that.

THE CHAIR: Thank you.

We're ready for our cross. Mr. Thaler.

Mr. Thaler has a generous allotted 25 minutes. My spreadsheet says that, but I'd be willing to give you less.

MR. THALER: I'll budget it somewhere else.

MR. PLOUFFE: Could Marcia clarify for everybody, please, that I have reserved time to ask questions.

THE CHAIR: I've got you on here to testify.

EXAMINATION

(Of Mr. Palmer)

BY MR. THALER:

Q. Mr. Palmer, I'll try to move quickly.

In terms of the lights that we were talking about, is it your understanding that the only lights up there with the turbines would be the pair of red lights on some of the turbines at the nacelle level?

A. That's my understanding, yes.

Q. And that -- Mr. DeWan's prefiled testimony, did you get a chance to look at that?

A. I was using an earlier version. I didn't reread the prefiled.

Q. That indicates that there could be space so that there would be a pair of lights approximately every half mile and they would have a slow-on/slow-off profile?

A. Right, instead of the strobe light; that's my understanding.

Q. And by not having a strobe would that, in your judgment, reduce adverse scenic impact from the lights?

A. I think that it might help, but what's important is that the lights are really there.

My understanding is actually the slow-on and -off may be more useful for birds. I think there are 15 lights that are strung up along and they will be seen.

Q. Right. When you say strung up, they're not going to be vertical on a tower?

A. Yes, I understand that. They're going to be in half-mile kind of distances plus the ends of each of those.

Q. Is it also your understanding -- were you here yesterday when Mr. DeWan presented his overview in the morning?

A. Yes, I was.

Q. And just to refresh your recollection, the lights are designed to be visible to low-flying aircraft, that's what the FAA is interested in, 5 to 7 miles under clear conditions?

A. Right.

Q. Do you have a sense of how far the lean-to is at the Horns and Bigelow from where the turbines would be that could be visible from that lean-to?

A. No. No, and I actually can't tell you how far away the lights will be visible.

Q. All right. If I represent to you that it would be in excess of 10 miles, based on your visual acuity analysis, I believe you indicated that you really wouldn't be seeing very much or much of an image at all beyond 10 miles?

A. That would be an object. The lights are going to be a different kind of situation because they're producing their own

light.
Q. Right. And Mr. DeWan said that it would appear sort of like red starlight dots; would that be your expectation?
A. Yes, that is my expectation.
Q. Let me just move quickly to -- you talked about context and that in terms of your definition of context, you feel in your opinion that it's important in order to accurately, for the viewer or judge or whoever, to get a sense what something, what kind of impact would be happening, to provide the context of what surrounds the object; is that right?
A. That's correct.
Q. Would it also then be true that if the simulator took the context out, that that would overemphasize the scenic impact or effect?
A. It would put it in a different context. It could overemphasize, de emphasize, depending on what the other context is.

In this case, yeah. If there's a context that's going to reduce scenic quality and that's taken out, it's going to accentuate the turbine impact.
Q. Also in terms of context, if you were thinking of places -- I know, I think you did your dissertation on part of the Appalachian Trail; correct?
A. That's correct.
Q. So you're familiar with the highest spot in Massachusetts,

which is on the Appalachian Trail, Mt. Greylock?
A. Yes.
Q. And you can spend a night there in a lodge, and there's also a concrete observatory there?
A. Hm-hmm (indicates yes).
Q. Also Clingman's Dome, are you familiar with that?
A. Yes.
Q. And that's the highest point on the Appalachian Trail both in Tennessee and the whole trail; correct? Clingman's Dome is the highest point on the Appalachian Trail?
A. I can't say that for sure, but I'll take your word for it.
Q. And that also has a concrete observatory on it; correct?
A. Hm-hmm (indicates yes.)
Q. And we already know about Mt. Washington, most of us, what kind of facilities are up there; correct?
A. Yes.
Q. The last question, in terms of your comment about decommissioning and recognizing that while the LURC regulations don't specifically discuss decommissioning, you mention that as something the Commission would at least want to be concerned with or aware of, have you seen the letter from Edison to the Commission that was filed back in May with the responses to agency comments in which Edison committed to put forth whatever funds would be required or requested by LURC to decommission the project if it ever needed to be decommissioned?

A. I haven't seen the letter, but they did mention it in their testimony.

MR. THALER: Thanks. I have nothing further.

THE CHAIR: Thank you. Mr. Plouffe.

EXAMINATION

(Of Mr. Palmer)

BY MR. PLOUFFE:

Q. Mr. Palmer, my name is Bill Plouffe, you know I'm representing the Appalachian Trail Conservancy and the Maine Appalachian Trail Trail Club.

You looked at Chapter 10 of the LURC regulations as part of your review, and you also looked at the DEP Chapter 315 regulations; correct?

A. Correct.

Q. On Chapter 10 in the LURC regulations -- if you're familiar with them -- Section I under scenic character, c, says, [quoted as read] If a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridgeline.

Yet I thought I heard you say things like, they seemed to have done the best they can, one does a cost benefit analysis.

Where in the regulations or the statutes do we find language concerning cost benefit analysis, or doing the best they can?

A. It wasn't the cost -- I was using positive and negative impacts. Impact has to do with weighing the positive and the negative effects.

That's not the point. I get what you're saying.

It doesn't. I think I was also clear that it's a major impact on the ridge.

Q. And we certainly agree on that.

Chapter 315, which, as you explained correctly, is a much more fleshed out analysis vehicle in State law.

Would you agree -- you're aware that Chapter 315 says that even if mitigation has been done to the maximum extent practicable and is still an unreasonable adverse impact, then the project has to be denied?

A. Yes, I am; but it's my understanding that 315 doesn't apply in this case.

Q. You agree with me what 315 says?

A. (Indicates yes).

Q. When you were preparing for this assignment, where did you go on the Appalachian Trail?

A. I went on the field trip with the Commission, so the primary view was up behind us; and I went on Saddleback and Horn, and we came back -- we had intended to go to Saddleback Junior. They wanted us off the mountain because of thunder storms.

Q. I thought I understood your testimony to be that if this

project is built, there will be three major development areas visible?
A. No, in the region. In this little area, there are three significant visual impacts -- not the area, but the valley.
Q. From the Appalachian Trail, then, is not what you're saying?
A. You wouldn't ever be able to see all three from the Appalachian Trail but the certainly the side trail, the blue-blaze.
Q. From the Appalachian Trail itself, though, as a matter of fact -- and if you don't know the answer because you haven't been there, just say so -- if you're hiking over the Horn, for example, you have been, you can't see Sugarloaf ski area at all, can you, except perhaps on a clear day maybe from one of the summit towers?
A. I did not see Sugarloaf.
Q. And Saddleback -- well, you haven't been to Saddleback, so you don't know.
You talk about the context of things, and you reference three -- you said there were three photographs that people should look at in the three reports -- the Vissering report -- and that was the view from Sugarloaf?
A. That's my memory, yes, that's correct.
Q. Is that Figure 2 in Eric Crews' report?
A. That's what my notes say, yes. And the simulation is G;

is that correct?
Q. I don't have that simulation.
So your point is that, what, the photographer in some cases left out some of the man-made elements on the top of Sugarloaf?
A. In the existing condition photographs that Crews has, that's not true, there are man-made elements; but in the simulations of the impact, there aren't.
Q. All right.
A. That's my point.
Q. Okay. Thank you. I just wanted to clarify that.
A. But -- I mean, I don't want to say that in a way that suggests that I think that Eric was really trying to do that in a misleading way. I think that those are honest, professional differences in how you represent the condition.
I think what's important is that all of these simulations are done essentially millimeter focal length lens, and they all show the turbines as being essentially the same size and the same place.
There are slight differences in how clear they are, but they're all pretty much in agreement.
Q. I apologize. I was out of the room when you apparently said something, it was reported to me. I want to clarify this, that in your mind there is a difference between a gas-fired power plant on the summit of Redington and a wind plant on the

summit of Redington?
A. That would be true.
Q. What did you -- why is it -- what did you say was the difference?
A. Because there's a symbolic meaning associated with those two kinds of plants. We've heard testimony these past two evenings.
There is a significant group of people for whom -- carbon dioxide produced by the gas plant is causing the death of the plants and that one of the ways to get out of that is to use wind energy; and so a wind turbine would be seen as a progressive element, for those people, in the landscape.
Q. So that opinion has nothing to do with the visual assessment, it's just the difference in how people might perceive the connotation of the object?
A. It doesn't have to do with whether the objects are visible, but it does have to do with the scenic or aesthetic assessment.
Q. Where in the regulations of the Commission or in State statute or the DEP regulations do I find the justification of finding that distinction?
A. I can't give you that reference.
MR. PLOUFFE: Okay, thank you.
THE CHAIR: Thank you very much. I think, Jim, you're off the hook.

MR. PALMER: Great.

THE CHAIR: Thank you very much.

It's 11 o'clock and we're going to give our reporter a break here. And while she's taking a break, I think, Mr. Plouffe, is your group ready?

MR. PLOUFFE: We'll be ready.

THE CHAIR: Why don't you go ahead and get your group assembled while she's taking a break. We'll come back in 5.

* * * * *

(There was a break in the hearing at 11:00 a.m. and the hearing resumed at 11:10.)

* * * * *

THE CHAIR: Go ahead.

MR. PLOUFFE: Thank you, Mr. Chairman. Now begins the testimony of the cohorts composed of the ATC, the MATC, Maine Audubon, and AMC. We're going to present to you with nine witnesses and four panels.

The first panel will be Jean Vissering on visual impacts, and then we'll have three other panels: Mr. Brown, Mr. Lambert, and Ms. Calhoun; and then Mr. Albright, Ms. Jones; and then the last panel will be Mr. Publicover, Mr. Horn, and Mr. Field.

So without delaying further, Jean Vissering is going to provide her direct testimony, and by agreement, Mr. Thaler has agreed that he will cross-examine Ms. Vissering after the

Commission's asked their questions so that she can leave. She needs to be out of here to catch a ferry boat. I appreciate Mr. Thaler's cooperation.

MS. VISSERING: I appreciate your cooperation, also.

My name is Jean Vissering. I'm a landscape architect in Montpelier, Vermont, and I have quite a number of years of experience doing visual resource planning and visual impact assessment since 1976.

Most recently I have been involved in looking at wind energy sites. Since 2002 I was working with the Public Service Department, this was an individual job, with a group of stakeholders in Vermont, including Mr. Lee and Mr. Horn.

Out of that I developed a publication called Wind Energy and Vermont's Scenic Landscape. Since then I have been working on many multiple projects looking at wind energy issues, and I am also working for the developer on the proposed Deerfield wind project in Vermont.

I think this case is going to be an extremely important one in determining the direction of wind energy siting in Maine, and I'm very honored to be part of this process.

I think wind is going to be a small, but very critical, part of your energy future, especially as it is combined with many other methods for reducing our dependence on fossil fuels, and in fact, quite honestly I would rather be

promoting wind energy than working against it.

But I firmly believe that there are some sites which for visual or other reasons are not going to be suitable.

I, to date, have looked at approximately 13 or 14 different projects, mostly on the east coast, and of those, two of those I believe that there are significant visual impacts, this being one of them and the other one for very different reasons.

In fact I have been asked by opponents to work on five other projects, which I have declined to work on because I did not believe that there was a case or that their reason for position was valid. One of those was Mr. Lee's other projects in Vermont.

But getting to this project, the Commission must decide whether or not there will be no undue adverse effect on existing uses, scenic character, and natural and historic resources in the areas affected by the proposal.

The Commission also has a stated goal of conserving and protecting the values of high mountain areas from undue adverse impacts.

Now, wind energy -- at least in the eastern United States -- has been to be sited where the wind is, and those include certain farm lands, open farm lands, certain ridgelines, and offshore areas.

And so I think in each of these categories there will

be appropriate sites. I don't think that visibility, per se, is the issue, nor do I think that the height of the turbines is necessarily a concern.

Rather, I think the issue is, and we should be focusing on, the particular character of the context, the particular and noteworthy scenic resources that exist within that context and their sensitivities.

There are two ways to evaluate scenic resources from potential site impact, and both of them are very important. The first is the so-called professional approach, and it's usually done by landscape architects -- we have four of them, at least, in the room here -- and it's based on research of human perceptions of landscapes.

You've heard about the most notable example, the US Forest Service Scenic Management System, which has been adapted by states, regions, localities for the particular needs. The principles always remain the same, but it can be adapted to different landscape types.

The second approach is a public evaluation process, and there are a number of ways to do that, one of which you were doing last night.

The reason this is important is outside professionals don't always know what is valuable to locals, we can't pretend to. When I evaluate visual impacts, I expect there to be some impacts, but when there are numerous effects to particularly

sensitive sites, I believe there's reason for concern.

In this case, for example, it is true that the project would be visible from numerous lakes, from various roadside viewpoints. I think those are important but what pushes this one up into the realm of undue for me are the views from the Appalachian trail.

Of concern here is the proximity of the proposed project to a highly sensitive and publicly documented viewing area from which both the scenic quality and the freedom from development are important.

And it is not just that this project is visible from the Appalachian Trail; the project that I'm working on in Vermont is also visible from the Appalachian Trail. But what is different about this particular project is the -- first of all, it would be visible for a long duration, up to five days of hiking, it would be seen at varying distances, much of it at very close range, 1 to 5 miles. Moreover, these are views which are unquestionably spectacular. There is highly scenic foreground, middle ground, background.

At the present time the existing character of these views is predominantly natural appearing. There are logging roads, they're nearly impossible to see from the trail. There are almost no structures visible from the trail, and I'm going to show you some illustrations in a minute.

There are brief glimpses of ski areas, they're a very

minor part of the overall scene.

No. 5, from numerous project ridges are seen directly across the valley. They are very prominent, they are distinct, they're distinct in form, and they appear right across the valley.

The views for hikers will not just be of wind turbines but because of the elevation of the view, the perspective of viewers from that very sensitive viewing area, I am expecting roads and clearings to be visible as well around the turbines.

Finally, I want to look at one type or a second type of public process.

When I evaluate, I look at public documents to give me a sense of what has been established as valuable to a community, to a region, or to a state.

The value of the AT is well documented within the state of Maine, including the LURC Comprehensive Land Use Plan. The Maine legislature also recognized the AT as being of statewide significance, but the question isn't just is it significant, but why.

The AIM Trail System Act recognized the AT as one of State's few trails to meet the more permanent designation which is defined as trails provided with appreciation of natural and primitive areas and for the conservation of significant scenic, history, natural and cultural qualities of the area through

which the trails pass and offer primarily the experience of solitude and self reliance in a natural or near natural surroundings.

Also, the Maine Department of Environmental Protection identified the AT as a State scenic resource for protection by the regulatory process.

Beyond this, of course, this is a National scenic trail recognized for scenic recreational and historic importance.

So this is a unique and valued scenic resource and one for which a critical part of the experience is being in a natural setting with scenic views. It's not an urban foot path.

So in examining the impacts of this project in relationship to the Commission's evaluative criteria, it will have obvious and undue adverse effects on existing uses, scenic character, and natural and historic resources in the area.

These impacts won't be experienced at a long distance, i.e., greater than 10 miles, but over an extended period of time at close range.

Moreover, this is a highly scenic context that is both distinct and largely intact.

Considerable care has been taken in the past to screen areas from the Appalachian Trail, and unfortunately this is not something that can be screened; but I think the question

is not whether wind projects are good or bad or whether they're beautiful or ugly, the question is what are the impacts on this site. We evaluate them like any other kind of project.

I just want to run through a few photographs. I have some visual images.

We're starting with the view -- I'm going to start without any labels because I want you to sort of focus on how much development you can see, how many forest roads can you see in some of these images.

When you look at these scenes, these are largely in every respect natural appearing views, and there you can see Black Nubble, Redington, both of which are fairly distinct in their form. On Redington there's a ski slope on the right-hand side in this case.

This just illustrates -- this is a view from Saddleback Junior showing the extent of ledges along the upper ridgelines of Saddleback in the distance, the Horn in the foreground. You also can see here that Saddleback ski area is certainly not visible. It's visible only very briefly from the Horn.

As you come up on to Saddleback Junior, this is the first view emerging from the forest of Black Nubble. It's very prominent. It's right across the valley.

As you know, weather changes very quickly up there. This is just an illustration of Cirque summit, brief summit

forest on the top of Saddleback.

This is a view, 50 millimeter lens, so this is an actual view. You might need to be a little closer if you were getting the actual view, but this is looking towards Black Nubble.

It was the one we used for our simulation, and you can see -- of course, a lot of it is protected by the US Navy Training Center in there, but there's very little evidence of any, roads logging, et cetera in there.

Same with Redington. It is -- this would be looking down -- that's part of the AT in the foreground running along the lower ridge, and then Redington right in the background.

You can see here that the Crockers are right behind, so those wind turbines would be right between along Redington but also right in front of Crocker from here.

So this is -- this is the view of Sugarloaf. This is a telephoto view of Sugarloaf from the ski area from Saddleback Junior. You can see how prominent the ski area development is up there. It's barely visible.

Okay, a couple of simulations. You have pictures of those in your files. On Black Nubble, on Redington.

Here we are on the top of Sugarloaf summit. We've heard a lot about Sugarloaf summit, which is not technically part of the Appalachian Trail, it's a side trail. It is the one place along its entire stretch where you do see development

in the foreground and it is a side trail.

So there is the view of the turbines.

Sugarloaf Cirque, a fairly dramatic land form as you're descending, and here's Redington Mountain from Sugarloaf Cirque.

Again, you can see a little evidence of an old logging road in there, but that's sort of typical of what you might see, not exactly a very dominant physical form nor a structure.

Here are the turbines from that same view from Sugarloaf Cirque.

This one I did not take, it was taken by Matt Robinson, GIS specialist. And here we're at Mt. Abraham. Those foreground openings are part of ski slopes that you go up as you ascent Mt. Abraham. That's Redington off in the distance, Black Nubble right behind it. Redington is the white ski slopes.

I've just got a couple of pictures. I'll run quickly through these.

I don't have a simulation, but there -- shifting over -- this is, again, a telephoto view from Mt. Abraham. We're quite a bit closer now, but this is how Sugarloaf ski area appears from Mt. Abraham, and I would have to telephoto in to get anything that you would even be able to see.

This is descending Mt. Abraham back towards the AT.

You are looking for a distance directly at Redington. So part of that you can't quite tell the difference. Crocker and Redington are mixed in there.

The Redington Pond Range from Spaulding Mountain. This is a picture. I did not visit Spaulding. This is a picture that was also taken by Matt Robinson with a simulation.

And these were just a few. We haven't really talked much about roadside views, but some different views from some of the roads around the area. I'm not going to go into detail.

That's the end of my presentation.

THE CHAIR: Questions? Anybody? Steve?

MR. WIGHT: Thank you for that.

You said that you expect roads and power lines to be visible as well as the towers. What do you base that expectation on?

MS. VISSERING: I -- the top -- well, partly I base it on the Applicant's admission that they would be visible, except in their testimony, there were a number of places where they said -- Mr. DeWan said -- that those would be visible.

If you look at where the roads are located -- well, a few things.

I don't expect the power lines to be visible from the Appalachian Trail. Let me be clear about that.

But the roads, the summit roads, if you look where they're located, a number of places they'll be coming down

slopes that face the Appalachian Trail, viewpoints from the Appalachian Trail.

And given the difference in elevation, equal or above, I think it's inevitable that some of those roads will be visible. My understanding is that to install the roads, you need to have a 32-foot wide clearing. In fact, their road detail shows a 32-foot wide clearing with a 6-foot shoulder along the edge.

This is steep terrain, so it's going to inevitably involve cut and fill in places.

So -- plus, I missed yesterday in terms of what they testified for clearings for the turbines, but normally a 200-foot wide clearing is pretty normal for general maintenance and also to reduce the drag on the turbines.

MR. WIGHT: Actually, the testimony refuted that. Sorry, you didn't get there.

You said the ski areas have been screened from the AT. We had testimony yesterday that the AT had been moved so that it would not be able to -- or people on the AT would not be able to view the skiers. Is that what you mean by screen?

MS. VISSERING: I think it was a combination of ski areas, of adjusting the locations, and tree removal in planting trails and locating lifts.

I think there was one section of that lift and trail that was moved, but my understanding is it's a combination of

the two working together to develop something that would minimize the visibility to the Appalachian Trail.

MR. WIGHT: You're talking about both Sugarloaf and Saddleback?

MS. VISSERING: Saddleback, I know, that was the case, and I'm less familiar with -- Sugarloaf except from the Bigelows is not particularly visible.

MR. WIGHT: I think the testimony was that the trail had been moved so that you couldn't see Sugarloaf.

The only other question I had was about your choice of colors for the turbines. Were those white turbines that you showed in your simulations?

MS. VISSERING: The simulations, of course, are white, but the color changes dramatically depending on the light.

MR. WIGHT: That's why I asked.

MS. VISSERING: The white color I'm not sure exactly what your question.

I have no problem with the white color. I think that if you're going to do turbines, that's a good choice.

MR. WIGHT: It just appeared that those were black.

MS. VISSERING: Yes, they were. Those were silhouetted and you do see that depending on the lighting situation.

They will look very different. They'll look -- in

come situations they'll look gray and in some, black, and some white.

MR. WIGHT: Thank you.

THE CHAIR: We had -- and Jeff you can kick me if I get out of line -- we've had three different presentations now on -- expert presentations, representatively expert presentations on visual impacts, and setting aside for a moment the complex focal length and viewing angles and arcs and all that stuff, I have to tell you -- and I'm not sure that anybody cares -- but, you know, put yourself in our position of trying to evaluate all of this stuff.

I think on the surface I'm going to give you a simplistic view. They all look the same to me. I mean, arguing about the details and how you got to where you got, the towers are visible, I don't think anybody's arguing that. If we can argue about the percentage of the trail that might be seen and all that stuff, but the towers are visible in varying degrees from short distances, long distances, from incredibly long distances.

I mean, what -- I think everybody here -- the Applicant and the others -- really have to -- what do you want us to take away from that? They're visible, they're there, we can't change that.

Are you going to offer us anything on the interpretation that the Applicant has made that suggests is

different? What am I supposed to do?

I'm getting a little frustrated.

MS. VISSERING: I completely understand your frustration. I would agree that some of the details that you've been hearing to me are not really relevant in your decision.

You have a site, and to me the issue -- the turbines will be the same from project to project, and you have to assume that there will be places where these big things will -- are going to be work.

But the question is, what is it about this particular site? Are there resources that are unique to this particular site that will be unduly affected that cannot be changed? Or cannot be mitigated.

You know, I think that -- there will projects where mitigation, reducing the number of turbines, that kind of thing, will solve the problem.

I think that the first and foremost issue in looking at wind and siting wind energy projects is the site itself.

If you have a site that works, you can tweak it, you can figure out, well, let's move this one so it's not visible from here.

To me the issue here is the resource. This is not a resource that I came up with as being important. This is documented as being highly important to the state of Maine, and

I think that if you are looking at -- if you are looking at it from the point of view of the site and its context, you have a site that is -- it's not just -- it's not just an undeveloped site. It's an undeveloped site through which a trail of national significance is running immediately next to it that -- or an extended period of time, not just one or two viewpoints, extended viewpoints in some highly scenic areas.

I doubt seriously that you will find many situations where this will occur.

I mean, I've looked at, as I've said, we have a number of projects in Vermont right now. Most -- few of them have seen the kinds of impacts that we're talking about here: Highly sensitive sites immediately adjacent to the trail.

Yes, they will have impacts. They will be seen. They will be seen from people's residences. They will be seen from lakes.

But there is not going to be a documented resource. It's one of the reasons that the Action 50 Commission over Vermont went to a community standard as being an important part of the aesthetics criterion, because instead of making that judgment, how do I decide what is going to be offensive?

The community has decided what is important to it and it's documented it. It's not just a few people saying, well, this is our backyard and we really like it. This is a large group of people over and over again saying, this is one of the

most valuable resources we have in Maine, and it's valuable.

And the other piece is it's not just valuable as a cultural piece, it's not just a -- it's not a local green. It's where you don't have development around it. The value of it is that spectacular views and in the natural context.

That to me, you know, gets you away from, well, yes, people like it, some people don't; but I think the critical thing for you is you're going to have to -- you're going to have to be able to look at this and say, there are very particular reasons why -- well, either this will work in this site as a precedent for other sites where you have some resources, and it's very difficult to do without seeing what else is out there.

But this is an important precedent and having some idea of what are going to be the important visual criteria, some factors that played out in different situations will come up with answers that really make sense that recognize the individual context.

THE CHAIR: Thank you. Marcia.

MS. SPENCER-FAMOUS: Jean, if you will, I did notice that you mentioned the Navy Survivor School and as I was looking at your Exhibit C, unfortunately it's not as clear on that.

MS. VISSERING: Oh, you're right.

MS. SPENCER-FAMOUS: I did want to ask you whether

you factored in the fact that roughly half of Redington Township, which is in the entire area between the Horn, Saddleback Junior, Poplar Ridge, and Spaulding Mountain between that and the proposed facility, is kept in a remote sense although it is a Navy training facility there.

It gives a perception of remoteness, but it's kept upland by virtue of the fact that about half of that township is owned by the Navy and is used in that fashion.

And I don't know whether that point is brought out. I'm very aware of the fact as I go through the different uses, I have to think of all the existing uses. If one hikes -- I've been up on Saddleback Junior and looked out, and I only saw a little road and small mountain and I saw Black Nubble and Redington ridge, but know that that entire half of that township is owned by the Navy for their training facility.

So that keeps it in that condition and gives a sense of remoteness because of that.

Did you think about that as you were doing your evaluation?

MS. VISSERING: Yes, absolutely. It is sort of a circumstance as it is with all -- any piece of land we're looking at. It will have a condition that is influenced by many factors, but clearly this is one and that piece of land comes very quite far up the sides of Redington.

So it does have -- you're absolutely right, it does

have the effect of keeping it in a more pristine condition.

However, I would also point out that even looking in other areas in other views where that is not the case, you do have -- there is quite a bit of evidence of logging, but logging is a sort of loose pattern of different vegetative colors. It's not structure and that's a big difference, I think.

Even where you don't have that area where very little is going on, you still don't see -- from most places along the trail, you don't see structures. You see this sort of evolving pattern of vegetation.

MS. SPENCER-FAMOUS: Thank you.

MR. WIGHT: Do we have a map of ownership patterns in this area?

MS. SPENCER-FAMOUS: Yes, I have that in the file if you would like to take a look at it.

MR. WIGHT: I would, yeah, eventually.

It all of a sudden struck me that if this project is denied, then in fact we may be backing into a zoning. We may be saying that no land within a certain distance of the Appalachian Trail can be used for certain things.

So maybe we need to know whose lands we're talking about.

MS. VISSERING: Could I have a response to that?

I do think that that is -- I would really be hesitant

to say that that was the case.

I think that it's very important to understand that the reason for the concern here are the particular characteristics of this site with an extended period of view because there are numerous cases where it's visible from the -- where this will be wind projects visible from the Appalachian Trail possibly even closely, but where you have a context that is maybe more developed or it's a very brief view, that's very different, and I think that's important.

MR. WIGHT: I'm just concerned about this particular area.

MS. VISSERING: Okay.

THE CHAIR: Thank you. I think we need to move on to Mr. Thaler who will do his cross.

He's got 5 minutes or so.

MR. THALER: I think I have -- I have a lump sum that I have to work against. I'm going to try to keep it close to 5 minutes.

THE CHAIR: We'll give you a little latitude there.

MR. THALER: Thank you.

EXAMINATION

(Of Ms. Vissering)

BY MR. THALER:

Q. Ms. Vissering, my name is Jeff Thaler. Let me ask you a first questions, please, and I'll, again, try to keep my

questions focused.

The photographs that were in your reports which you showed up on the screen today, did you take all those, the winter views, the summer views? All of those?

A. I took probably 90 percent of them. The ones that I didn't were noted as being taken by someone else. The first scene from the Horn was taken by ATC staff, as were the Spaulding views.

Q. How about the winter views?

A. Those I took.

Q. Okay. Is it true that, as you indicated in your report and with Mr. Crews, that as of the seven sort of, you might call them important view areas, that you described, you only personally visited three of them; correct?

You didn't visit Saddleback and the Horn by Saddleback; correct?

A. That -- I did not. Saddleback Junior, Mt. Abraham, Sugarloaf, and Sugarloaf Cirque.

Q. You didn't visit the Bigelow range and the Horns at Bigelow; correct?

A. That's correct.

Q. You didn't visit Spaulding or Crocker; correct?

A. That's correct.

Q. You -- Mr. Wight -- Commissioner Wight mentioned to you -- I guess you missed it yesterday -- you threw out this concern

about a 200-foot radius clearing required, you said, required around turbines.

The testimony yesterday was that it would be a 20-foot radius, and beyond that there would be no tree trimming. That was stated in the May responses to LURC questions.

Have you ever reviewed those before you filed your testimony?

A. I reviewed the -- I did review those. I didn't remember seeing that in there. I do know that almost every other wind project I've been involved with has a 200-foot radius.

Q. So if this one was a lot less than 200, then you would think that that would be a positive environmental step; would you agree?

A. Yes.

Q. You also indicated in your testimony that from the Appalachian Trail you said there's "very little human made structures."

Is it your testimony that you can't see the Saddleback ski area or the Sugarloaf ski area from the Appalachian Trail?

A. No; I said very little evidence.

Q. Are you aware that you can also see transmission lines, roads, and stockpiles -- gravel stockpiles -- on the Navy land from the Appalachian Trail?

A. Well, I never saw any of that stuff from several critical viewpoints. None of that was visible.
Q. But you didn't get to at least half or more of the critical viewpoints you described in your report, correct, you personally?
A. I did not get to the Crocker view. No, I did not get to the Horn view. You can see that photograph and the Horn.
Q. You didn't get to Bigelow range, either; correct?
A. That's right.
Q. You also testified in your written statement that this area of AT, "some of the wildest and most remote sections" of the trail.

By remote, are you saying that a trail that is within half a mile to ski areas is remote from development?
A. The Appalachian Trail Conservancy considers this to be one of the few places along the Appalachian Trail where one can have an extended period of time between road crossings where there is no -- virtually no development.
Q. I don't think you answered my question. I'm not asking what the Appalachian Trail Conservancy might think. I asked about what you are testifying to and what you stated in writing.

Is it your testimony that a trail half a mile from two ski areas is "remote."

Is that your definition of remote?

A. Absolutely. I think this is something that has been a value of the trail and it has been upheld in past development.

This is absolutely critical when you're looking at scenic or visual impacts.

Those two ski areas are on the periphery -- they're both concepts from the major road, they're on the periphery.

There's a long area of hiking through a huge arc that's made by the Appalachian Trail through that area from which those two ski areas are virtually not visible.

Q. You also wrote in your testimony that from the Horns' pond campsite, lights of this project would be "quite common and dramatic."

Have you been at that campsite?

Do you know where the Horns' pond campsite is?

Do you recall talking about the lights of this project in your prefiled?

A. Yes, I do, but could you point to those?

Q. I will. If you don't recall writing about that, we'll come back to that if I have time.

You also wrote in your testimony that the proposed turbines are not so large that they will overwhelm the height of the project ridges.

So are you agreeing with Mr. Palmer that the turbines would not be a dominant element in the view?

A. No, I think that's -- well, there's an important

distinction here, which I would like to make if I'm allowed the time.

Q. I just asked you a simple question.

Do you agree with Mr. Palmer that the turbines would not be dominant given that you said they will not overwhelm --

A. No.

Q. -- the area?

A. That's two different points and I can't.

My answer would be no in answer to your question.

Q. Thank you. Some of the Commissioners, I think Mr. Wight, asked you about some of your simulations and they appeared -- and I'm looking at D-4B from Sugarloaf Cirque -- and how the turbines seemed fairly dark and you had responded to that.

Do you know what kind of turbines were simulated in that simulation?

A. It was -- it was the Vestas V90 I believe. I didn't do -- Matt Robinson created the simulation and put the turbine --

Q. You didn't give him the specifications as to what you wanted to be in the simulation?

A. We had the specifications in terms of height and dimensions of the turbines, and that's what was used.

Q. Last -- and I apologize to the Commission. I thought I made 25 copies of every exhibit I've used so far, and this morning I found that I thought I had 25 here and I have the original. I will get copies made during our lunch break, which

I assume we'll have a lunch break, and I will distribute it to Mr. Plouffe and all parties then.

What I've shown you and will offer as an exhibit is from a website called Building for Social Responsibility, and the title of this is Jean Vissering's Questions and Answers.

Is that you?

A. That's me.

Q. And the question that you were answering was: Question, is there anything in the 248 process -- and that's an environmental review process in Vermont; correct?

A. Yes, that's correct.

Q. Is there anything in that process that speaks to cumulative impacts of more than one project in a given area, and there goes on with a series of questions and answers.

What I would like to call your attention to is Page 2 where the question is, How would you compare the transformative visual impact of grain silos becoming common in Vermont landscape to possible wind development? Are they comparable?

This is somewhat similar to a question Commissioner Hilton had asked earlier.

Do you recall giving answers to these questions on the website?

A. Yes, I do.

Q. Do you recall stating that both grain silos and wind turbines are technologies responding to the resources involved;

do you recall saying that?
A. Yes.
Q. Do you also recall that both express a logical relationship with the resources involved?
A. Yes.
Q. If you could read aloud for the Commission, and then again that would be done at that point, the sentence starting with "while wind turbines are appropriate?
A. [Quoted as read] While wind turbines are appropriately linked to ridgelines in Vermont, they're nevertheless being located on landscapes that have heretofore been considered somewhat sacred. We need to recognize this, proceed with caution, and recognize the concern expressed by citizens as a reasonable response.

In parenthesis, if none of us were NIMBYs, the world would be a mess; however, I do think that there is some unjustified fear about -- I think I meant to say "these."

This was a very hastily written thing in response to some questions for which I was not being paid by the way.

And that we will over time come to see them more popular, especially if we site them with respect for the scenic resource values. We will need to sacrifice some of our ridgelines to balance the harm that has resulted from our unbridled use of energy in this country and all of the world at this point.

And I would completely agree with that statement.

MR. THALER: Thank you very much. I am done, Mr. Chairman.

THE CHAIR: Thank you. The Internet is a wonderful thing to remind us of what we wish we hadn't said.

MR. THALER: The Internet is a wonderful thing.

THE CHAIR: It depends on the point of view.

MR. THALER: Exactly. I think that's it.

THE CHAIR: We'll do the rest of the cross later. We're going to -- I would like to go for half an hour, Mr. Plouffe, if we could. I don't know whether you'll be done. If you're not, we'll just continue after lunch.

We had a few problems with our lunch logistics yesterday, and I want to make sure we have lunch when we get there, not after we're ready to leave.

If you would please go ahead, I would appreciate it.

MR. PLOUFFE: Is Ms. Vissering free to go?

THE CHAIR: She is free -- as far as I'm concerned, she's free to go.

Thank you very much for being here.

MS. JACOBSON: Good morning, Mr. Chairman. This next panel will consist of Dr. Aram Calhoun, Bud Brown, and Bert Lambert. I think we'll start with Bud Brown.

MR. BROWN: Good morning, Mr. Chairman, member of the Commission. Thank you for this opportunity.

Just one quick point about the visual things, an observation I made since I read all the application, everything from the Applicant's prefiled, and one thing I saw about lights on towers.

I happen to live on the coast of Maine down at Georgetown, and the only thing I see out of my bedroom window -- I have an old Victorian house with a turret and my wife and I have a bedroom there -- and the only thing I see once the summer people leave is the two flashing lights on the Bath Iron Works crane, and it's very visible to us, and I don't know that it offends me, but just so you know, what it is is it's two lights that kind of pulse on and off, red lights. It's a constant thing going and coming all the time.

So I plotted that out in my maps, and it's 10.3 miles from my bedroom window to that Bath Iron Works' flashing red light, which is clear as a bell out of my bedroom.

Now, let's go to -- if Tim has this thing working. As some of you know, I've been working in Maine as an environmental consultant for 31 years now, having fun all the time doing it. I work on this mountain a lot. I have got an after-the-fact permits or worked on after-the-fact permits for site locations for the VA, Army Corps of Engineers on every bit of it: The slopes, condominiums, the mountains, the golf course, everything that's here.

I've also worked down at Flagstaff Lake on hydro

licensing. I did a project for budworm back in the '80s, so I know this area in and out.

And what I did involved with this is typically I work for applicants, not the intervenors.

But I looked at the Application to see if it had the elements in it that I would have if I were preparing an application for LURC or for DEP. I think the last time I came before LURC was when I did the water withdrawal permits for Cherryfield Foods, which was 8,000 acres of irrigation and it was all about wetlands.

What I did was I read the entire application, and Marcia asked me if I did. In fact, I read every bit of it. I may forget some things, but I read it in the context and I wanted to know what was going to happen there, what kind of trucks are going to be going up and down the roads, how the transmission lines are going to be built, everything.

The first thing that struck me -- the first thing that struck me was there was, I believe, 7,616 square feet of wetland impact in the S-3 supplement.

My experience over the many years has been is we figured that one-third of all acreage in Maine is wetland, and it's going to be a little bit different here in the mountains, particularly because of steep slopes, because the soils don't develop the harboring conditions, but we have to deal with the seeps.

The acreage involved in the linear portions of this -- now that I've found out there's on average 1,000-foot corridor involved here -- is there's 3,300 acres of land in the linear forces -- the roads, the transmission lines -- not involving the footprint.

So I looked at that. I looked at all the requirements in the S-3 supplement, and it didn't jive with me that there were going to have that much increase, it didn't make sense.

So what we did is we got the CAD file from the Applicant, broke it into our GPSs, and Tim Forester, who's here with me, and I and two member of the Applicant's team went out and we walked it inch-by-inch, row-by-row.

We went with no preconceptions. We had no idea what the Applicant had mapped or anything. We simply started walking and we did it. Every time we stopped, we took a picture, we took field notes, I gave you the field notes. They're unedited, they're exactly what we thought about what we saw as we went along.

We put it on a map, and the maps that I presented in my testimony simply show you a representation of where these items are. We didn't say if they were big streams, small streams, big wetlands. We didn't try to attribute acreage to it or anything like that.

The other thing I -- having been involved with

projects like there, whether golf courses or working on power lines or whatever it is, ski slopes -- is we have a requirement to avoid and minimize adverse impacts and regulated resources.

I look at this, and a couple of things jumped out at me. The first thing, this is the transmission line coming off 27, does this routine. That's about an additional -- there are roads that run through here -- they're right on the maps -- that run off the existing Boralex power line. There are roads that run down through here and over into the -- I think this is called a scavenger -- where the 34.5 and the 115s come together. It's a couple of miles extra length of power line.

Now, I read in the application that it was to avoid forestry operations. Well, I looked at what Egro said about how much it cost to run a 115kV line. In round numbers it's half a million dollars a mile. In other words, why didn't the Applicant say to the landowner, I will pay you a million dollars' worth of stumpage, which we know is not attributable in today's climate, for 50 years' worth of growth on these woods? I've worked in the woods forever here, and that just jumped right out at me. Why didn't they do that?

Then I looked -- we also tried to avoid fragmentation, and, you know, I've worked as an expert for intervenors, the last job I did, on the proposed stud mill route for Bangor Hydro between Orrington and Baileyville.

I looked at the Metco route up to Orient. There have

been a number of instances where Applicants have attempted to say that it's less impact to build a new route than to use an existing route.

Then I looked at the Redington access road, which we counted up all these things and made ten different elements, but you have the access road that comes up through there, and then you have the transmission line that runs downhill. They're two parallel elements that are about 500 to 1,000 feet apart for miles. Why don't they run the power line down the road? It doesn't make sense. I mean, it's just a single pole, 34.5kV line.

I guess I'll leave it at that. Let's skip along. I haven't been paying any attention to this up here. I would like to do that.

This is -- this is -- this is a key element -- go back -- I'm not criticizing the Applicant's work. I'm simply -- we went out and we found what we found. And there may be some dispute on whether something is a wetland or whether a groundwater discharge area is a seep that doesn't have hydric soils or whatever, but after -- I talked to Dave Rocque a little bit about this, and I think that we fundamentally agree that up on top of the mountains, hydric soils will develop, down at the bottoms of the mountains there will be hydric, and on the steep slopes, there may be a question if these wetland seeps are -- they definitely wetland

vegetation.

Once you disturb these areas -- and I've seen it hundreds of times up on this mountain -- once you disturb them, the water comes gushing out forever, as far as I can tell. And it just accelerates flow down the mountains.

We may have -- we may be wrong on five, we may be wrong on 10, but I'm not wrong on 100 different additional things, which I spotted and Tim spotted and documented on the power line.

Let's go to that next picture.

This is up on -- there's 1.2 miles of the Black Nubble transmission line that are on slopes that are on a 45-degree angle or steeper.

There were parts when Steve Pelletier and were walking down when I slid down the mountain on my butt because it was so steep.

I had an epiphany when I saw this, and then I spotted another one. This is -- it was a big blowdown, and it has thin duff on top of these boulders are cobbled, and I kind of looked down in the hole to see how deep it was.

There's 3 to 4 feet before -- and I never did see bedrock or till, I don't know what's under there -- but the point being is, what kind of machine is going to go up that slope this steep and build a 1.2 mile power line parallel to the side of that mountain.

I wouldn't want to be in it. You know, I think that needs to be figured out. It just appears to be impossible to do.

You would have to cut a road in order to go in -- from what I'm told, you would have to bore these holes into the substrait so they'll stay together.

So you've got this side angle, 3 or 4 feet of this, and someone's going to go out there and try to build it. I don't know how they're going to do it.

I wish I had seen this earlier because I suspect -- I don't know -- that these Mahoosic soils, I'm told, I'm not a soil guy -- but I saw a lot of very similar stuff once I got up to the top of the Redington access road, the Redington transmission line.

I don't know that that's what's under there, but the ground looked the same, the trees looked the same, the slope was the same.

I think we need to know that. I mean, in a way what I'm saying is, when I read the application, it looked like a cookbook. It didn't look like -- there was nothing in there that made me feel that could determine what I was looking at, and I don't think you have enough information, in my professional opinion, to make a judgment.

This is the Redington access road. It's just a quick thing Tim tossed together to show -- we got these new GPS

units, which I found very useful because they have a barometric altimeter in them, and they take readings every 10 seconds, every 5 seconds, and they're very precise. They may not be accurate for elevation because during the day it goes from nice and clear to rainy, so I couldn't say what elevation I was at, but they're very quick readings they take. They're very precise. I feel pretty comfortable about the slopes.

These are all slopes over the 14-percent elevation, and I'll tell you that in the 31 years I've been working, walking in the woods, that this was the worst going once we got above -- I believe that right here is where I marked the top of the last clearcut and then we got into the real stuff, that same kind of mahoosic soil and I'm guessing.

It was the worst thing I'd ever walked in in my life. I believe I was the first person who ever walked the mapped centerlines -- all of the mapped centerlines of these roads. I just don't think that anybody else had ever been there because I was doing this (indicates).

And we knew exactly where we were all the time because anytime we had a reference, we fell on to it.

I just want to go to the last slide. You saw all the pictures. We may have some disagreement. I'm not worried about it.

That's the beautiful wetland. That's the one that was not found on Black Nubble. It looks just like -- there's

two on Redington. It has 500-foot buffers.

Up to the last slide. I just need the last slide.

You heard testimony yesterday that we were out there in a rainy time of year, the implication being that there would be all kinds of water, we would see flooded out areas.

There's nothing like data. I went to USGS, and as you remember from Redington -- Steve, I know you were there -- no Redington, but Cherryfield Foods -- that ADF is the median flows, it's the basis, it's the standard flow. That's what that red line is.

And what you'll notice is that right there is the day that we finished, the 11th. This was the year when everybody was worried that the vernal pools were going to dry up.

I was not out there in a flood. The flood came after. I guess that's it.

MS. JACOBSON: Since we're having a little technical difficulty, I guess, with the PowerPoint, what we would propose is to take either like a 2-minute timeout so that Dr. Calhoun can fix the PowerPoint, or we can go to Bert Lambert.

DR. CALHOUN: Chairman, Commissioners, I'm pleased to be able to speak to you today. I know you're hungry and exhausted, so I appreciate your attention here.

My name is Aram Calhoun, and I'm an associate professor of ecology at the University of Maine, and I'm also a biologist for Maine Audubon Society.

I have to admit that being in this position opposing wind power is kind of like scientists opposing teaching evolution in public schools. It's a very strange position to be in, so my job here today is to explain to you what a wind energy 20-year conservation biologist is doing opposing a wind power project.

What I would like to do is bring the focus back down to what we should be considering here, which isn't whether wind power is good or bad, or whether or not global warming is in fact happening. What we need to focus on is the specific site. It's location, location, location. That's what we need to focus on.

I going to be focusing on seeps, the hydrologic resource that I believe is very vulnerable on these mountains.

I just wanted to give you an idea. People have been talking about seeps in different ways here. There's a couple of ways that seeps occur. One is it's interception -- when water filtrates into soil and intercepting a seemingly impermeable area and then it pops out when that impermeable area comes close to the surface.

The second type of seep is at brakes and slopes, so you have a seepage going down a mountain, you have a change in slope that might be temporary and continues down the mountain. At that change in slope you can actually have forested wetlands and peak-filled basins in the wetlands that do exhibit

anaerobic -- or lack of oxygen conditions.

When you get these types of seeps at the top there, you often don't have evidence of hydric soils because the water is aerated.

But I have been working on a seep project for four years, and we were looking at the hydrology, the chemical functions, and ecological functions of seeps in watersheds.

The mountains that I'm working on are in eastern Maine. In fact, they are a -- the seeps there are a lot less extensive and complicated than what I witnessed on Redington.

So I wanted to just give you a couple illustrative data slides from that project, and although it isn't from Redington, the concepts apply across seep landscapes in Japan, in New Zealand, and lots of other places that I've seen seeps. It's remarkable how it behaves globally.

So basically what I want to draw your attention to is the areas that feed these seeps are called variable source areas, and they're variable because how much area is feeding the seeps varies with time, precipitation events, types of soil.

The interesting thing is that these variable source areas are generally only .5 to 2 percent of an area of a watershed, yet they contribute to 50 to 80 percent of the base stream flow to streams below and wetlands below.

So it is a very small part of the watershed that

contributes greatly to downstream sources.

In Steve Pelletier's testimony he states that the location of a project along the ridgeline remove much of it from potential fish habitat concerns leaving the transmission lines and so forth as the only project potential to affect fish habitat.

I would like to argue that given what we know about seeps in many parts of the world, contributing 50 to 80 percent of stream flow from variable source areas, which may be in a ridgeline, to me is a considerable impact.

The other issue is that these seep areas, these variable source areas, do affect stream chemistry and wetland chemistry downstream.

I don't want you to may attention too much except that this is an area above the seep. This is an area in the seep. The key here is that pH and chemical parameters and temperature change after -- before and after a seep contributes to a stream. That also holds across the particulars of how much pH level changes are going to vary.

Then I want to address the issue of time of construction. You've already heard from Dave Rocque that he has problems with winter construction, as do I, because of soil structure issues and other issues. You can't really see seeps well in the winter, plus variable source areas are not going to be seen easily in the winter.

I have a problem with spring and fall construction. This map, this graph you can see flows and our seep are high in the spring and in the fall, and they settle down in the summer months. The issue is that your high water flow, this is not a time to construct a road the size of Route 16 in a high elevation mountain up to 4,000 feet. You can't do it. That leaves the summer. That's this area right here.

I have a problem with summer construction in this area because it's during the summer that a lot of the wetlands and species are active on the soil surface. Using the wetlands, they're associated with seeps. Lots of amphibians use seeps during the summer months. The sallow wetland, that is the site of the bog lemming, has a complicated hydrology. The maps show part of the area where the road goes up to the mountain. Actually, we have coming off of that road, and that potentially could be disrupted.

So in conclusion, my feeling is that there's inadequate documentation of the extent of seepage and source areas in this very complex hydrological environment.

Here's the key for me. Even if all of the seeps were mapped -- and I hear that this may be happening, that people will got out and try to get a better handle on these hydrologically sensitive areas -- the key isn't just mapping them. You need to know what the hydrologic flow patterns are in order to predict what's going happen when you construct a

major road, which will intercept subsurface flows.

Those subsurface flows from these seepage areas are the key feeder of storm water runoff. If you don't understand those patterns, you can't make predictions about what you need to mitigate those problems.

So types of studies that we do to see flow patterns, we use physometras, we can isotope work, we've looked at groundwater chemistry and compare it to surface water chemistry and see where those come from, where the source areas are.

It's an extremely hydrologically complex mountain. I've walked a lot of mountains looking for study sites. I've never seen such a complex mountain in terms of hydrologic flows.

Disruption of hydrologic function, deep seeps from water quality, and quality downstream is a high-risk potential here.

Dave Rocque submitted an e-mail to Marcia Spencer, which you all have, he noted -- and at this time I think he assumed that construction would be in the summer -- he noted that it would be almost impossible to construct the type of stable roads needed without significant alterations of the mountains and in particular to the hydrology that supports streams, wetlands, and groundwater systems below.

I completely agree with this.

And one last thing. I just can't help but address

this because it is related to this project.

You're talking about being concerned with global warming and how the wind farm will help mitigate the effects of global warming.

One of the effects of global warming is loss of species, loss of habitat. Conservation biologists will tell you now that the latest paradigm is not conserving a community of species or particular species necessarily as the only tool, that it's important to conserve elevation, gradients, and physical areas on the landscape so that if we do have global warming and there are animals that live here, they have a future, they can go up one level. These guys can go up here.

Talking about removing this. We need to think about biophysical regions. We need to think about topography in our conservation efforts, and I would argue that this is a hydrologically sensitive area and it has some unique features. Just by way of that, if you want to do something for global climate change, you need to conserve landscapes.

Finally, I could not leave this. I'm tired of having this thrown in my face. It is indeed the truth that the Redington project is not an appropriate location for a wind farm. It will cause undue adverse affect on hydrologic resources, including seeps and wetlands supporting sensitive species.

Thank you.

THE CHAIR: I think, Mr. Plouffe, with your concurrence, it's about 25 after 12, and I've been informed that we have to be out of our dining room by 1 o'clock and we have to be there by 12:30 if we're going to get any lunch at all.

I apologize, but I guess I'd like to take a break from your panel and let everybody take a breather for a half an hour.

(There was a break in the hearing at 12:21 p.m. and the hearing resumed at 1:02 p.m.)

THE CHAIR: Go ahead.

MR. LAMBERT: My name is Bertram Lambert. I'm a licensed professional engineer. My background stems from about 35 years of experience at MDOT. I was a highway construction engineer and a resident engineer on 37 highway contracted projects, primary and secondary roads. Most of my career was in the western Maine mountains.

I'm currently a consulting civil engineer. I'm also a licensed Maine forester.

The Applicant's proposed 12.5-mile road project is estimated to cost about $15 million. This road is built to standards to allow for the transportation of very heavy, oversized trucks that have to be specially permitted because they are way above legal limits.

This qualifies as a major road project in Maine, both

from a cost point of view and the load bearing point of view.

The visual impact of this road, especially in high mountain areas, along with permanently maintaining clear power lines will be visible at viewpoints -- you've already heard about -- for miles around and tens of thousands of acres around.

Four hundred and five feet tall, the 30 windmill structures, better than twice as tall as any structure in the state of Maine, it will more than double the skyline in the city of Portland, Maine.

On top of the mountain extensive clearing and blasting for 30 towers, two bases, 30 grid pads, intended 32-foot wide roads between towers would entail, according to my calculations, about 56,000 cubic yards of rock excavation to be disposed of by 4,655 12-cubic-yard truckloads.

At that stage of the project on the tops of the mountain, the access roads already have been built. The estimated 56,000 yards of rock is most likely excess, unneeded rock to construct the roads.

It will be deposited in abutting areas creating waste dumps. This will greatly contribute to the areas of -- destruction in the subalpine forest, a fragile 2 to 3 inches of soil. It will also greatly increase visual impact at these higher elevations where only certain plants grow.

Because the site is located north of the 45th

parallel and up to 4,000 feet in elevation, revegetation will take generations.

The blasting will take about 26 tons of dynamite. This is equivalent to 104 500-pound bombs blasting the rock on the mountaintops alone, not to mention access roads.

In my opinion they are literally proposing to blast the tops of these mountains off.

On any road project erosion is going to occur. The way to minimize this is to have a buffer prior to a detailed set of plans. Right now those plans do not exist.

There is a vague promise by the Applicant. Some on-ground surveying will be provided late summer and fall.

Careful reading of the Applicant's meritus on the roads doesn't call for a future detailed set of plans either.

The proposed building of winter roads -- building the road in the wintertime doesn't have many advantages. It doesn't have any except that there are no lights. You have nice cool weather.

Winter roads cost two to three times more to build. It shouldn't be built in the cold weather time. It's beyond the 45th parallel and high elevations. There are no real advantages of building roads in the middle of the wintertime and I can get more specific but the time --

I have actually had a project in the wintertime north of Mooselookmeguntic Lake on Route 16, which lasted 3.5 years.

We contracted work in the wintertime and he went bankrupt.

At those elevations only certain plants grow.

Their approach to erosion control is to have it a toolbox of erosion control methods to be used for damage control.

The toolbox will be used as a built road when observed erosion is occurring. That approach saves the expense of preliminary detailed plans based on detailed on-ground surveys. But I guarantee erosion will occur and the toolbox will be used for damage control.

Location and the fragile nature of the site, as well as the steepness of the topography exacerbate the erosion problem. This is an area with some of the highest rainfall in the state of Maine -- 58 to 66 inches per year. Combine all those things, this makes the project of very high potential for very serious erosion.

Opponents and I are not against windmills, per se, as the proponents imply. That isn't the issue. We are strongly opposed to placing them in this fragile area, protected by law, inappropriate place.

Destroying the environment in order to save the environment doesn't make much sense to me.

Thank you very much.

THE CHAIR: Thank you. Is this all for this panel?

MR. PLOUFFE: This is all for this panel.

THE CHAIR: Do you like to ask this panel any questions, or would you like to hear them all and ask questions and get all of them?

I guess that's fine. Let's hear from -- I think you have a couple more people; right?

MR. PLOUFFE: Yes.

THE CHAIR: Okay, why don't we hear from them, and then we'll take whatever questions.

You're all going to have to come back up again for cross-examination.

MR. ALBRIGHT: Thank you, Chairman Harvey and Commissioners and staff. I am John Albright.

I'm here on behalf of Maine Audubon Society, specifically to address the project impacts in the northern bog land.

I was director of the Maine National Heritage program from 1983 until 1993. In 1985 an associate and I trapped two bog lemmings on the Table Land of Katahdin.

The other topic in my prefiled testimony, and then I'm going to summarize some key elements in that testimony, but I want to quote this primarily on the matter of bog lemming habitat.

The northern bog lemming is known in Maine only by virtue of six individuals tracked at five different locations. It is unequivocally one of Maine's rarest animals. It is

listed as threatened pursuant to 12 MRSA Part 13(3).

Bog lemmings' threatened status is directly relevant to this request for rezoning because the Maine Endangered Species Act requires that LURC shall not permit any activity that would significantly alter the habitat in the listed threatened species.

Further, the Act prohibits killing or taking any listed species, and as proposed, this project almost certainly will violate both of these provisions of the Act.

LURC's own criteria for approval of rezoning requests states that a project must have no undue adverse impact on natural resources in the area likely to be affected by the proposal.

The final paragraph in that section concludes that the Applicant must, "Demonstrate by substantial evidence" that all criteria for approval is satisfied.

But the fundamental assumptions and all the conclusions in project application pertaining to the bog lemming all derive from just one single data point. One lemming from one trap.

A single data point by any definition is not substantial evidence. It follows that the Applicant cannot conclude no undue impact because they do not in fact know the full extent of the habitat that the lemming uses.

Steve Pelletier and Kim Morris agreed yesterday that

they cannot map the home range of the northern bog lemming from a single data point, but it is the home range that would show the Applicant and the IF & W and the Commissioners all of the areas on the summit used by northern bog lemmings.

Kim Morris of MD IF & W, however, said that one can, "Take an educated assumption of where the lemming is likely to be found based on habitat type."

Again, an educated assumption does not constitute substantial evidence.

Further, Kim's statement that the only place the bog lemmings have been found is stagnant dominated wetlands is not correct. Evidence indicates northern bog lemmings outside of stagnant dominated wetlands and argue that the lemming is a wetland-dependent species that uses terrestrial habitat regularly during its annual cycle, just like vernal pool species that require vernal pools for breeding but spend much of the year as habitat.

The lower elevation trap site for northern bog lemming in Baxter State Park is described in a paper I co-authored, Albright 1987, which is cited in Section 7 of the application.

That site was a spruce budworm killed spruce fir stand. The understory had regenerating spruce and fir, mountain ash, and paper birch. The shrubbing ground there was, "raspberries, ferns, and grass, and scattered in places. All

the trees were dead. Most of the ground was dry in July and August."

This clearly is not a stagnant dominated wetland, yet the bog lemming was using it.

A very good way to identify habitat needs of an animal is to study food patterns. The prefiled testimony of Steve Pelletier states that wonderful foods of northern bog lemmings is raspberry seeds, and he cites MD IF & W's endangered species program is the source for that information.

Raspberry is not a wetland species. So food habitat data would tell us that the northern bog lemming in fact move into upland areas to find food. An upland area is an important part of bog lemming habitat.

The Montana Natural Heritage Program has conducted a series of intensive surveys for the bog lemming beginning in the late 1980s.

In a 1993 report they state, "Lemmings have certainly been found in habitat other than bogs and in Montana and other parts of the range."

This is a 1993 report by Richel that I cite in my prefiled testimony.

So it may very well be a core component of lemming habitat, it certainly is not the exclusive component, and bog lemmings are found outside the stagnant dominated wetlands.

So no substantial evidence is presented by the

Applicant or MD IF & W supporting their assumptions that the edge of the stagnant wetland regs beyond which they've never mentioned.

Therefore, all of the activities -- road building, blasting, construction activities -- on this summit will occur within lemming habitat. It would destroy lemming habitat. That would constitute a violation of the Endangered Species Act, and it would not satisfy the criteria for rezoning under LURC guidelines.

My time is up, so I'll stop there. Perhaps we could clarify some things later with questions.

MS. JONES: Good afternoon Commissioner Harvey and other members of the Commission. I'm very pleased to be here today, and I appreciate your attention.

My name is Jody Jones. I'm a wildlife ecologist at Maine Audubon. I've been there for 19 years. I was directly involved in the successful settlement of the Kenetech wind farm project in '94, and I initiated a stakeholder process to help set up statewide criteria for siting wind power to avoid wildlife. That was one year ago today. That project is not yet complete.

The project will cause undue adverse impact of Bicknell Thrush. Thrush is a migratory bird. Primarily what I'm going to talk about today is the loss of breeding habits, habitats, and also the collision obstacles for a large number

of nocturnal animals that are in the area.

So why is Bicknell Thrush important? It is the northeast's only endemic bird and occurs nowhere else in the world except for in the northeast region. It's the rarest of all the tropical song birds and it is a severely limited habitat. And as lemmings, it's mostly found above 3,000 feet. Redington is at the geographical center of this bird's breeding habitat, and it occurs here in very high densities.

This project will result in the permanent removal of 300 acres of prime habitat due to the roads, the turbines, the turbine blades, and the associated clearing.

And I would also like to mention that the Vermont ski area study that was cited by the Applicant is not applicable. It's not relevant.

The study itself states that -- and I'm quoting here -- "We emphasize that our scientific data do not enable us to predict the impacts that creation of ski trails may have on Bicknell Thrush habitat. The data presented in this report pertains only to existing ski areas that have been in operation for 40 or more years and cannot be directly applied to other areas."

Also, the slide that was presented by Mr. Pelletier actually depicts multiple locations of a handful of individuals, so visually it appears that the area is much more inhabited than it actually is.

And finally, there were no pre- or post-construction studies done at the ski area. It's likely that the clearing that was associated with that area removed Bicknell Thrush habitat, much like it will from the turbine construction.

I also would like to describe briefly the collision risk to Bicknell Thrush. They perform an aerial display much like woodcock. They go way up above the treetops, 25 to 75 feet, and perform a display in a large circle or oval of about hundred meters in five. And then they plummet back down to the trees as part of their breeding display.

This would put them in direct conflict with the rotor-swept area of the turbines that would be adjacent to their breeding habitat.

Many migrating song birds and bats are already in decline. When I was before you before, as part of a panel discussion I presented a lot of information about those declines, and there are certain sites -- certainly not all sites -- but there are certain sites that have been documented for both birds and for bats, and the schematic here indicates the relative size of the proposed turbines -- this is actually a bit smaller than the actual Vestas, V-90s -- are about 20 meters larger, and the rotor-swept area is equivalent to greater than a Boeing 747 spinning around in the air.

Also the application has documented the highest passage rate of any site proposed for wind power development in

the eastern United States.

This table was compiled directly from prefiled testimony of Mr. Pelletier. I've taken the fall concentrates and put them in rank order from lowest to highest, particular fall studies.

You can't see the colors there very easily, unfortunately, but from 200 -- you can see in the middle there's a 200 -- and below. Those are what I call sort of the lowest concentrates of the studies so far conducted, and then yellow, which goes from 238 to 638 is what seems to be at Redington is much higher at 1,472.

The Applicant also failed to measure the impact over the entire project area. This is Exhibit 7 in my prefiled testimony, and it shows the black hash mark, which estimated the passage -- not passage rate, but the total passage over the project area and the green is the entire.

Next slide.

By our calculations, it was eventually 30 percent, not 5 percent of this project area, and that's the actual number of migrating animals, 10,000 versus 1,700.

Next slide.

So in conclusion, the project will permanently destroy and degrade 300 acres of prime Bicknell habitat coincide with the rotor-swept area. The risk to migratory birds and animals is higher recorded in the east in terms of

potential risks.

So proper siting of wind power facilities we hope will avoid this type of action.

Thank you very much for your time.

THE CHAIR: Do we have anybody else?

One more panelist. Who's going to go first?

MR. FIELD: Commissioner Harvey and Commissioners, thanks for the time.

My name is Dave Field. I'm the overseer of land for the Maine Appalachian Trail Club, and I'm a resident of Hampden, Maine. I own property in Franklin County, in Madrid, and Carrabassett Valley.

I first climbed Saddleback Mountain, which is the location in my judgment of the primary visual impact of the proposed project, in 1951. I've maintained much of the Appalachian Trail across Saddleback for 50 years and have a long experience with the views from the alpine zones and other areas along the Saddleback ridge. I first hiked those, Spaulding and Sugarloaf, in 1956.

I mentioned this. I just saved the cross-examiner's time. I've been on every inch of the trail in question here.

I think there's no one in the room who has spent more time on Saddleback of anyone who's testified this week. So those are my credentials.

From personal experience, I tell you that there was

no simulated or photographic representation of the views the proposed development site from along the AT that comes close to the views experienced from the trail itself.

I realize that most of you have not been up there on the important points, but the Forest Service simulations come closer than anything I've seen before to what it really looks like, but there is no picture that really does it justice.

V-8, from the perspective of the Maine Appalachian Trail Club, who I represent today, and the larger trail community is aesthetics, is beauty. That's the core of the trail experience.

The proposed development would have the greatest negative visual impact on users of the Appalachian Trail in Maine and the history of the trail.

Nothing like the proposed extensive moving -- that's extremely important -- moving skyline disturbance has ever before been proposed. The most extensive visual impact to the proposed development would be that experienced in the Saddleback Mountain range. From that perspective, the proposed development on Black Nubble would have by far the greatest impact.

Aesthetics isn't just a matter of interest to hikers. It's the core of much of the attractiveness of Franklin County, the tourists, as well as full-time residents. People simply don't come here to enjoy the black flies, it is a beautiful

place.

Wind power advocates express an almost religious zeal that implies that hardly any trade-off would be too great to preclude wind power development. I understand the College of the Atlantic in Bar Harbor has contracted for electricity from this project. It would save a lot of transmission loss if the windmills could be located on Cadillac Mountain or in Frenchman Bay. I don't hear many calls for such development.

Both the Maine Appalachian Trail Club and others have urged a comprehensive statewide survey of appropriate wind power location potential, and the Maine Appalachian Trail Club has never opposed wind power development in principle.

I have a letter here I wrote to the Land Use Regulation Commission in 1993 on behalf of the Maine Appalachian Trail Club indicating we would not oppose a development proposed on Sugarloaf Mountain itself.

We concluded that development would have a negative impact on the AT but that existing developments on Sugarloaf would help to reduce the marginal impact.

We also did not oppose the proposed Boundary Mountains wind development project. Neither of these was built but we did not oppose them.

The Club's prefiled testimony reviews the extraordinary values of Maine's high mountain terrain. It urges you to consider the appropriateness of this proposal and

having made that consideration to reject the permit application.

Just a couple of other comments. None of the Appalachian Trail on Saddleback, not one inch, was moved in consideration for the ski area.

The Appalachian Trail was bulldozed off Sugarloaf. Those of you familiar with the Tote Road years ago when I was young and still did Alpine skiing, you would see white blazes on the rocks during spring skiing. Interesting, though, the trail was moved off Sugarloaf onto Crocker not because of that but because of proposed development of a ski area on Bigelow. So whoops, got that wrong. It never happened.

Private property, come on. The developer bought this property knowing full well it was restricted by LURC regulation and is now seeking a zoning change.

This is not something imposed on a private property owner after the fact. The developer knew that Appalachian Trail was there, knew there were concerns, and again, is looking for a zoning change, a special privilege.

Except for the summit building and the tower up there, Sugarloaf is invisible from all the Appalachian Trail that we're talking about in this to date. On Saddleback a northbound hiker sees the ski area up to 2/10 of one mile. A southbound hiker gets about a quarter mile, that's it.

I don't know how clearcuts got brought into this

discussion.

We're talking about vegetation changes. My grandmother grew up in Madrid, born there in 1890. That whole area was open farmland. That was the view south of Saddleback, it was open farm fields. That's all grown up.

Over the 50 years I've worked on Saddleback, I have seen timber harvest, logging roads all over the place, extensive clearcuts, especially after the budworm epidemic. It's a vegetation change that changes the color and texture of the landscape for a couple of years and then it's gone.

We're not talking about decades' long introduction of man-made structures into the landscape, which is what this project proposes.

Those are my comments.

THE CHAIR: Thank you. Who's next? Go right ahead.

MR. PUBLICOVER: Chairman Harvey, members of the Commission, my name is David Publicover. I'm a senior staff scientist with the Appalachian Mountain Club, where I've been employed since 1992. I hold a doctorate in forest ecology from Yale University. You may remember me from your panel discussion on wind power in December.

The AMC supports the development of wind power as an important source of renewable energy. We are not opposed to wind power development in GMA zones.

However, we do not believe that all sites are

suitable for wind power. Of the dozen or so projects proposed for ridgelines in New England, this is the only one we oppose.

The proposed wind farm is incompatible with LURC's Comprehensive Land Use Plan. It is inconsistent with all three of the goals. It does not ensure the separation of uses; it does not conserve, protect, and enhance the natural resources of the jurisdiction; and it does not maintain the natural characters of certain areas within the jurisdiction having significant natural values and primitive recreational opportunities. Rather, it will severely degrade these values.

The application includes goals and policies from the plan that support the project; however, in order to be consistent with the plan, the project also avoids serious conflicts with other goals and policies. This is not the case, to cite just two examples.

The second policy for mountain resources is to identify and protect high mountain resources with particularly high natural resources values, which are not appropriate for most development. We believe that the project site is such an area.

And the second policy for energy resources is to prohibit energy developments, related land uses in areas identified as environmentally sensitive where there are overriding, conflicting, and other public values requiring protection.

We've heard a lot about the western high mountain region. It is, along with Baxter State Park, one of the state's preeminent mountain landscapes. It has the greatest concentration of 4,000-foot peaks in the state, including Redington, the largest concentration of area above 2,700 feet in the state. Outside of the Baxter State Park region, it has the greatest concentration of large, unfragmented roadless habitat areas. These areas have been recognized as an important habitat by both the Maine Comprehensive Wildlife Strategy beginning with the habitat program.

You've heard about the Appalachian Trail, and this is an area of high conservation interests, State and Federal agencies and private organizations. And I note the State's efforts to protect Mt. Abraham, and the US Fish and Wildlife Services interests in adding the US Navy Redington base to the National Park System.

This is just a map of the project. These darker colors are areas above 2,700 feet. I would ask you to note the distribution of roads in the region, most of which are located at lower elevations. With the exception of the Caribou Pond Valley and the two ski areas, the presence of roads above 2,700 feet is quite minimal.

Redington Mountain lies in the heart of this region and is an integral part of what makes the landscape so special.

Redington and Crocker combined comprise one of the

largest contiguous areas above 3,500 feet in the state, behind only Mt. Katahdin. It lies within an unrouted corridor extending for 17 miles from Route 4 to Route 17.

It encompasses only five exemplary examples of this state's rare habitat and subalpine forest as documented by the Maine Natural Resource program. It provides high quality habitat for two of the state's rarest species and is a prominent feature of the Appalachian Trail.

This shows part of this landscape. This is Crocker Mountain from the summit of -- the north summit of Redington. This is the south summit of Redington from the north summit showing the unfragmented nature of landscape as it currently exists.

This is our satellite imaginary, year 2000 satellite image of the region, which shows the large roadless areas as we've mapped them, and the extensive roads and timber harvest activities occurring in lower elevations.

Now, Mr. Pelletier noted yesterday that Redington, because of recent clearcut between Redington, Crocker, that Redington has been effectively pinched off from the roadless area as we've mapped it.

That's true. But a small clearcut on the slope of Crocker Mountain does not in any material way change the unfragmented character or ecological value of Redington, even if I could no longer draw a line around it, according to the

criteria we use to delineate roadless areas.

The Applicant has portrayed this as a landscape of no particular significance already impacted by extensive human activity. I believe this is a serious mischaracterization.

The Applicant consistently dilutes the project impacts, combining the unfragmented higher elevations with the more extensive fragmentation at lower elevations.

Even within the large contiguous area above 2,700 feet for which Mr. Pelletier presents statistics in his prefiled testimony, three-quarters of the harvested area and three-quarters of the existing road mileage lies below 3,000 feet.

The impacts of this project will occur on Redington Mountain almost exclusively below 3,500 feet. The only impacts at that elevation in the area are from the Sugarloaf ski area.

The impacts of this project will be concentrated in the wildest, least fragmented, most sensitive part of this landscape.

The project would clear miles of the corridor, with 32-foot road surface blasted in slopes in excess of 30 percent. I note that this is wider than the paved surface of Route 16 at the entrance to the Sugarloaf ski area, and I want you to picture building Route 16 on steep slopes on the summit of a 4,000-foot mountain through the middle of a rare and pristine natural community.

The idea that this does not constitute a severe and undue impact is to me incredible.

The project is not located in the best available site. We have conducted analysis of wind power potential across the region, the type of analysis that we have been encouraged in the state to do since the Kenetech settlement agreement.

My analysis identified about 480 miles of primary ridgeline with Class 4 and above winds lying on private land potentially available for development. There's even more if you include secondary side ridges or Class 3 areas.

And I note that in their prefiled testimony, the Conservation Law Foundation spoke of the plentiful wind resource available in Maine.

Of this, about 320 miles is within 5 miles of a highway and about 135 miles is within 10 miles of a transmission line. The Applicant has noted importance of proximity to transmission lines, but I would note that TransCanada is proposing to construction 25 miles of transmission lines for 130-megawatt project, less than half again as big as this one. For this project transmission lines represent only 3 percent of the capital investment.

Now. When we overlaid these ridgelines on data for rates of natural resource values, Redington possesses a combination of resource values that are shared by only a small

number of the state's most iconic mountains. And it's this combination of features and resource values at Redington that make it especially significant, not any particular value.

We believe there are numerous other sites with lower levels of resource conflict and higher levels of existing impact that are potentially available for development.

Now, I recognize that this is a first-cut analysis, it is not the final word on where wind power should go. I recognize that there are many other constraints that we have not considered.

However, the Applicant has provided no information or analysis that illustrate how the range of potential sites has been narrowed down to this one mountain. Rather, we are given only general statements that amount to nothing more than, trust us, it has to go here.

If the range of possible sites in the state is so small that an area as sensitive as Redington has to be developed, then wind power has no future in Maine. The various public policies designed to encourage its use are essentially meaningless. I do not believe this is true. I believe that there is potential for wind power development in Maine without developing places as sensitive as Redington.

If LURC's Comprehensive Land Use Standards and Districts and their Land Use Plan are intended to protect any high mountain areas from development, they are intended to

protect an area that's ecologically and scenically significant as Redington.

I believe that if this development is permitted, it will set a precedent that will leave PMA designation and by implication of other protection subdistricts without any real meaning or value. It would mean that any mountain on private land would be open for wind power development. I do not believe that this is the intent of either the plan or of the PMA designation.

I request that LURC deny this application, and I thank you for the opportunity to present this testimony.

THE CHAIR: Thank you. How are we doing, Melissa, on time?

MS. MACALUSO: 16 minutes.

MR. HORN: My name is J. T. Horn. I'm the New England director for the Appalachian Trail Conservancy. The Appalachian Trail Conservancy is the national group that overseas the full of the Appalachian Trail.

My office is in Rye, New Hampshire, and I oversee 730 miles of the Appalachian Trail between Connecticut and Katahdin. I also oversee about 100,000 acres of land that's been dedicated to trail management.

I wanted to make a couple of points today. One is that the Application Trail is of national significance. I'm not going to go back through all the testimony that you've

already heard, but suffice it to say that there's an extremely significant body of law and policy in both the Federal level and State level, including your own Comprehensive Land Use Plan that calls the Appalachian Trail one of the most significant scenic and recreation resources in the country.

One of the things about the Appalachian Trail is that it goes through a variety of environments, and I think one of the key issues here is what is the environment in the western Maine mountains.

We've heard different characterizations of this landscape as being pristine, wild, and remote or highly developed, it's near ski areas, clearcuts, roads, transmission lines, et cetera.

I believe that the answer to that is much more on the remote and primitive end of things when you look at some of the resource data that Dave Publicover just presented about the roadless core and some of the information that we've seen in terms of the aesthetics of the Appalachian Trail in terms of the visual impacts.

I, like Dave, have hiked the entire section of trail, although I've only done it a handful of times instead of probably hundreds. The overall impression that a hiker gets is that this is one of the wild, remote landscapes left in the eastern United States. The trail is known to have several places that hikers will call jewels of the trail experience.

These are places like the Great Smokey Mountain National Park, the Presidential Range in New Hampshire, Roan Mountain in the North Carolina/Tennessee area, Mt. Rogers in southwest Virginia, the hundred miles in Maine, the western mountains of Maine are in the same kind of category. They are amongst the most dramatic and significant landscapes that you will find anywhere.

I think one of the things that bears that out is the elevation of these mountains and the amount of alpine zone present in this area, which is one of the reasons why the view shed impacts of the trails are significant. Mountains in Maine rarely get above 4,000 feet. When they do, you typically get alpine conditions.

There are six places in the state where you get alpine growth. They are Katahdin, the Mahoosic Range, Bigelow, Mt. Abrams, Sugarloaf, and Saddleback. These are the places that hikers typically seek out to have a remote high mountain recreation experience.

It is worth noting that of the six areas, four are right here. The Redington Wind Farm would be the view shed of four of those alpine areas.

This is an extremely limited resource in the state of Maine, the opportunity to walk above the tree line in a remote setting, and the only places you can do it are in this region, Baxter State Park, and Mahoosic.

We feel that that is indicative of the special quality of this landscape.

One of the things that is very apparent when one reads the Comprehensive Land Use Plan -- and I have to admit I read just about the whole thing to get ready for this hearing -- it's actually pretty good.

As a guy who spends his career dealing with public policy issues, I want to commend the Commission for finding a very compelling set of goals and resources that you have decided to manage and protect as part of your jurisdiction.

One of the things that I wanted to point out to you is that in your own plan, remote recreation is one of the most significant resources in the jurisdiction. There's a very compelling section on Page 114 of the plan that talks about how fishing in a remote pond is categorically different than fishing in a pond with a road to it.

I would argue the same is true for the Appalachian Trail experience. The Appalachian Trail experience in Maine, in these mountains and the western mountains, is much different than the Appalachian Trail in Connecticut or New Jersey or any of the other parts that it traverses.

The critical issue before you is, does a very large development belong to this particular landscape. And I would offer the following thought, which is that this project is really an outlier compared to other wind energy projects

proposed in the northeastern US.

The other projects that typically matched in development in some way, the Mars Hill project is on a ski area. In my testimony you'll see a chart on the back of other projects that have been proposed within 10 miles of the Appalachian Trail.

We have not opposed any of those other projects because they're mapped in infrastructure development and a landscape that is highly modified by humans. This landscape is different.

And finally, in reading the Comprehensive Land Use Plan, I wanted to point out that there are very compelling statements where there's a conflicting use between energy production and the other values identified in the plan.

It's very clear that energy production takes a back seat to protection zones that you have created. The reference to that is on Page 40. If I can read to you very quickly.

[Quoted as read] The number of protection zones applied resources that can be used for energy productions, such as high mountain protection zones, shoreland protection zones, and wetland protection zones. In all these cases, the focus of these zones is the resource, not the energy that can be produced from it.

You have a balancing act to do. I believe that your own plan indicates that in that balancing act, resource

protection is given a higher priority than energy production.

Thank you.

THE CHAIR: Thank you. Is that all of your witnesses, Mr. Plouffe?

MR. PLOUFFE: Yes, it is.

THE CHAIR: Thank you.

I guess the rest of the panel should come up at this point, and we can start to deal with questions.

We'll start with the Commission member. Anybody on the Commission that have particular questions for anybody on the panel?

EXAMINATION

(Of Mr. Horn)

BY MR. WIGHT:

Q. I'd just like to ask J. T. I guess it's the Appalachian Trail Conservancy that has the overall view of the trail; is that correct?

A. That's correct. The two entities that have overall responsibility are the National Park Service on behalf of the government and the Appalachian Trail Conservancy for the private sector.

Q. Is there still an Appalachian Trail Club or only a Maine Appalachian Trail Club?

A. Up until 2005 my organization was called the Appalachian Trail Conference, and we changed our name in July of 2005 to

Appalachian Trail Conservancy.

We had some fancy marketing consultants that convinced us it was a better name.

Q. So that is the overall private sector, non profit whatever?

A. We are the overarching body. There are 30 individual trail clubs that maintain discrete sections.

Q. How does the Appalachian Mountain Club fit into all of it?

A. The Appalachian Mountain Club is a separate organization. They actually represent four of the 30 trail maintaining organizations: Their Connecticut chapter, their Berkshire chapter, and their Delaware Valley chapter, and their White Mountains Trails Program run out of Pinkham Notch all maintain an individual section of the Appalachian Trail.

But the Appalachian Mountain Club does not have any specific oversight responsibility for this section of trail in the western mountains of Maine.

Q. Is there anywhere on the trail a view shed easement held by any of these entities?

A. When the National Park Service acquired the Federal corridor, which averages a thousand feet wide, many of these properties are scenic easements. They were negotiated parcel-by-parcel.

In general, those are -- even the scenic view easement are limited to an average of a thousand feet. What

happens beyond that corridor is generally either inside of a large public land unit, like the White Mountain National Forest would be, in case we would work on public policies, processes to influence those land use decisions, or if it's on private land, we simply use whatever the local planning zoning is, such as LURC or towns that use land use designations.

Q. Are you telling us, then, that the National Park Service doesn't own the fee of the whole trail? It has easements?

A. That's correct.

MR. WIGHT: Thank you.

MS. SPENCER-FAMOUS: I have several questions.

THE CHAIR: Go ahead, Marcia.

MS. SPENCER-FAMOUS: I guess I'll start with Bud.

EXAMINATION

(Of Mr. Brown)

BY MS. SPENCER-FAMOUS:

Q. You and I have had a lot of conversations about all this.

I listened to your testimony, I read your testimony. I've obviously talked to Dave Rocque. Dave has been out on the site, and I've had several conversations. We've talked about a lot of water being developed on the site and wetlands and seeps and streams.

You are aware of the fact that a seep, as such, may or may not be a wetland, therefore, it may be regulated as a wetland or it may not.

Are you aware of that?

A. I am aware of that. Actually, Dave and I had a pretty long conversation about that. I also had a conversation with Jim Cassidy of DEP when I raised the same concerns there about the lack of a NRPA permit.

And what he told me when Mr. Plouffe and I went to see him after we had heard that you and Jim, Dave, had gone out to the site, as well as Steve, he said that he directed the Applicant to go out and identify all of the streams, wetlands, drainage swales, whether or not they have free parameter approach or not because functionally they're all the same.

As I said in my prefiled testimony, I believe that they need to be considered. We may have some professional disputes on whether or not the soils have hydric conditions or not, but they're all functioning the same way and they all have great implications to water quality in these streams.

That's my answer.

Q. And understandably so, I guess the point is just not as a wetland meaning the Corps of Engineers definition, we can't apply at wetland rules from that, so we have to separate the two out; however, as you know, there's been extensive conversation about where these seeps are.

A. May I add something else as well. There are also lots of places that we identified, for instance, it's become known universally that it's a beautiful wetland, plus that vernal

pool that I found up on top of Black Nubble, those are also wetlands that are clearly jurisdictional, you know, that were not reported.

EXAMINATION

(Of Mr. Brown)

BY MS. SPENCER-FAMOUS:

Q. Bud, are you aware of the fact that we're at the preliminary stage and the criteria of what was supposed to be submitted in the preliminary stage and the final stage is the permit to build?

A. In the very beginning I sort of said, you know, we're having a crisis of confidence here, and I went to the attorneys and all that and talked about that very thing, you know, what is preliminary and what is not.

And the way I feel about it is how can the Commission make a judgment when there's a 1,000-foot-wide corridor and people, I believe clearly from the testimony I've heard, that the engineers have not been on those sites.

How can they lay out roads and expect the Commission to give a permit to go up there and by an act of faith expect that they're going to report all the wells and be completely sensitive, because I know what it's like to build woods roads.

I've been doing this since 1975.

Q. I understand that, but for the sake of time did you -- I'm talking about what LURC is required to have submitted.

Are you familiar with that? The answer is yes or no.
A. Yes.
Q. Thank you. When you looked at wetlands out there, did you assess the soils? Do you look at the soils?
A. I did the same thing that I saw in the application that the Applicant did. I did not do data sheets. No.
Q. You didn't do soils?
A. No.
Q. You don't know if they're hydric or not?
A. No.
Q. Okay, thank you. For streams did you, when you assessed the streams for the criteria, what break area did you use?
A. I found it kind of amusing when we were out there. I started to feel bad because I was seeing all these streams.

It got to what I did what I call the three-rock rule. If I picked up three rocks and it didn't have a bug, they all had skallowed channels. So I was just using the aquatic insect as the second parameter for a while. On the ones that were marginal, if they were marginal, I didn't write them down.

In retrospect, I wish I had written down a lot of the seeps that I didn't that had summer stream characteristics.

Now, I don't know where you went when you were out there, because I wasn't afforded the opportunity, so I don't know what you looked at.
Q. I'm just wondering about the criteria, the stream

criteria.
A. Right. There was a regular cast of characters there.
MS. SPENCER-FAMOUS: Thank you.
I think I'm going to go over to Bert Lambert.
EXAMINATION
(Of Mr. Lambert)
BY MS. SPENCER-FAMOUS:
Q. I just want to make a comment right now that you had made some comments about the toolbox approach, and, you know, this is not such a question to you but I think later on we will have Dave Rocque describe a little bit about the changes we have.
This is really not a question to you, just a comment right now that I think we should go into a little more detail to clarify some of that. I think it would be helpful.
I'm not going any further with that unless you've talked to Dave. Have you talked to Dave about that?
A. No, I haven't. I just gathered that opinion based on the Applicant's application. It's pretty obvious to me what they're trying to do.
MS. SPENCER-FAMOUS: Okay, thank you.
Jody, I have a couple quick questions for you.
EXAMINATION
(Of Ms. Jones)
BY MS. SPENCER-FAMOUS:
Q. You would agree that that habitat being present doesn't

necessarily mean that the habitat is being used by the rare species in question; is that correct?
A. I am sorry, I don't understand.
Q. That a habitat can be available for say lister, that doesn't mean that habitat actually supports the population. That that habitat type would indicate you would look for that but you wouldn't necessarily find it there?
A. That's correct.
Q. So the same with Bicknell, it may or may not be present in the habitat; is that correct?
A. That's correct, but it's definitely on Redington and Black Nubble.
Q. Right. And I forget, how many Bicknell were found by the Applicant?
A. They did a breeding bird survey, and I don't have that number in front of me. It did not estimate densities. They identified -- I don't know. I don't recall that number.
Q. I sort of remember there being a couple?
A. No, it was more like -- I remember that there were -- more than 10 and certainly we heard them frequently when we went up there on a site visit.

They are actually very difficult to detect.

Q. Right, I understand that.
A. So hearing them.
Q. For the sake of time, you had made the statement about 305

acres of prime habitat being destroyed?
A. That's correct.
Q. This morning when I read the statements and I took the number right out of the application, 307 acres of clearing entirely all habitat and all planned subdistricts --
A. About --
Q. No, 305 total for all the clearing entirely for the entire project, including the utility lines. So it sounds like it was a discrepancy between --
A. I'll have to check on that, thank you.
Q. One final question for you. You talked a lot about the rarity of Bicknell and the habitat type, and as you know, there is migrating Bicknell along the coast, there's habitat site for that, and that range, as you say, is in the northeast; is that correct?
A. That's correct.
Q. I looked -- I poked around and I read your testimony and I looked for records of migrating, annotations but mostly migrating.

I guess in some of the northern locations there was some breeding, too, but I found reference to Schoodic Head, Grand Manan, Jonesport, Oquossoc gravel pit, Adirondacks, all through New Brunswick, Cape Breton, Campobello, Quoddy Head.

So this is also habitat for Bicknell?
A. It used to be. My understanding is a lot of those records

have not been reidentified, and there is concern that the Down East Bicknell Thrush was sort of a fragment of the population and may no longer be viable.

Q. These were fairly recent records in the last, say, five or ten years, so I can't substantiate what is current today.

A. Right, I think there's grave concern that those populations aren't large enough to be sustainable and the habitat is marginal.

MS. SPENCER-FAMOUS: Okay, thank you.

EXAMINATION

(Of Ms. Jones)

BY THE CHAIR:

Q. I guess there was one quick question I had. I think you made the statement kind of black and white that if the habitat exists nowhere else in world?

Is that what you really meant to say?

A. The bird and its habitat is endemic, which means that this particular species occurs only in the northeast and that's what I'm saying.

Q. The northeast is a pretty big area.

A. Well, you know, endemic species are not very common. They're a rarity amongst orintologists. Like if you were to travel to the tropics, there might be an endemic specie on the Dominican Republic. It only occurs there.

THE CHAIR: I guess I had a few other minor points,

but I'm not going to prolong the agony here.

I guess I continue to make my statement which made me famous. The differences you point out in the ecological studies is still somewhat of a mystery to me, but I don't think I'm going to solve it here today. I'll express that concern for the record.

I'm going to turn it over to Mr. Thaler for his cross-examination.

MS. TRACEY: Good afternoon. My name is Sarah Tracey. I'm one of the attorneys for Maine Mountain Power. I'll be questioning Mr. Albright and Mr. Lambert.

EXAMINATION

(Of Mr. Albright)

BY MS. TRACEY:

Q. Mr. Albright, on Page 15 of your prefiled testimony you said alternatives that should be studied including leasing additional vans and resiting loads of turbines greater distances from the saddle.

That saddle you're referring to are the two stagnant wetlands that I had shown you in the exhibit that I gave to you and the Commission; is that correct?

A. That's correct.

Q. And that's where the northern bog lemming was actually found at the base of Redington Mountain; is that correct?

A. That's correct.

Q. Referring you to this map, are you aware of Maine Mountain Power's sworn testimony yesterday that Maine Mountain Power has arranged to purchase additional land to move the road farther outside of the bog lemming stagnant wetlands?
A. Yes.
Q. You testified in your prefiled testimony that you were concerned about the direct impact to the bog lemmings from the blasting for the road and turbine foundations; correct?
A. Yes.
Q. And referring to this map that I gave you, the turbines that are located in that area are Turbines 6, 7, and 8; correct?
A. Yes.
Q. Are you aware that the road that passes between Turbines 6 and 7, the road that's near the wetlands that we're referring to, will not require any blasting?
A. I wasn't aware of that. There was no blasting plan or indication in the application, so there was no way that I could know that.
Q. Are you aware that the foundations for Turbines 6, 7, 8 will not require any blasting?
A. No, because that was not specified in the application.
MS. TRACEY: Thank you.
Mr. Lambert.
EXAMINATION

(Of Mr. Lambert)

BY MS. TRACEY:

Q. Good afternoon, Mr. Lambert.

A. Good afternoon.

Q. You said in your testimony today that the -- I'm sorry -- that this road is built to standards to allow for the transportation of very heavy, over-sized trucks with loads that have to be specially permitted. This would qualify as a major project in Maine; is that correct?

A. That's correct.

Q. And these standards you're talking about are Maine Department of Transportation standards?

A. Actually, a lot of departments get involved in giving special permits.

The actual permit is issued by the motor vehicle division, and what they do is they contact MDOT for advice, and the main entity there is bridge maintenance. The engineers --

Q. Thank you, Mr. Lambert, I'm pressed for time.

What standard would you be referring to then, not the individual people?

A. It's actually State law.

Q. And those are standards for permanent roads?

A. That's right.

Q. Are you aware that the roads that we're talking about that go up the mountain are actually -- that are actually going to

have the heavy-duty load are temporary loads that will be holding heavy loads for only about six weeks?
A. Yes.
Q. And that the permanent 12-foot road at the end of the construction will really only need to be a medium- to light-duty truck load; are you aware of that?
A. No, I couldn't gather that from your application.
Q. As I read your testimony on Page 3, you stated that -- and from your prefiled testimony -- I gather that you're dissatisfied with the level of detail that Maine Mountain Power has submitted with its plan.

Is it that you need to have proper prior details on the ground plans that do not exist in your prefiled testimony on Page 2, to apply that Maine Mountain Power hadn't met the standard scale of plan views because the standard was 1 inch to every 250 foot at 50 feet; is that correct?
A. That's correct.
Q. And that your implication was that the larger scale of Maine Mountain Power had used was in fact insufficient; is that right?
A. Yes, to have detailed plans, you need 50-foot -- 20-meter cross sections, which as far as I know don't exist.
Q. And that standard plan scale, the 1 inch to 50-foot, is the standard that you use in your experience; is that right?
A. That's right. I've had 37 highway jobs, and they always

do that.
Q. And the highway jobs that you've been participating on are State highway jobs for Maine DOT; is that correct?
A. That's right.
Q. And the Maine Department of Transportation has an obligation because they're using the public purse to go through a detailed budgeting and bidding process; is that correct?
A. That's right.
Q. So to get comparable competitive prices for publicly funded projects, you need high levels of detail on your plans and bid documents; correct?
A. You said public?
Q. To get comparable and competitive prices for publicly funded projects, you need high levels of detail under plan and bid documents; is that correct?
A. That's correct.
Q. Isn't it true that private construction projects are negotiated, not bid out, in the same way publicly funded projects because they're not on the public dime, they're using their own budgets; is that correct?
A. I've worked with projects, both construction, in my consulting business and we always use a 50-foot bridge standard.
That's a pretty rare thing to build a road that's expensive and not have a detailed set of plans. It's really,

to me, lacking seriously.
Q. Have you used the AutoCAD program, Mr. Lambert?
A. I have a CAD program but it isn't called AutoCAD.
Q. You stated in your testimony this morning -- pardon me while I get my bearings -- you stated in your testimony this morning that most likely excess, unneeded rock will be deposited in abutting areas creating a waste dump, and if I may paraphrase, that will greatly impact the visual impact at higher elevations; is that correct?
A. That's correct.
Q. Are you aware that any and all material that occurs from removal of material at the site will either be reused or trucked and disposed of off site?
A. DeLuca, in their basis of construction report, has a diagram that shows cutting up pieces of the top of the mountain and wasting the materials on both sides.

So that's where I got that idea from. I don't know what you -- are you telling me you're going to haul that stuff off the mountain.
Q. All of the excess material will be trucked off site.

Are you aware of that?
A. No, I wasn't aware of it.
Q. And you've gone pretty detailed calculations on the amount of dynamite that will be used, the amount of blasting that will be occurring at this site.

And assuming for the moment that your calculations are correct, you have calculated that there will be 12.5 miles of road and that there will be 26 tons of dynamite used on this project; correct?
A. That's correct.
Q. And in conclusion, you stated that they -- meaning Maine Mountain Power -- are literally proposing to blast the top of these mountains off; is that correct?
A. That's correct.
Q. Are you aware of the Mars Hill wind power project?
A. I've never been there, no.
Q. Did you know that the Mars Hill project is in the process of being built?
A. Yes, I did.
Q. Do you know how much dynamite has been used at the Mars Hill project?
A. I have no idea. All I know is that it's 1.25 pounds per cubic yard.
Q. Were you aware that the Mars Hill project has built 5 miles of road and used 87.5 tons of dynamite?
A. I have no idea.
Q. Would you agree that 87.5 tons of dynamite is more than three times the amount of dynamite that you've said that we're going to be using, that 87.5 or 26 times --
A. Is that a statement or a question?

Q. Do you agree that --
A. I agree that --
Q. 87.5 is about three times the amount of dynamite used by Maine Mountain Power?
A. I agree that three times 26 would give you that conclusion.
MS. TRACEY: Thank you very much, Mr. Lambert.
MR THALER: Thank you very much. I'll try to move in no particular logical order here.

EXAMINATION

(Of Mr. Brown)

BY MR. THALER:
Q. Mr. Brown, you were responding to some questions by LURC staff.
Do you agree that are three criteria required for an area to be considered a wetland?
A. I do.
Q. That would be first dominance of hydro vegetation; correct?
A. That's correct, soils and hydrology. Yes.
Q. Second would be hydric soils; and third would be evidence of hydrology; correct?
A. Correct.
Q. And you would need all three before you would have an area you consider a wetland; is that right?

A. That's correct.
Q. Now, did you do any testing, yourself, of the hydric soils, whether the soils were hydric when you were out doing all your walking inch-by-inch?
A. Row-by-row.
Q. Row-by-row?
A. I did not.
Q. All right, thank you. You also presented a slide this morning -- I think it was this morning or early afternoon -- at the end of your show that showed CFS on a graph as well as another three-letter acronym, I don't recall.
A. ABF.
Q. ABF. Was that taken, the CFS taken from a waterway?
A. It was. It's the USGA's agent station on Carrabassett and North Anson. It's an unregulated river. I use that whenever I'm working up here when I want to look at natural conditions.
Q. So you didn't look at meteorological rainfall data for the first 11 days of the month?
A. No, I didn't; and actually because my show was truncated, I was going to show a picture of Marsh Stream, because I was remarking to Tim about how low the water was for the time of year. It was actually very low in the big streams up here for that period.
Q. In terms of -- I think you talked about the fact you understood that -- this is in response to Marcia's questions --

that the preliminary development planned stage and that currently in the proposal there are corridors that will be narrow in terms of the actual transmission lines for final design?

A. Yes. I will say that that's pretty much not my experience. On any project we've ever worked on, we kind of have a sketch plan to design a $150 million project.

Q. Well, LURC regulations make you do certain things.

Why don't we also talk about in terms of the transmission line corridor, when you were doing your walk, were you primarily walking down the centerline of the corridor?

A. I was.

Q. You didn't walk 300 feet one way, 300 feet the other way; correct?

A. Never did.

MR. THALER: Thank you.

Mr. Clark -- Mr. Field, I'm sorry.

EXAMINATION

(Of Mr. Field)

BY MR. THALER:

Q. I just want to clarify, Dave, you said that -- I believe you said orally today that Black Nubble creates the greatest visual impact on Saddleback; correct?

A. That's my judgment, yes.

Q. So therefore, have you heard about this Black Nubble-only

proposal that NRCM has entered?
A. I have.
Q. Is it the position of your group that you would oppose the Black Nubble-only project, as well, because of scenic impact?
A. Yes.
MR. THALER: That's all I have. Thank you.
If you could pass next to your left to Dr. Calhoun.

EXAMINATION

(Of Dr. Calhoun)

BY MR. THALER:
Q. Dr. Calhoun, I think you and I have met before in some other proceedings.
Are you a certified soil scientist licensed in the State of Maine?
A. I am not.
Q. Are you a certified geologist, which is required in order to --
A. No.
Q. Do you have any expertise in ground water hydrology?
A. I have collaborated on a project. I've been doing this for four years. I am not a hydro geologist.
Q. Now, you were, in terms of Black Nubble and Redington, am I correct that you spent -- you did a day trip up part of Redington; is that correct?
A. That's correct.

Q. And you haven't been up Black Nubble in connection with this project and your testimony?
A. That's right.
Q. Is it also true that you didn't do any test pits when you were going up Redington or down Redington?
A. I didn't think it was incumbent upon me to do test pits.
Q. We'll let the Commission decide that ultimately in weighing your testimony.

In terms of your research, you talked about your research as primarily Down East; correct?
A. That's correct.
Q. Aren't the soils of a different nature where you've been doing your research from the soils here on Redington and Black Nubble?
A. The soils are different, but we have shallow seeps, boulder seeps, as well, and channeled mineral soils with short and permeable layers, so that's my answer.
Q. Are the soils primarily granitic Down East?
A. Yes.
Q. And they're not primarily granitic here; correct?
A. Correct. Impermeable layers are impermeable layers.
Q. I also just wanted to understand. In your testimony you talked about why you didn't think one could build in the winter, why you couldn't build in spring or fall, and why you couldn't build in the summer; correct?

A. Correct.
Q. Does that leave any time of the year for building over 2,700 feet?
A. Not on this particular site, which is extremely fragile and hydrologically complex. Absolutely not.
Q. And that's based on your one day of a day trip up Redington only, not Black Nubble; correct?
A. That's correct; and based on the species and the habitat that occur there and my experience doing day trips to seeping mountains.

Also, I have data from all of the reports from the Applicant.

Q. Let me just ask you one or two other questions.

You seemed to suggest that with respect to this project there hadn't been any design to handle flow from seeps; is that your testimony?
A. That's not my testimony. I saw the sandwich and all the toolbox that was there, but what I was objecting to is that you can start building the road and make decisions at that time on the road what you want to use in that toolbox before you know the extent of hydrologic challenges on that mountain.
Q. Have you seen the diagrams that would engineer such that the flow or the discharge on the seeps would continue to be discharged down slope streams, transferred beneath the road?
A. I think you didn't hear my answer. I've seen the designs.

The sandwich is appropriate for that sort of area. What I have not seen is the extent that would be needed to work in such a hydrologically complex, fragile area.

Q. One other question. I was a little surprised to hear, are you offering an opinion that this project would have an adverse impact on fish?

A. I am offering an opinion that given all of the data that we know about how seeps and very small amounts of a watershed contribute to base flows, this mountain feeds Nash Stream; so yes, I would hazard that it has not been demonstrated that no undue adverse effect would be found in Nash Stream, and downstream wetlands as well, by a major development on this fragile mountain.

Q. In terms of hazarding a guess, have you reviewed the comments file with LURC by the Department of Inland Fisheries and Wildlife specifically relating to fisheries impacts?

A. Yes, I have.

Q. Do you recall that they felt that there would not be an undue adverse impact on fisheries as long as some of the measures proposed by the Applicant were undertaken?

A. Absolutely, I don't believe that they've done enough in their investigation to come to that conclusion.

Q. So you disagree with the conclusion reached by the department?

A. I absolutely do.

MR. THALER: Thank you. Moving right along, the next question is for Mr. Horn.

EXAMINATION

(Of Mr. Horn)

BY MR. THALER:

Q. J. T., I have a few questions for you. You have in your prefiled testimony a statement that if a road system were built on Redington Peak, there will be a significant loss to people who perform this form of recreation, meaning hiking, because of easy access to the road system.

Do you recall saying that?

A. I do. What I meant by that was that the Comprehensive Land Use Plan places premium on remoteness and primitive recreation.

One of the things about remoteness and primitive recreation that happens here in the state of Maine is climbing 4,000-foot peaks.

There's only 14 peaks that get that high. Redington is one of the only ones that doesn't have a trail to it.

Q. I don't mean to interrupt you, but --

A. I'm trying to answer your question.

Q. I want to ask you is whether you said something that I just read. I would like to be able to ask you a follow-up question so that I can just make the most effective use of my time.

So if you could let me -- you just said -- you answered yes, then I would ask you the next question which is: Given your statement that there would be a significant loss to hikers if there was a road on the mountain, aren't there a significant number of hikers who each year hike to and up to Mt. Washington?

A. Yes, there are.

Q. And there's a road up to the top of Mt. Washington; correct?

A. That's true.

Q. And is there also a road up to the top of Mt. Greylock in Massachusetts on the AT?

A. Yes.

Q. Is there also a road going up to Clingman's Dome on the AT in Tennessee?

A. Yes; and one of the things --

Q. Excuse me.

A. -- unique about those mountains --

MR. THALER: Mr. Chairman, I would like the witness to just answer the question. I don't think any other witness so far in this hearing has taken just a simple yes or no and then gone on for a few minutes. I don't think it's appropriate or fair to me.

THE CHAIR: Just answer the question. I understand your -- we all understand your frustration, but you have to

answer the questions he asks.

THE WITNESS: Thank you, Mr. Harvey.

MR. THALER: Thank you, Mr. Chairman.

BY MR. THALER:

Q. I also wanted to ask you, there was some discussion, as I recall, when we were doing our site visit up here with the Commissioners.

You were part of that visit; right?

A. Yes, I was there.

Q. That was the a few weeks ago?

A. Yes.

Q. You recall there was a discussion about sort of membership in your organization and who were the types of people who generally would devote the time to doing the trail work, things like that, or had the time to do that kind of volunteer work?

A. We have many kinds of members, some of which do trail work, but many are just supporters of our organization.

Q. Is it true that the number of people -- through hikers is a term where somebody hikes from beginning to end of the trail; correct?

A. Correct.

Q. And that's something that the Appalachian Trail Conservancy keeps track of, the numbers each year; correct?

A. We keep track of anyone who self reports.

Q. All right. Are you aware of the numbers from the last

five or six years showing a steady decline in the number of through hikers utilizing the Appalachian Trail?
A. I'm aware of that trend.
Q. Let me just show you quickly in exhibit.
J. T., this is from the Appalachian Trail Conservancy website, is it not?
A. It appears to be.
Q. Does this confirm what you just told me, that since 2000 there's been a decline in the number of through hike completions that have been reported?
A. That's true.
Q. Let me also ask you, in terms of -- and I don't know if you're the appropriate person to ask or Dave so tell me -- there's something called the local plan for the management of the Appalachian Trail in Maine, Grafton Notch to Katahdin.
Which organization does that?
A. The Maine Appalachian Trail Club is the author of that plan; Dave's probably a better person to answer.

EXAMINATION

(Of Mr. Field)

BY MR. THALER:
Q. There's a draft, Third Edition January 2006?
A. Yeah, that should be the most recent.
Q. I think that's what you submitted to LURC as I recall, is that correct, either you or Steve?

A. Somebody did.
Q. There's a statement in here that -- well, first of all, it says that outside of public highway corridors, the trails cross by only four power transmission lines and no telephone lines.
Is that generally consistent with your knowledge?
A. I'd have to mentally run through it, but that sounds about right.
Q. Are you aware that the line related to this project will be running under the road and --
A. That's my understanding.
Q. Also there's a statement in the draft plan that you authored that entrepreneurs are experimenting with wind power to electricity generating facilities in the vicinity of the trail in western Maine and have announced hopes for large windmill "farms" near the AT.
Did you write that?
A. Sure.
Q. Was one of those farms this particular project?
A. It's the only one.
Q. It just said plural, so I wasn't sure.
You also then wrote in the next sentence, All mountain peaks along and near the trail are now public ownership or protected by easement rights.
Is that generally consistent with your understanding?
A. Along is correct; near, obviously middle ground,

background, whatever here; but yes.
Q. So that statement was correct?
A. Yes.
Q. Redington and Black Nubble are neither in public ownership nor protected by easement rights; correct?
A. That's correct.
MR. THALER: Let me just offer that as an exhibit.
For the record I'm not marking the whole thing, I think it's about 90 pages or so, but --
MR. FIELD: Without the appendices.
MR. THALER: Right. Moving right along, Mr. Chairman. I think Mr. Publicover, if he could have the microphone.

EXAMINATION

(Of Mr. Publicover)

BY MR. THALER:
Q. David, you mentioned in your testimony this afternoon, you referenced Mr. Pelletier's presentation yesterday in the opening PowerPoint presentation, and he had showed some comparative fragmentation analysis slides.
Is that what you were referring to when you were talking about the issue of --
A. Yes.
Q. Okay. And is it true that you had made an error in your testimony and your description of what was the unfragmented

roadless block in question?
A. No.
Q. Well, is it true that you had not put -- let me strike that.
Were you aware of the clearcut that Mr. Pelletier talked about yesterday?
A. Not until I saw the aerial photo in his prefiled testimony.
Q. Is it true that now knowing about the clearcut in that area that that impacts your testimony that you had prefiled with the Commission?
A. In a technical sense, yes; not in any material way.
Q. In a technical sense the boundaries of what you said was an unfragmented roadless area that is changed; isn't that true?
A. Yes.
Q. And I'll leave it to the Commission to decide whether that's technical or not.
But the clearcut area is right -- is up in the area that -- in the slide that the Commissioners have I'm showing you what's up in that blue circle in the upper right-hand corner?
A. Yes.
Q. Did you say to Mr. Pelletier yesterday afternoon, good catch?
A. I did.

Q. Did you also tell him you wondered if he was going to catch it?
A. Yes.
Q. When did you know, or did you know before Mr. Pelletier testified that there was something to catch?
A. When I made the information request after the prefiled testimony had been -- after the information request had been made after the prefiled testimony, I made an information request for Mr. Pelletier's materials, and when I received that material and I saw it I said, uh, there's a clearcut here.
Q. Did you write a letter or do anything to notify the Commission and parties that you had made a mistake in your prefiled?
A. No, I did not.
Q. I know you generally -- you're a very experienced -- I don't have your resume in front of me.

Remind me, are you a forest ecologist by background?

A. I have a bachelor's degree in forestry and a doctorate in forest ecology.
Q. Are you aware of something that's been going on in forests in North America that's connected to global warming related to new pests and diseases spreading northward?
A. I'm aware of that trend, yes.
Q. Are you aware of something called the mountain pine beetle that is devastating substantial portions of the forests in

Canada, which is spreading from west to east?
A. I'm not aware of the specifics of that particular insect.
Q. I'll show you what I've marked as an exhibit, an article called "Rapid Warming" spreads havoc in Canada's forests March 2006 relating to millions of acres of forests being decimated by the mountain pine beetle.
MR. PIDOT: Is this for pursuit of your questioning? This exhibit that you're planning to hand out, is this for further questioning?
MR. THALER: Of this witness?
MR. PIDOT: Yes.
MR. THALER: No, I was in parley to see if that would help refresh him since he studies in this area, whether it's something that --
MR. PIDOT: So it is in pursuit of a question?
MR. THALER: Yeah. I mean, there was going to be one follow-up question. Yes.
MR. PIDOT: This is not evidentiary, in other words?
MR. THALER: No, it is evidentiary.
Can I ask my next question?
MR. PIDOT: Why don't you go ahead.
BY MR. THALER:
Q. My question is that according to the article that people quoted in here and other information, as well as information that's been published by groups like Natural Resources Council

of Maine, and possibly AMC, about forest diseases and the effect of global warming, you had indicated in your testimony earlier that AMC was aware of the need for more clean renewable power; is that generally true?

A. Yes.

Q. Therefore, as part of your organization's knowledge about the need for more renewable power, is part of that based upon the fact that global warming can and has been leading to the spread of diseases impacting forests, both in this country and in Canada?

A. That's one impact of global warming, yes.

Q. And is it true that those diseases can have and are having substantial economic devastating impacts on the areas that they're spreading?

A. I'm not a forest economist. I can't speak to that knowledge.

MR. THALER: I don't have anything more, Mr. Publicover; and I think my last witness may be Ms. Jones.

EXAMINATION

(Of Ms. Jones)

BY MR. THALER:

Q. Ms. Jones, Jody, you had I think very early in your remarks this afternoon talked about a stakeholder process that Audubon initiated that you were personally very involved with to develop some kind of common methodological approach to

evaluate bird and bat impacts from wind farm projects; is that right?
A. Not exactly. We weren't evaluating bird and bat impacts. What we were doing was developing protocols for wind farm developers how to assess bird and bat impacts, and also developing a common set of criteria for understanding conflicts among wildlife resources and potential projects.
Q. And you personally have been, from Audubon's perspective, pretty much spear heading that; is that correct?
A. That's correct.
Q. Now, in your testimony you indicated to the Commission that -- well, let me strike that.
You had attached an April draft of that report or what was called a report, to your testimony to the Commission; correct?
A. The products from that stakeholder committee are two-fold, and the draft bird call was attached. We're also currently working on citing guidance, and that document was not far enough along for me to attach it.
Q. Well, in fact, isn't it true that the document you gave LURC has not been approved or peer reviewed by either the task force or by any outside party?
A. That's correct.
Q. Isn't it also true that a number of the participants in that task force have not had input into or commented upon the

draft that you've now given the Commission?
A. That's not correct.
Q. Well, let me show you an e-mail that was sent to you and some of your group.
A. I want to make sure I understood your question. May I ask a clarifying question?
Q. Sure, in this instance.
A. Could you ask -- my understanding of the question was that isn't it true that a number had any input?
Q. No. My questions was: In terms of reviewing, commenting on, and signing off on the latest draft of the report.
A. Everybody in the stakeholder group has had input into it. It is in draft form and it has not been signed off on.
Q. So when you gave it to the Commission, you weren't intending to suggest to them that that was something that Marcia, for example, who is part of the stakeholders, had asked for, or Harley Lee, or others on it had signed off on it or agreed with it; correct?
A. Absolutely not. I wanted to give the Commission an idea of what we were working on. It's not complete.
Q. Are you aware of one of the members being Ron Crossman?
A. Oh, I certainly am.
Q. I'm sure you are. Are you also aware that Mr. Crossman has written to you and complained several times about statements you've made to the press and then in your

representations to this Commission about the status of that stakeholder draft?
A. I am. We've also had a number of stakeholders participate in drafting our press release in support of it. We don't have 100 percent support, as any stakeholder group.
Q. Well, in fact, you didn't ask for support or approval of the press release or the finding of this Commission of all members before you did it?
A. No, we did not.
Q. Let me show you -- I didn't put an MMP sticker on it, but people can write on it.

For the record -- Jody, this is an e-mail that was forwarded to me by Mr. Lee because he was copied on it. It's an e-mail from Mr. Crossman, who was writing about the background on the report that you submitted to the Commission, as well as a press release that you issued just before this hearing last week.

The third page of that exhibit in which you announce that Audubon is announcing, "Final stage of projects speed approval of Maine Wind Power projects."

Did you participate in drafting that press release?
A. I did.
Q. The words "final stage" are in the caption but are not mentioned anywhere in the actual body of the release.

There hasn't been a meeting of this task force since

when, January, is that correct?
A. That's correct.
Q. Isn't it true that there is significant disagreement still among members of the task force as to what should be the final version of this document?
A. I would like to be able to respond to that fully, if I may.

The protocol document that's attached to my testimony began being developed in August of 2005. We had a subcommittee group of most -- well, of scientists and consultants to help us develop what might be the best approach for Maine to take on developing protocols for wind power development, because there had been a concern about consistency in projects.

We recognized the need for developers to know ahead of time what types of studies should be done and where they should be done.

So the group -- a smaller group of the full stakeholder group got together and met several times between August of 2005 and December of 2006 and developed a protocol document.

We brought that document -- and it went through several iterations. We brought that document to the full stakeholder group, and my initial sort of -- the way our thinking had gone was that this document would, because it was science based and developed best protocol, would be more pro

forma in terms of how much the stakeholder, full stakeholder group, would have an impact on it.

But it didn't turn out that way. So we continued working on some of the language. I would say that substantively, the methodologies, there's a great deal of agreement on the methodology. There's still a lot of disagreement on putting it in context, so that's how I would characterize it.

Q. Thank you. In terms of the context, are you familiar with a report issued by the Federal government by the United States government accountability, GAO, wind power impacts on wildlife and government responsibilities for regulating development and protecting wildlife?

A. I am.

Q. In fact, this was a study that you relied upon in part in drafting some of the draft protocol?

A. In part.

Q. Right. In your testimony to the Commission that you prefiled, you spoke and focused upon one project in California called Altima; are you familiar with that?

A. I am.

Q. Are you familiar that in GAO report from the Federal government they say that Altima is an usually anomaly type situation because of different factors related to that project?

A. I am.

Q. You didn't say that to the Commission, though, in your prefiled, did you?
A. What I said was that -- probably not.
What I said was there were specific sites that have high levels of collision mortality and that we need to be careful because the new turbines are reaching farther up into the migratory pathway, and these are taller than any other turbines that have been built. There's only a handful of sites where these are located.
Q. One of the differences with the turbines out there -- I know we can't see the picture -- but I heard the description of the Eiffel Tower, I think the other night, public comment that they're called latticework towers?
A. That's right.
Q. And the type of tower being proposed here for the Vestas 90 project is totally different from the lattice tower; correct?
A. That's correct.
Q. In fact, the tubular tower will be considered an improvement over the latticework tower in terms of potential bird impact; correct?
A. Actually, they found that the lattice towers, they used to think that they were perch sites for birds, but the recent California publication indicates that although some of those can be problematic, that's not the primary reason for

collision.

So that has been sort of recognized as not as important as other indicators.

Q. Now, I know you're familiar with the GAO report. It has an appendix that reports studies of birds, bats, and raptor tally rates by region at a number of different sites around the country.

You generally remember that?

A. In general, yes.

Q. But you didn't provide that appendix, that tabulation of those studies, to the Commission in your testimony, did you?

A. No, I did not.

Q. And in fact, that study, for example, for birds generally shows in terms of fatalities per turbine per year ranges of zero to 4.04, just one in Tennessee being 7.28; do you recall that?

A. I do recall that.

Q. But you didn't give those statistics to the Commission in your prefiled, did you?

A. No, I did not.

Q. Likewise, there's statistics in here with respect to bat fatalities per turbine per year by region, and except for again this one Tennessee project, you agree that generally with bats, the Appalachian region shows, relatively speaking, more bat fatality than other regions, particularly the northeast?

A. Well, we don't have a very large sample size. There are very few -- as we learned in testimony today -- very few turbines built in the northeast, so we have no information on that. That's correct.
Q. Would you generally agree that the vegetation, the tree type, the shag bark type of tree, and the type of broad leaf there and the caves provide more of a sort of welcoming habitat for bats than the type of habitat that you find here in Maine in terms of spruce/fir and on the type of trees we have?
A. I couldn't -- I don't really have an answer for that. I'm not a bat biologist. I don't know.
Q. I do know you know something about Bicknell Thrush, though; correct?
A. That's correct.
Q. Is it also true that there's something called Audubon Watch Lists. What's that?
A. That's a National Audubon list, and it has to do with birds of conservation priority. I'm not that familiar with it to be perfectly honest.
MR. THALER: And I apologize, this is the color exhibit I know I had 25 copies of, I'll probably find back at the hotel, so I will submit to everybody on the record that it comes from the Audubon website, but I will just show Ms. Jones briefly for a moment.
BY MR. THALER:

Q. Are you familiar with the Bicknell Thrush section of the Audubon list?
A. No, I'm not. I primarily relied on the Vermont Institute of Natural Science who is doing most of the research.
Q. Since you're relying on Vermont research, not Audubon, let me ask you a general question.
Do you agree --
A. That's National Audubon.
Q. I thought Maine Audubon is now connected to National Audubon.
A. We are affiliated.
Q. Is it true that in your understanding that in northeastern United States, high elevation forests have been declining since the 60s, and that has had an impact on Bicknell Thrush habitat?
A. I can't directly -- I can say -- I don't know about the dates, but yes, they're in decline. Yes.
Q. Is it also true that with respect to the Bicknell Thrush there have been findings -- studies finding mercury in blood and feathers of the Bicknell Thrush?
A. Absolutely.
Q. From acid or emissions from power plants?
A. Absolutely.
Q. Is it also true that -- at least according to Audubon and you tell me whether the Vermont people agree -- that there's a study from the United States showing the area covered by balsam

fir forests may be reduced by 96 percent with the anticipated increase in surface temperature associated with global warming?
A. I'm not familiar with that study, no.
Q. Just a couple more questions, Ms. Jones.
You gave testimony about -- or actually strike that.
You showed the Commission that today in your slide show and have in your prefiled some photographs of a place called Buffalo Mountain.
Are you generally familiar with that?
A. I am.
Q. And you showed that to the Commission and use it in your testimony, am I correct, to sort of suggest the amount of clearing that might take place among the turbine string?
A. That's correct.
Q. Were you aware that the wind farm that was developed on Buffalo Mountain was actually developed on what had been a former strip mine?
A. Yes, I was.
Q. Did you say that in your prefiled testimony to the Commission about what the prior conditions were there before the wind farm was built?
A. Well, I didn't think that was necessary because the trees had regenerated since then.
Q. Are you aware that -- are you aware of what this project has proposed for the width of clearing around the turbines?

A. I am, and in my prefiled testimony, I was concerned about the ability of the Applicant from what I know of previous wind power developments whether or not they were going to be able to strictly adhere to that from what I seen.

The brand of turbine, the V90, and apparently do not have to lay the blades down in the way in which they have to be erected. Apparently they just need a single area that's going to be cleared and then raised.

But I would like to have -- also, the Applicant submitted pictures from Nebraska of where this was being erected, and there were a lot of construction debris around those pictures, including large piles of dirt and heavy equipment.

I was concerned that the Applicant was underestimating the needs once they actually got on top of those ridges, so I submitted that as an example of a different kind of turbine, but I also recognize that the Applicant is proposing --

Q. Are you familiar with somebody or some group called the American Bird Conservancy?

A. I am.

Q. What is that?

A. It's an -- Gerald Wagner is the head of it. I've met him at conferences that I've attended in Washington, DC, with regards to how to address bird and bat issues with wind power

facilities.

So I actually know a little bit about their organization, and I know that they're very supportive of wind power.

Q. Are you familiar with their wind energy policies?

A. Yes, I am.

Q. Are you aware that they recommend that wind turbines should be mono poles and not of lattice construction?

A. Yes.

Q. Are you aware that they recommend that the turbines be lit using only simultaneous pulsing white or red strobes?

A. No, I mean, not specific. I read a number of guidelines and policies across the nation in preparation for our stakeholder group, so the details are not at the tip of my fingers.

Q. The American Bird Conservancy policy also recommends that all connecting power transmission lines be underground.

Will this project have its lines underground up on the turbine string?

A. Yes.

MR. THALER: I have no further questions, Mr. Chairman, thank you.

THE CHAIR: Thank you.

We -- initially the way we had the Conservation Law Foundation and the Natural Resources Council planning to

cross-examine.

Are you still planning to do that?

PARTICIPANT: Yes, sir.

(Technical difficulties with microphones.)

BY MR. HINCHMAN:

Q. David, are you aware that on Earth Day 2003, the Appalachian Mountain Club joined the Coalition, which in a press release before you and has been handed out to the Commissioners describes a grass roots effort to fight global warming.

A. I'm aware of the area in which I've been directly involved.

Q. I will skip having you read the pieces I wanted you to go over.

In the same press release on the same day, are you aware that AMC also announced it was launching a new program called Mountain Watch?

A. Yes.

Q. Could you read from the press release right below the highlighted piece, it starts with AMC staff scientist, those two paragraphs.

A. [Quoted as read] AMC staff scientists are monitoring the mountain environment in an effort to detect ecological changes that may be attributable to climate change. In addition, the organization is slated to launch a new program called Mountain

Watch, a citizen-based environmental monitoring program that focuses on recording the impacts of air pollution on climate change within mountain ecosystems.

Next paragraph in?

Q. Yes, please.

A. [Quoted as read] AMC's Mountain Watch program engages people directly in the issue of climate change on a personal level by involving them in actual monitoring activities, such as tracking the dates when certain alpine flowers bloom from year to year or monitoring ground level ozone concentrations.

Q. As the senior staff scientist in the northeast region, presumably you're one of the scientists involved in this effort to monitor the mountain environment in the northeast and detect ecological changes attributable to climate change?

A. No, there are other scientists who are primarily responsible for this program.

Q. Are you aware of what the Mountain Watch program is identifying?

A. I am aware of the types of things that they are monitoring.

Q. Let the record reflect, I think that's the AAG's cell phone.

What are you finding with your Mountain Watch program as indicated climate change in the northeast at mountain-level elevations?

A. Well, the data collection has only been ongoing for a year or two, so what we're trying to do is start the program to establish a baseline to be able to detect trends. It's way too early to defect any trends now.
Q. The Mountain Watch portion of the AMC website goes through a number of impacts of climate change. The studies and numbers on that website are identical to the studies and numbers and direct testimony, are you aware of that?
A. I'm not aware of it, but we're all using the same sources.
Q. Right. And some of the initial analyses that you've come up with that are on your website include earlier flowering dates for certain wild flowers at high altitudes, decreased snow fall, days without snow cover, increased growing seasons, earlier ice-out dates.

Are you aware of all those factors?

A. I know those are factors involved with climate change. I don't know how many of them resulted from our research.
Q. This is also from the AMC Mountain Watch website.

David, could you read the second paragraph for me. It's from a website page called, Mountains, what can they tell us?

A. Second paragraph?
Q. Second paragraph, Mountain environments are also.
A. [Quoted as read] Mountain environments are also likely to be some of the most severely impacted ecosystems in the

northeast from future climate change. The alpine zone is a climate limited environment and may be particularly sensitive to changes in temperature and precipitation.

In addition, alpine areas are threatened by loss of habitat. Most ecosystems are predicted to slowly migrate and shift their distribution northward in response to warming temperatures; however, alpine areas in the northeast are distributed as small isolated islands surrounded by a sea of inhospitable spruce/fir forests.

Instead of shifts in latitude, alpine vegetation will be limited to shifts in altitude.

As these plants migrate upwards, they will be faced with reduced amounts of habitat or may disappear completely. Scientists are already noticing shifts in vegetation boundaries from various alpine areas around the world.

Q. As a professional forester, biologist in this region with many, many, many years of experience, in your professional opinion would you agree with that paragraph?

A. Yes.

Q. Your direct testimony describes Redington Mountain ridge line as one of only five exemplary examples in Maine as a rare fir subalpine forest?

A. Yes.

Q. Is this subalpine forest subject to the same phenomenon of shrinkage and disappearance if global warming in fact reaches

the levels that are predicted?
A. Of course.
Q. Would you agree that Redington Mountain then faces two threats, first a short-term threat as described in your testimony and your consolidated group's testimony of partial impacts from construction of wind farm and a second long-term threat of global warming that would essentially be a complete loss of the entire ecosystem?
A. I agree with that. I'm not sure I would describe construction of that berm and road as a short-term threat.
Q. I meant short term in the start day. Assuming the start date --
A. Near term.
Q. J. T., global warming, by definition, effects everything on earth, how would it affect the Appalachian Trail?
A. It certainly would affect the ecosystem of the Appalachian Mountains and the visibility seen from the trail due to smog and particulate matter.
Q. Have you guys analyzed potential impacts to the trail from global warming?
A. We're beginning some programs not unlike the AMC's Mountain Watch program. We'll call it our environmental monitoring pilot program.

We're about two years into data gathering. We're trying to get some baseline information about visibility,

stream information, wildlife habitat, that sort of thing in the Appalachian Trail corridor.

Q. I'm passing out right now an article from the Appalachian Trail Conservancy's newsletter from 2002 written by a man who was on your ATC board of managers and founding member of Hikers for Clean Air, which ATC is a member organization.

I just wanted to point out in that article, if you open up, I've marked it for J. T., but would you agree the article again shows the same numbers that are in Sealots's testimony regarding the predirected degree of global climate change?

A. I'm not an expert on that subject, but I generally don't dispute the consensus position of the science world that global warming is real.

Q. Interestingly in your article you mention the great Smokey Mountains. In this article, ATC says that if that's correct, the forests of the great Smokey Mountains, one of America's most biologically rich regions, could be transformed into scrubby savannah not unlike that of central Texas.

Is this one of the trail areas that you guys are trying to protect -- not your office but other offices with ATC?

A. Sure. The trail that's through the Smokey Mountains, it's one of those very special places along the Appalachian Trail.

Q. Impacts to the trail, they're documented in this article.

Just in the interest of time, they talk about water supply, fire, storms, insects and disease, ticks, lime disease, high ozone days.

Would you agree those are all potential impacts that would affect the recreational trail experience for members of your organization and hikers of the trail?

A. I would agree to that.

Q. If you flip to the final page of the newsletter article I gave you, you'll see a No. 3 and a No. 4, and both of those paragraphs explain that migration of existing forest habitats northward and the shrinkage and elimination of high elevation habitat, would you agree those are both potential threats facing the trail and the trail experience?

A. Yes.

Q. Sometime the global warming piece of this thing gets to sound like science fiction. I have a hard time trying to sit here as an attorney and articulate something that, as one of the speakers last night, may be worse than the great depression. Yet, more and more organizations and scientists are doing that.

I wanted to ask J. T. in relation to the ATC, the sidebar on the right talks about the types of things you can do to fight global warming function, and it suggests that the trail corridor could function as an escape route so that animals and vegetation could move northward along the green

belt of the trail to escape the changing ecosystem and that in order for that to fully function, the trail would need to build green bridges on the highway crossings so that wildlife and plant species could migrate northward along the trail.

Would you agree that I'm not alone in indulging in science fiction in relation to global warming?

A. While this appears in our membership magazine, I can't say that building green bridges is anything that ATC has ever seriously contemplated or endorsed.

We generally have a fairly free hand with our editorial policy, let's say.

Q. Fair enough.

Last question. At the very end of that sidebar there's a sentence that says -- would you read for me, it starts with, Little steps add up?

A. [Quoted as read] Little steps add up. Every incandescent light bulb in replacement of a fluorescent light bulb cuts greenhouse emissions.

Q. So I assume there that when they're talking about light bulbs, they're talking about electrical use and conserving electrical use?

A. Yes.

Q. And the notion is that every little step counts towards stopping global warming?

A. I couldn't agree more.

Q. And light bulb uses over a year is something in the nature of kilowatt hours of electricity?
A. I'll take your word for it.
Q. The Redington wind project, would that be deemed in that likelihood a little step of kilowatt hours or 260,000 megawatt hours a year, a larger step?
A. I think it's a -- has the potential to be a significant new source of wind power as a potential significant new source of power where appropriately sited.

MR. DIDISHEIM: I'm Peter Didisheim from the Natural Resources Council of Maine. My first question is of J. T.

EXAMINATION

(Of Mr. Horn)

BY MR. DIDISHEIM:
Q. J. T., you stated in your testimony that ATC supports wind power as an alternative for global warming.

How many wind power projects has ATC publicly endorsed?
A. None.
Q. None. The AT goes through 14 states, from Maine to Georgia, so along the entire 14 states, ATC has not endorsed a windmill power project?
A. We tried to work out --
Q. That's a yes or no question.
A. No, we have not.

Q. Not at Brody Mountain Ski Area, not at Lee Mountain Ski Area, to existing ski area, you didn't endorse either of those projects?
A. We stayed neutral on those projects.
Q. Okay. Do you believe that from a developer's perspective that a decision by an organization such as ATC not to oppose their project is the same as having the organization's endorsement.
A. No, they're not the same.
Q. Not the same. An attachment to your testimony listed the six wind power projects that are within the view shed of the Appalachian Trail. From what you just said, you've not endorsed any of those.

All of these have run into local opposition, and one has been withdrawn because of that local opposition, one was denied recently in northern Vermont.

The only one that's actually moving forward is the Hoosic --

A. The Deerfield project is still ongoing and it's about to undergo a US Forest Service GIS process.
Q. But it's struck pretty deep because of opposition. You haven't endorsed it; is that correct?
A. Well, I'm still expecting a review and the GIS sometime in 2007.
Q. In your testimony you claim that these types of locations

are very well sited.

All of them are running into opposition. How do you reconcile ATC's view that building wind farms near existing towns constitutes proper siting with this sort of response from the local communities that have been opposed to these projects?

A. I'm going to give you a slightly long answer but not too long.

Q. Don't use too much of my time.

THE CHAIR: You need to give the short answer. Let's keep this relevant to this project, too.

MR. DIDISHEIM: Okay.

BY MR. DIDISHEIM:

Q. I'll just make the observation that in these communities many people do not believe that those are well sited and opposition has been significant.

MR. PLOUFFE: Is that testimony?

MR. DIDISHEIM: This was part of the testimony.

BY MR. DIDISHEIM:

Q. ATC has expressed strong concern about the 12 miles of new roads and 11 miles of new transmission lines associated with these projects.

The Kenetech project was considered by this Commission, ultimately received a permit would have involved about 46 miles of transmission lines, 76 miles of new roads, 20 miles of which are above 2,700 feet.

Did ATC intervene in those proceedings and express concerns about the upper road building for transmission lines?
A. No, it's generally outside of our area of interest.
Q. So because it's outside of your area, you weren't concerned?
A. We're a single-issue organization. We're out to protect the Appalachian Trail and we generally don't get involved in issues beyond our area of focus.
Q. So although you're concerned about global warming, you say that ATC believes that wind energy must be an important part of our future mix of energy sources.

You are only focusing on new power projects within your view shed, and you have not taken an endorsement position on any of those projects?
A. Well, has NRC ever endorsed anything in California?
Q. Who is cross-examining here?

THE CHAIR: Well, I'm beginning to wonder what the process is about, because we're supposed to be talking about Redington, not about the philosophical differences between NRC and the Appalachian Trail Club.

So let's move it along here and stick to our knitting.

MR. DIDISHEIM: I was referring to the testimony in the claim, your claims with regard to wind power projects.

Let me move to Dave.

EXAMINATION

(Of Mr. Publicover)

BY MR. DIDISHEIM:

Q. In your testimony you say that to date we have evaluated about a dozen wind power projects proposed for ridgelines across New England, and this is the only one that we opposed.

Does AMC endorse any of those other projects?

A. Yes, one is that.

Q. Which one?

A. Emmerton/Kenetech Project.

Q. So 15 years ago you did oppose a project.

A significant 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's in the middle of that.

Is Black Nubble within that roadless area?

A. No.

Q. The site analysis process that AMC as gone through including five screening factors, you referred to in your testimony.

One of those factors that you used to determine whether a project was inappropriately sited was whether it was within 2 miles of the Appalachian Trail; is that correct?

A. Yes.

Q. Are you familiar with the testimony that I provided in my

prefiled that showed that none of the turbines on Black Nubble are within 2 miles of the Appalachian Trail?
A. Yes.
Q. And that testimony also showed that all 12 of the Redington turbines at their nearest location are within 2 miles of the Appalachian Trail?
A. Yes.
Q. Your testimony refers to Redington Mountain 36 times and mentions Black Nubble only once.

Just for clarification, when you refer to Redington Mountain in your testimony, is it fair to say that you're referring to Redington Mountain and not this Redington Wind Farm project?
A. Yes.
Q. Let me just -- some of the statements in your testimony include the following. I just want you to affirm what you said.

Redington Mountain is located in a harvest but unfragmented roadless area?
A. Yes.
Q. Redington is one of the most valuable environmental resources?
A. Yes.
Q. Redington is a truly spectacular place?
A. Yes.

Q. Redington Mountain possesses some of the highest values of the viewing mountains in the LURC jurisdiction?
A. Yes.
Q. Near the end of your testimony you state on Page 23, Redington Mountain is clearly not the best available site for this type of development.
I assume that you are very specific here in stating this is Redington Mountain is not the best available site, and that does not include Black Nubble.
A. That's correct.
Q. Is it fair to conclude from this testimony that AMC is much more concerned about the 12 turbines that are proposed for Redington than it is about the 18 turbines proposed for Black Nubble?
A. That's a good statement, yes.
Q. Are you familiar with NRCM's proposal that the project be --
A. Yes.
Q. -- a rescale.
A. Yes.
Q. From your testimony, is it fair to conclude that a Black Nubble-only project would have significantly reduced environmental and visual impacts?
A. I think it would have a significant reduce in environmental impacts.

I'm not convinced it will have visual impacts.

MR. DIDISHEIM: That concludes my testimony.

PARTICIPANT: My questions will be addressed to only Mr. Publicover, so I have nothing for Mr. Horn.

EXAMINATION

Q. What I would like to ask Mr. Publicover about is AMC's wind power site analysis since it is largely the basis for insertion since Redington is not the best available sites?

Mr. Publicover, your analysis started with 268 sites; is that correct?

A. Yes.

Q. As I understand your analysis -- or if I do understand it correctly -- by including in the factors that you included to determine whether a site was potentially viable were five natural resource factors: Elevation, roadless areas, proximity to the Appalachian Trail, Bicknell's Thrush and the major conservancy priority areas and the potential wind resource at the site.

Is that a fair characterization of your analysis?

A. Those are the ones that I included in this analysis but this is a preliminary, like I said, first cut analysis.

Q. That's what I'm trying to understand, what was in, what was not.

Your analysis didn't consider energy market factors, what water control regions the site might be in, what

transmission capacity would be available; is that correct?
A. That's correct.
Q. You didn't talk with landowners to determine their willingness to sell leased lands for wind development; is that correct?
A. That's correct, but the greatest -- or the largest concentration of the sites is on Plum Creek land, which has conservation willingness to lease one side for wind power.
Q. About 75 percent of these sites were not on Plum Creek land; is that correct?
A. That's correct.
Q. The analysis did review site terrain to determine suitability for wind facilities; is that correct?
A. That's correct.
Q. You didn't consider site orientation to the wind; is that correct?
A. That's correct.
Q. Your analysis didn't review these sites' proximity to transmission lines; is that accurate?
A. I didn't include that as a criteria but I did mention that in my testimony.
Q. Right. Okay. So your analysis was much more thorough in its review of natural resource factors than in reviewing energy factors?
A. That's fair.

Q. Isn't it reasonable to think that since you went from 268 sites to 75 sites, by only screening for the wind resource and these five natural resource factors, that when you factor a wind developer, would consider factored in -- you could go from 75 alternatives to zero, 1?
A. There's only one feasible site in Maine, and we're wasting our time talking about wind power.
Q. So one significant wind power facility in Maine is a waste of time?
A. At this site I believe it is.
Q. So your testimony is that 90 megawatts of renewable power added to Maine is a waste?
A. I'm not saying it's a waste. I'm saying the balance, it's not worth the impact.
PARTICIPANT: Thank you for your time.
THE CHAIR: Thank you very much. You're all done.
The next person -- the next intervenor is TransCanada. My understanding is that they don't have any testimony but we obviously have to allow their witness to be cross-examined if anybody wishes to do that.
PARTICIPANT: Yes.
THE CHAIR: Is that the correct understanding?
PARTICIPANT: Yes, we have prefiled testimony but in lieu of summarizing that testimony, the two witnesses are available for cross in the event.

THE CHAIR: My list indicates that a number of people wanted to cross-examine.

MS. JACOBSON: We had some time, Mr. Chair, we do not wish to cross.

THE CHAIR: Thank you. Mr. Thaler.

MR THALER: Just give me a moment to check.

THE CHAIR: Let's get started again.

I have got -- if I'm correct, at this point your folks are off the hook. If anyone wants to ask some questions, I don't know if that's an insult or a complement.

MS. JACOBSON: You may recall, that was our request initially.

THE CHAIR: Thank you for conceding your time. We appreciate it.

He told me he didn't have any questions.

With that, that leads us to the direct testimony of the Friends of the Western Maine Mountains.

I'm sorry, I'm reading the wrong thing. We'll get to you eventually.

MR. MORGAN: Good afternoon. My name is Eric Morgan, and I am speaking on behalf of this consolidated group No. 2, the intervenors in support of this project.

There are four organizations among us, and we've each submitted individual prefiled testimony.

In the service of time, we have prepared a

consolidated statement, a summary, that I will read just to make sure that I get it correct and that we can use this time efficiently.

So I would begin for thanks to all of you on the Commission for the opportunity to attend this hearing and to voice our opinions and for your patience in allowing this lengthy opportunity for everyone in here to voice their opinions, as well.

I'm speaking on behalf of the Independent Energy Producers of Maine, the Maine Energy Investment Corporation, Maine Interfaith Power and Light, Incorporated, and Ed Holt and Associates, Incorporated.

I would like to summarize our positions as proponents of the proposed Redington Wind Farm and our desire for the Commission to grant approval of Maine Mountain Power's application to rezone approximately 1,000 acres of Redington Township to a planned development subdistrict for a 30-turbine wind farm.

As proponents of the Redington Wind Farm, we represent many of Maine's electricity consumers, businesses and residents, who possess a deep concern for Maine's environmental, economic, and energy future. We are comprised of three nonprofit organizations and one consulting firm engaged in work to ensure a clean energy future for Maine.

Maine Interfaith Power and Light is a licensed

electricity aggregator that works to protect the natural growth and climate change by bringing Maine people, faith communities and organizations together with suppliers to purchase clean renewable electricity from wind, hydro, and solar.

They have served nearly 4,000 consumers since their inception in 2000. They currently represent over 2,000 electricity customers across Maine, including several hundred in this area.

The Maine Energy Investment Corporation operates with a mission to mainstream renewable energy, making cleaner, healthier and home-grown fuel and electricity available to Maine.

We manage a variety of projects promoting technologies, like solar, bio fuels, hydrogen and clean electricity.

The Independent Energy Producers of Maine is an association of renewable power producers, suppliers of goods and services to those producers, and other supporters of this industry.

It is comprised of members who generate electricity in a sustainable manner from hydro, biomass, wind, and waste energy facilities.

These three nonprofit organizations are joined by Ed Holt & Associates, Inc., a 10-year-old Maine-based firm that consults nationally on renewable energy policies, renewable

energy markets, with environmental and regulatory policy organizations, electric utilities, and non utility marketers, and public sector institutions.

Collectively, we contend there is substantial evidence that the proposed land use district satisfies a demonstrated need for the Redington project from the standpoint of energy needs, consumer demand, economic need, environmental benefits, and the protection of public health.

I'm next going to run very briefly through our key points in each of these areas.

First, energy needs. To satisfy public goals of cleaner air, reduced global warming, increased resource diversity, more secure energy supply, and greater price stability, the demand for renewable power is unprecedented. As a consequence, the energy policies of Maine, New England, and the Federal government are clear that new renewable electricity, including wind, is needed.

State policies encourage wind development. These notably include a recently enacted law, an act to enhance Maine's energy independence and security, which sets a goal of increasing by 10 percent new renewable electricity by 2017.

In practical terms, this means that Maine will need 350 to 500 megawatts, and perhaps more, of renewable power over the next ten years. The policy makers who wrote this law expect wind power to fulfill a large percentage of this goal.

Furthermore, Maine's resource portfolio standard, and other provisions of the 1997 Restructuring Act, further established the need for renewable electricity capacity from wind and other renewables. It's also significant that the LURC Comprehensive Land Use Plans call for energy diversification, self-sufficiency, and the use of indigenous renewable resources consistent with these and other State policies.

Regional and Federal policies also call for new wind power. In addition to the new Maine law, regional demand for renewable energy can be seen in the renewable portfolio standards of other New England states, notably, Massachusetts, Rhode Island, and Connecticut, yet these states lack sufficient new renewable capacity within their borders, leaving them to look to the regional power pool that they share with Maine to meet their needs and in particular to Maine where the wind resource is more than that in New Hampshire, Massachusetts, Rhode Island, and Connecticut combined.

At the national level, Federal policy has supported tax incentives for wind development since the Energy Policy Act of 1992, and the advanced energy initiatives announced by President Bush in February targets wind power to meet 20 percent of the nation's electricity demand.

Beyond the policy realm, the Independent Energy Producers of Maine assert that due to the configuration of Maine's electricity grid, our state needs wind projects in both

Maine's northern and southern electrical areas to provide the resources and benefits throughout the state.

Because parts of northern and eastern Maine are only electrically connected to the rest of Maine through New Brunswick, the state will need wind power on both sides of this divide in order to take full advantage of this resource.

IEPM challenges assertions by opponents of the Redington project that Maine can develop substantial wind power on mountain ridgeline sites. Such claims are based on unverified assumptions.

IEPM maintains that there are a very limited number of sites in Maine suitable for wind power and that finding a reasonably available alternative superior to Redington is very unlikely.

Second, I'm going to talk a little bit about consumer demand. Maine consumers want clean electricity. Since 2003, Maine Interfaith Power and Light's efforts to market renewable electricity has resulted in nearly 4,000 counts in Maine, representing approximately 50 million kilowatt hours of power consumed.

Furthermore, Maine Energy Investment Corporation and Maine Interfaith Power and Light contend that a Maine-made new wind product will have significant customer appeal.

Previous experience with a product known as First Wind of Maine, a renewable energy certificate product generated

from a turbine in Orland, Maine, showed the significant premium many Maine customers are willing to pay for a Maine-made new wind electricity product.

According to a 2005 survey, nearly half of Mainers -- 47 percent -- are aware that they can purchase electricity produced by renewable resources. This awareness, combined with growing concern about spiraling energy costs and the consequences of dirty power from fossil fuels, leads us to believe that demand for renewable energy, and wind power in particular, will only grow in Maine.

The advent of new wind generation of the Redington project will create the possibility of new green power products with attributes that are attractive to Maine customers. The in-state location of the facility allows for the sale of wind generation as a green supply product, meaning that it can be paid for through your existing electricity bill, an option that many customers like.

As a new wind facility, output from the project will be eligible for use in Green E project certification and branding efforts. Renewable energy credits from this facility will also have value customers who seek to participate in national green power recognition programs, like EPA's Green Power Partnership.

The Redington Wind Farm will generate enough electricity each year to power the equivalent of 40,000 Maine

homes. The cost of producing electricity from wind has dropped dramatically in the last ten years and is now competitive with other sources of energy, going from .38 per kilowatt hour in the early '80s to .07 or .08 today. As a result, Redington is poised to affordably serve a growing demand among Maine consumers.

Recent experiences of two US utilities offering wind power give us some examples of what might happen.

In 2005, rising natural gas prices pulled conventional electricity costs above those of wind-generated electricity in Texas. This crossing of the cost lines created an overwhelming demand for wind power, which in turn forced Austin Energy to hold a raffle for the remaining lower wind supply. People wanted that product.

Excel Energy is Colorado's largest electricity supplier, and it has 33,000 wind resource customers as their green power project. Until late 2005, these customers were paying more each month for their electricity than those using conventional sources from natural gas and coal. However, in 2006 they are now paying slightly less as the cost of the conventional supply has gone up.

To meet the fast growing demand, Excel is currently soliciting proposals from wind developers for up to 775 megawatts of new wind power generation. That's enough to supply 232,000 Colorado homes with electricity.

This level of customer demand is also borne out in Maine. This has been demonstrated by Maine Interfaith Power and Light's marketing success, and it's described by Maine Energy Investment Corporation, in our testimony.

Through MEIC's three years of green power market development work, we'll attest that Maine customers are literally waiting in line to take advantage of the long-term fixed price contracts that will result from the proposed project.

The project's power wholesaler, Constellation New Energy, also confirms in their testimony that all of the output from this facility will be sold in Maine under these highly desirable long-term contracts.

The economic benefit to Maine institutions, businesses, and non profits is that they can hold their energy bills nearly flat for ten years while their competitors remain on fossil fuel for electricity. It is important to understand that.

Next we talk about economic need. Wind is free. When weighing demonstrated need, it should be pointed out that natural gas, which accounts for 60 percent of the electricity generated in Maine, thus far, it is true that the capital cost of wind is higher than that of two natural gas facilities, but the free wind allows for stable and renewable electricity prices.

Maine's heavy reliance on natural gas, combined with unstable prices and potentially unstable LNG imports, subject that fuel to price fights and supply interruptions. This in turn drives up the consumer energy process and could undermine Maine's economy.

In a more immediate sense, the effect of the Redington project on permanent jobs will be modest. The claim by the Applicant is consistent with the direct jobs created by other wind projects.

Moreover, independent studies and the effect of wind projects on nearby property values show that the values of properties in the view shed, actual wind projects, has not fallen, and all this has been spelled out in direct testimony of Ed Holt.

Concerns about the impact of wind projects on tourism are not based on any hard evidence that we've been able to discover. Contrary, in our testimony we present evidence that the impact of wind development on tourism may be mutual and positive.

Next the environmental benefits. Obviously a lot of this has been said, so I'm going to move quickly through this.

Beyond the energy cost savings and the supply benefits the Redington Wind Farm will bring to Maine, the project is urgently needed in light of all we've heard about with global warming.

New findings unveiled in 2005 declare that the world is about ten years, or about 2 degrees Centigrade, away from irreversible climate change. That is a temperature rise beyond which we would be irretrievably committed to fairly disastrous changes.

These changes could include widespread agricultural failure, water shortages, major droughts, increased disease, the death of forests, a lot of what we've heard here over the last several days, including the migration of species and the compete destruction of many of the fragile areas on these mountains.

Scientists calculate that the point of no return will arrive when concentrations of atmospheric carbon dioxide reach 400 parts per million. We're now 379 parts per million and that's counting. That's a level of atmospheric carbon dioxide this planet has not experienced in 420,000 years.

The single largest environmental benefit of the Redington Wind Farm will be the substantial amounts of carbon dioxide and other greenhouse gases that will be avoided. We've heard testimony about the signs of that contribution.

While we are well aware of the opponents' concerns about the impacts of the wind farm on the surrounding wildlife, including Bicknell Thrush, after carefully considering those concerns and weighing them against the direct and indirect impacts of climate change, Maine Interfaith Power and Light, in

particular, contends that the wind farm is in the best interest of all wildlife.

Consider the US-EPA's findings that higher temperatures resulting from a climate change can directly alter a bird's life cycle and may impair the extent to which that cycle is synchronized. While birds can adjust to warmer temperatures by flying to more northern areas, the vegetation on which they depend or the insects that they eat may take decades or longer to adjust.

In addition to climate change, another threat to Bicknell Thrush that's also been cited here is acid rainfall, which in part occurs when sulfur dioxide and nitrogen oxides from fossil fuel plants are emitted into the atmosphere. Bicknell's Thrush habitat, including balsam firs and red spruce stands, are in general decline, also in part related to acid rainfall.

Atmospheric deposits and heavy metals is also implicated in the decline of high-elevation forests.

Furthermore, mercury, a toxic metal, emitted by coal burning electricity generators bio-accumulates in humans and species. According to the Bio Diversity Research Institute's work with Bicknell Thrush using populations from 20 sites from Vermont to the Gaspê peninsula, thrushes in western Maine show some of the highest blood concentrations of mercury. Moreover, Maine has a very high rate of mercury contamination with 89

percent of the fish samples collected in the 2004 study by US-EPA showing mercury levels higher than the level considered safe.

All energy projects have environmental impacts. Nonetheless, we believe that the benefits of the proposed project substantially outweigh its impacts.

Our concern, actually, is that the specific impacts of building the proposed project may be considered without consideration of the impacts of not building the project, namely, the environmental impacts, which are less tangible, harder to attribute, more distant in the future, and therefore easier to ignore.

If the Redington Wind Farm is not completed, the electricity it would have generated will likely be provided by a fossil fuel-fired plant.

All energy generation creates an environmental footprint, but as long as Maine residents use energy, we must make choices about which environmental impacts we will accept, whether we make those choices consciously or not.

Finally, protection of public health. The Redington Wind Farm will advance LURC's Comprehensive Land Use Plan's goal to protect and enhance the quality of air resources throughout the jurisdiction, as others have asserted and Maine Energy Investment Corporation does in its testimony. Asthma, chronic lung disease, you heard that from the Lung Association

up here as well.

In conclusion, we contend that there is substantial evidence in support of the proposed land use rezoning action. We submit that the project does satisfy strongly demonstrated needs from the standpoint of energy supply, consumer demand, economic need, environmental benefit, and the protection of public health as further supported in all of our separate prefiled testimony.

Energy demand shows no sign of subsiding in Maine or elsewhere. To meet that growing need with power-generated fossil fuels, which are both increasingly expensive and which have deleterious effects on the environment when combusted, is not only poor policy but is inconsistent with policy already set in place.

It may be helpful to bear in mind that turbine visibility is not a bad way to remind us of the consequences of our energy use. We should now allow ourselves to be lulled into a false sense of no adverse impact from other less visible or more distant power generators, most of which are fossil fuel generators located out of sight and seemingly out of mind.

It is difficult to associate the health risks, the environmental damages, changes to wildlife habitat to any one of those fossil fuel plants if clearly their cumulative impact has been significant.

Maine deserves better. The Redington Wind Farm

promises to be an important step on the path to energy independence, prudent energy planning, and the protection of the environment we all cherish.

Thank you for your time. We are now ready to take your questions and comments.

THE CHAIR: Perhaps the cross-examiners, according to my schedule, the Applicant had wished to question all of them.

Is that still true?

MR. THALER: Very quickly.

THE CHAIR: You have 15 minutes according to my schedule, so you may proceed.

MS. TRACEY: My name is Sarah Tracey. I represent Maine Mountain Power. I have a couple of questions for Mr. Ed Holt.

EXAMINATION

(Of Mr. Holt)

BY MS. TRACEY:

Q. Mr. Holt, I notice that you're a consultant. Are you getting paid for your time here today?

A. Unfortunately, no.

Q. Do you have any clients that have interest in this project and that's the basis of your presence here?

A. No, I do not.

Q. Why are you here today?

A. My consulting practice really goes across the country

observing markets, observing policy decisions being made by States, trying to advise States on public policy and advocates on public policy.

It's kind of an arm chair position in which I rarely take a position in an individual project, but this project is an important one in my own backyard, and I just didn't feel that I should sit on the side lines and convince my friends and my neighbors without directly getting involved and seriously participating.

Q. Thank you. We heard a lot of public comment about the effect of the wind farm on property values, and one of the Commissioners attempted to elicit a little bit more information from Miss Hagerstrom, the Franklin Development Corporation, and it was a little out of her experiential range, but you have done some analysis of the effect of the wind farms on property values.

I have a couple of them here. I'm not intending to pass them out. I'm sure the Commissioners are sick of paper at this point. I looked through them, and they're a little bit complicated.

Do you have any experience reading reports, consumer surveys, such as this?

A. My experience in economic impact analysis actually goes back to my first job out of graduate school when I began my career in the energy field where I was tasked with analyzing

the economic impacts and job impacts of decisions being proposed in the Pacific northwest to invest or not invest in various energy alternatives.

The property value issues that you raise, which I testified to, are not my own studies. They are -- I reported on the two most comprehensive studies that I'm aware of. There's a lot of anecdotal evidence, as people testified, that they're concerned about property values, but the evidence from these two studies, which are independent, one, they're both done nationally. They've looked at places where a wind project had been proposed and looked at the before and after values compared to specifically looking at those in the view shed wind project and compared to communities who didn't have wind projects.

These studies did not find any adverse impact on property values. I think I maybe didn't answer your question directly.

Q. That's okay. I just wanted to establish that you have experience looking at studies and analyzing them; is that correct?

A. Extensive. I've been doing that for 30 years.

Q. And I wanted to refer you to one of the studies you testified about, the Kittitas --

A. Kittitas.

Q. -- the Washington State study. They interviewed -- or

they surveyed tax assessors?

Why did they survey tax assessors?

A. Well, primarily they were concerned that if they surveyed, say, for example, real estate agents, that there would be a bias either in terms of their own perception or their own fear or their own anecdotal experience.

And if they talked to tax assessors, they could see based on actual property value what was happening after -- both before and after the wind turbine project had been installed.

Q. What did those tax assessors find in the Washington State studies as to the effects of wind power on property values in the area?

A. They found no impact.

Q. We also -- I wanted to refer you to some of the -- I'm not going to restate all the testimony on tourism, but we had an earlier discussion on the Beacon Hill Study, and I believe Mr. Kaplan, of CLF, spoke a little bit about that. Mr. Trafton actually brought it up initially in his questioning of Miss Hagerstrom.

I'm not sure that it came out, but you testified about the fact that the summary did not report this one aspect -- the appendix revealed that 94 percent of the people surveyed regarding the effect of wind mills on Cape Cod answered that it would not change the frequency of their visits to Cape Cod; is that correct?

A. Yes; what I found interesting about that study was that -- at least when I do a study reporting results, I try to report them comprehensively in a balanced way.

The study itself found that a small percentage of people said that they would shorten a visit to Cape Cod -- I think it was 3.2 percent or something like that; another 1.8 or said they wouldn't visit Cape Cod; 94 or 95 percent said it would have no effect.

The study reported the small percentage that said that their visits to Cape Cod would be effected and then used that to base their statements about the lost revenues, which based on that calculation is fair enough, but the study should report the overwhelming result that 94, 95 percent of those who were interviewed said it would have no impact.

Q. Maybe just to repeat the obvious. In your review of the material regarding tourism and the effect wind generation facilities on tourism, what was your general finding?

A. Well, the general finding was that we really don't have comprehensive studies before and after to show whether or not -- to prove in any significant way that there is an impact one way or the other. We just don't -- there's not enough research that's been done.

I try to avoid anecdotes and opinions stated by individuals and just look at research that has been done, mostly attitudinal surveys, those that are documented and are

done in large enough numbers to be of some meaning. And generally I would say that the result was that, as I stated in my testimony, either neutral or slightly positive.

MS. TRACEY: Thank you, Mr. Holt. I have no further questions.

MR. THALER: Just briefly, I guess I'll start first with Eric.

EXAMINATION

(Of Ms. Morgan)

BY MR. THALER:

Q. Yesterday -- I think it was yesterday, it's hard to remember -- Commissioners were asked -- or Commissioners asked why anybody would want to buy RECs, what's the benefit that you get by doing so.

Can you briefly and in somewhat layperson terms explain that?

A. I can try. There's no questions that RECs are a complicated concept, but I think Bruce McLeish yesterday said yesterday, they are a tool for matching the environmental benefit from renewables with the energy, the electrons that go along with those.

Why would people want to buy a green power product made up of RECs? There really are a lot of reasons, but they all go back to the fact that broadly speaking, people are becoming aware that global warming is real, it's serious, and

it's compelling many of them to take action to address their role in causing global warming to mitigate their fossil fuel use, their over consumption of energy.

There are a lot of different ways you can do it. But largely it gets back to willingness to take responsibility for their piece of the global warming impacts. Increasingly, both in the state and nationally, there are efforts underway to encourage that kind of behavior.

Here in Maine we have the Governor's Carbon Challenge, which is a statewide effort for businesses, institutions, and nonprofits -- now even homeowners -- who are willing to take responsibility for their own global warming impact, sign up, and say, I'm going to do it.

Energy efficiency and buying clean electricity are very simple ways that those entities -- everyone from the household level to our largest employers in Maine -- can take responsibility for their own global warming impact.

And then if they do, they're recognized, in that case, by the Governor's Carbon Challenge, there are over 50 Maine businesses and institutions that have signed up to do that.

There are national level activities that are similar. The EPA's Green Power Partnership has been mentioned here before. Nationally a very wide variety of organizations are stepping up to address global warming in this way through their

purchases.

Through my efforts on behalf of the Maine Green Power Connection, we are a neutral product, supplier-neutral source that explains to businesses and homeowners how to do green power, what the products are, how they work, how you can buy them, what they cost, and then we put them in contact with any of these sort of recognition programs to reward them for taking those actions.

So there are a lot of reasons why people want to buy green power and there are now a lot ways we can do so.

Q. Thanks.

One other question, Erica. In terms of the businesses that you talked to in Maine -- consumers, customers -- in your experience how important is it, or what are you hearing in terms of the importance of being able to have fixed price, long-term electrical contracts?

A. It's very important, and in fact I spent some time on that in my testimony.

I have watched the green power marketplace very closely since 2003 and watched how sales have grown or not.

Even though there are an increasing number of ways to buy green power, the overwhelming barrier has been price, particularly for larger buyers, larger institutional or business customers.

The opportunity to buy from a facility like Redington

that starts at a competitive price but then holds that price fixed for a long term is compelling, is desirable, and can dramatically change the shape of Maine's green power market.

There are institutions literally waiting in line for this product, and I speak to that in my testimony. There is an aggregator who works with a number of large customers on behalf of the cities and towns. She literally knows of those institutions that are waiting for this product and will enter into those ten-year contracts as soon as they are available.

MR. THALER: I guess just two questions remain for Interfaith Power. I'm not sure which one of you will answer.

It's a related question, I guess, to Erica, but you have a different market or clientele.

EXAMINATION

(Of Mr. Platt)

BY MR. THALER:

Q. In your experience with Maine Interfaith Power and Light, are there currently sufficient renewable sources available for Maine customers or businesses who want it?

A. I'm Dave Platt. I'm a member of the board of Maine Interfaith Power and Light.

Our experience is that there are not.

Q. In your experience in dealing with the customers who want renewable energy sources, what role does cost play, price play, in that?

A. I think it's currently playing a considerable role. There are two kinds of customers, really. We have those that just want power and aren't really concerned about cost, but then our experience at the office and responding to queries is that when people learn that there's a 3- or 4-cent difference, that slows them down and their desire to buy green power.

It's a problem partly due to the structure of the standard offer. The standard offer price is currently substantially lower than ours.

Q. I guess if you could clarify, how would a project like this 90-megawatt wind power project based on what you've heard impact your clients or client base or what you do?

A. I think that as Erica pointed out, the substantial gain would be the existence of larger amount of green power available and long-term, fixed price contracts over ten years and that eventually the differential between us and the standard offer would come down.

Harry, you may want to address that.

MR. BROWN: I think the only thing I would add to that is -- I'm Harry Brown, executive director of Maine Interfaith Power and Light -- is that the addition of the Redington Wind Farm would create a more competitive environment for residential power consumers and that would in fact bring the price down.

I will add that the current price of our product is

actually competitive with current market rates and it looks -- well, it is in fact higher than the standard offer, it's a suppressed rate. It's been fixed by the PUC over the last few years.

But what's relevant, to those who locked into our product two years ago -- myself being one of them -- were actually below the standard offer rate.

So it is proof of demonstration that renewable energy can in fact be less expensive than conventional electricity.

MR. THALER: I just have about two more questions and then I'm done with this panel, Mr. Chairman, for Dave Wilby.

EXAMINATION

BY MR. THALER:

Q. David, in your experience, director of IEPN and other experience, have you worked with businesses, Maine businesses, with respect to purchases of power, RECs, capacity payments, and things like that that the Commission has heard about in the last two days?

A. Yes, that's something that our members are involved with on a daily, weekly, and monthly basis.

Q. In your experience in Maine, is it generally the practice for a wholesale power seller like, in this case, the Applicant for this project, Maine Mountain Power, to bundle all those potential savings into the power purchase agreement in the form of a single price per megawatt hour?

A. That is very typical, yes; typical to the point where I expect that it would represent the vast majority of the arrangements that my members have to sell their output.

If I could just add, there's been a lot of discussion about RECs, about capacity, about energy. Essentially these PENs, those attributes -- capacity, energy, and RECs -- they're just going to bundle those for one price, sell them in this case to Constellation, who works with many of my other members as well, and then it's up to Constellation to decide what they're going to do with these pens.

Q. I guess my last question is, again, since I have been outside much in the last two days, but -- and I think you were on the road yesterday, but I think my understanding was -- at least when I drove up here -- it was really hot.

Did New England -- did New England hit a record high for electricity demand this week?

A. That's my understanding, yes.

Q. And so that would mean that in order to meet that demand, there would have been some of the types of power plants generating that might be creating more emissions than gas or things like that?

A. That's a safe assumption. And also and importantly, the most expensive generators of electricity in New England would have been running.

MR. THALER: Thank you, I don't have anything

further, Mr. Chairman.

THE CHAIR: Thank you. Mr. Plouffe did you have -- you had indicated you wanted to question -- somebody in your group wanted to question Mr. Platt.

MS. JACOBSON: Yes.

EXAMINATION

BY MS. JACOBSON:

Q. Good afternoon. I'm Hope Jacobson, I represent Maine Audubon.

In your testimony you state in part that you support the project because of its environmental benefits; is that correct?

A. That is correct.

Q. What studies -- what environmental studies of Redington or Black Nubble has your group done to specifically evaluate the environmental impacts?

A. We did not do our own studies.

Q. Thank you. Over the past few days have you heard the testimony that if this wind power project were to come on line, the most likely fossil fuel burning power source to be taken offline would be natural gas power plants?

A. I have not heard that. I was not here then.

Q. Well, assuming that if this power plant were to come online and natural gas plants were the power source that would be taken offline because the wind power plant came on line,

what would the reduction be in the amount of mercury overall?
A. I can't give you specifics on that.
Q. Okay, so is mercury -- is mercury created from burning natural gas?
A. No.
MS. JACOBSON: Thank you. That's all I have.
THE CHAIR: Very good. NRCM. Are you still planning to say something, Peter, or are you done?
MR. DIDISHEIM: I'm done.
THE CHAIR: Thank you.
Friends of the Western Maine Mountains, Mr. Trafton.

EXAMINATION

BY MR. TRAFTON:
Q. Thank you, I'm Dain Trafton, Friends of the Western Mountains.
I would like to begin by questioning Mr. Holt on a somewhat different subject from the ones so far being discussed in this session.
You and many others have mentioned a recent piece of legislation in Maine, LD 2041, which contains a statement that it is State policy to increase new renewable capacity resources by 10 percent by 2017.
Are you familiar with the provisions of this bill?
A. Yes.
Q. Do you view the bill as containing a mandate for State

agencies to approve wind plants without reference to other criteria?
A. No.
Q. Does the policy that we are discussing -- namely, the policy about increasing renewable energy resources -- appear in a part of the bill, Part C, that is about mechanisms to ensure capacity resource adequacy?
A. I believe that's correct.
Q. Does this section grant the Maine Public Utilities Commission authority to employ long-term contracts as a mechanism to assure capacity resource adequacy?
A. Yes, it does.
Q. According to the bill, is the Maine Public Utilities Commission to give priority to renewable resources?
A. There's a priority list. I think renewable resources, I don't remember it at all, but I think renewable resources are I No. 2 and 3.
MR. TRAFTON: That's right. Thank you.
Now I'll continue with you, Mr. Holt.

EXAMINATION

BY MR. TRAFTON:
Q. You mentioned two studies of property price, the effects of wind plants on property prices, which you thought were particularly good.
I take it that one of them is the study Kittitas

County in the state of Washington; is that right? Is that one that you meant to include?
A. Yes; but I would characterize it not a study of Kittitas County but a study of US wind sites that was done as background for a Kittitas Task Town proposed project.
Q. Proposed project. Can you tell us of the sites included in that study, how many had topographical, geographical characteristics which in some broad way are comparable to the characteristics of this area?
A. I believe that none of them are mountainous, if that's what you're getting at.
Q. That's one thing.
A. But on the other hand, they were all in rural areas, and they all had properties in which -- which can see the wind turbines from those properties.
Q. But none of them that you can name was in an area where tourism was a primary and important industry?
A. I would not characterize tourism as a primary industry in any of them.
Q. Thank you. I want to return now to the Beacon Hill study, which has come up several times.
That study contained information on tourism, which I mentioned yesterday, and we all know everyone who was there knows that there was significant monetary consequences to the 5-percent decrease -- the potential, this was a study of

attitudes -- potential 5-percent decrease in tourism that the study projects.

Now, the study also surveyed 501 homeowners and 45 real estate professionals.

Are you aware of what the results of those surveys were in monetary terms?

A. No, I focused only on the -- there were at least two studies, I think that the Knowlton Institute did, and I focused only on the one that related to tourism.

Q. But this study that I just referred to is in that same study. There was a second one which dealt with other economic matters. I'm referring to the same study that deals with tourism.

Now, yesterday it came out that support for this Beacon Hill study came from opponents of the Nantucket Sound wind project.

Do you consider that that fact about the prominence of support invalidates the study?

A. No, I don't. I think what's much more important is the way in which the study is conducted and reported.

Q. Thank you.

EXAMINATION

BY MR. TRAFTON:

Q. Mr. Brown or Mr. Platt, you mentioned that your green electricity offer at the moment is more expensive than the

standard offer.

Could you tell us exactly what the price is for per kilowatt hour?

A. [Mr. Brown] Just as a matter of procedure, we weren't on the list to be cross-examined. I'd be happy to answer the question.

We have two products, one is Maine Clean Power, the other is Maine Clean Power Plus.

One is generated from the Maine hydro dam in Lisbon, Maine. That's currently 12 cents --

Q. I only have a --

A. 12-cent per kilowatt hour. And the other product, which is supplemented by renewable energy from wind, is 12.5 cents per kilowatt hour.

MR. TRAFTON: Thank you, that's all I have.

THE CHAIR: Nobody else said they want to cross-examine you, so I think we're done.

Mr. Trafton and his expert are next finally.

MR. TRAFTON: Thank you. I'm Dain Trafton, Friends of the Western Mountains. I have two of my witnesses with me, the two who were requested to be cross-examined, Ray Craemer here, who is on the board of directors of Stratton Snowmobile Club, Tom Newscomb is here, who is an energy expert from Virginia.

Other members -- other witnesses on our behalf were

Melvin Paul Chodish, Rangeley, owners of the Mingo Springs Golf Course; Mary Lou Melvin, a real estate agent from Kingfield; and Bob Silvia, who is chair of the Rangeley planning board.

I'm going to make a very brief statement and then turn the microphone over to Tom Hewson, who is the expert from whom you really want to hear, need to hear.

First of all, Friends of the Western Mountains are the group that has collected 1,887, now, 1,887 signatures on the petition against this project, and I have them here and I will hand them to the Commissioners at the end of this session.

We think the fact that we were able to collect these signatures in this area -- didn't go down to Portland or Boston or any other such exotic place to get our signatures -- we got them right here, although some of them are visitors to the area but most are residents -- we think that shows that there is a lack of community support, or at least a significant degree of lack of community support.

We think that the Applicant has not met LURC's compatibility and community character criteria. Concerns about destruction of mountain beauty and adverse impacts on local wildlife, as well as fears that the plant will harm our tourist-based economy, and the quality of life that draws people to the area have been evident both in filed testimony and in numerous public comments.

We think also that the criterion of making a

contribution to the local economy has been met only in prospect only in a very limited way.

Most of the capital equipment -- most of the capital investment in equipment will go to suppliers and specialized contractors from outside Franklin County, and we believe that local employment, permanent local employment, will be extremely limited.

We think that the criterion of some sort of public benefit to the community has not been met. The project's claimed avoidance pollution benefits are undocumented, overstated, and may even be non existent.

The Applicant wants the Commission to rezone two beautiful and fragile mountaintops for a very small amount of incremental power that is not needed in Maine and that will adversely affect a large view shed.

Now I'm going to turn the microphone over to Tom.

MR. HEWSON: Good afternoon, I'm Tom Hewson, and the principal at Energy Ventures Analysis. I've been in the energy and environmental consulting business for 30 years. I've done a lot of work for the US-EPA, the Department of Energy, Asheville with NERC, to most of the major utility systems in the United States.

What I was asked to do here was I was contacted by the Friends of the Western Mountains to review all the claims from this project and to render an opinion one way or the other

in terms of how robust were there.

As you can see, there are four different areas that I developed conclusions on. One was concerned about the output projects. We'll get into there is no wind document, and this is highly unusual for most of the projects that I have reviewed.

There is no demonstrated need for the project. I've studied local impacts. There's been no study of what really happens in this area with this project.

And then I would like to spend more time on the highly confusing issue in this terms of what are the benefits, and I have definitely a different view point than most of the other witnesses that you've heard.

I'll only spend a very short time. Obviously in this project the concern is that, as you can see in my Exhibit 1, this project has a 33.6 percent capacity. That's how we measure performance.

You will note in my Exhibit 1 I have all wind projects in the east in the United States greater than 25 megawatts are required by law to report their output, and so we can use this data as a way to judge how does this compare to operating projects throughout the United States.

I have provided you with a list of the 86 in 2005 that have reported so far, and you will find that one of the concerns is that 33.6 percent exceeds all of the existing

plants on the east coast and what they've been able to achieve.

So this project, if they're -- based upon their claim -- would be the highest performing wind project in the eastern United States.

So there was concern whether there was documentation in order to support that finding.

Obviously, a wind project is totally dependent on wind resources. As I said, there was no wind information that was provided to you.

In many of the other cases, they at least provided some wind. I understand they considered proprietary but one wonders in terms of if they own the site and this wind -- studies are specific to the site, who else other than the owners of the site are able to take advantage of this information.

So there are studies. We know, we heard about them. Evidently some of them were supplied to the Conservation Law Foundation in order to be able to do their documentation, but they didn't provide it to you.

So the question in terms of this data is important to understand how this site, vis-a-vis, compares to other sites; and yet you get to a point where it's important for you to say, well, there's only going to be a limited amount of wind projects that can be developed without creating transmission issues. It's important to understand how this project site may

compare to other project sites, and the way we tend to do it is first of all is looking at wind resources.

So all this data is not available.

We were concerned. As I put in my testimony, there's another concern concerning this particular site. As you get farther up in elevation, we get more and more icing and in my -- and I apologize that I quote one of the studies and it says northwestern and it's supposed to be northeastern -- what happens is in the northeast we have a lot more moisture here versus some of the western sites. So icing is a much bigger issue here in the east than it is in the west.

As I understand it, subsequently one of the reasons for an extension on the monitoring data was the concern about mountains and icing and getting a sufficient amount of data.

A second about need. As far as testimony received, you did hear something about imports/exports, and I would note, look at the year, the year 2000. It's six years later, things have changed, and so the situation has changed.

In 2005 you produced roughly about 250 percent more power than what you consumed, so therefore you are a very large exporter of power.

So we're not -- this project isn't necessarily -- if you're just worried about Maine in isolation, this isn't necessary to meet the Maine demand. We use Maine resources to meet Maine demand. Maine is -- if we took 2005 and looked at

the demand, it would take probably about -- in our projections -- probably close to 2030 before we reach about the 18.6 kilowatt hours in terms of the demand.

Maine also has renewable portfolios in which 30 percent of all Maine powers is supposed to come from renewable sources.

You have one of the most aggressive standards of any state in the nation; 30 is very, very high. As it turns out, you exceed the standard as you are blessed with hydroelectric resources, which account for a very large part of your generation, and you also are blessed with a lot of biomass.

And the combination of biomass and hydroelectric account for 41 percent of that 18.6 tarawatt hour of generation. It's equivalent to about 61.7 percent of what retail sales were in Maine.

So you have a surplus, by far the highest proportion of energy coming from non hydro renewable resources of any place in the entire country. You rank number 1, so you are doing very well as far as renewable resources.

You heard a little bit about the high temperatures and the high demand and the need for power. Well, you build power based upon capacity, and we want to make sure that we have enough capacity so that when we turn on all of our air conditioners that they work.

The way we do that is we plan, we project how much

bar of demand will increase the time, and I must admit every one of the protections this last year, we got it wrong. Who would have ever thought that we would have had as hot, humid weather as we did.

And so we exceeded -- we would exceed for some time.

However, in order to meet that, we need to have a capacity that when we call up we'll come online. And the problem that is true of using a variable resource is that, for example, where I live, Virginia, whenever it's hot and humid, there is no wind.

Typically wind is not very -- is lowest during the summer periods, and that's when we hit our peak demands.

And so since we don't have a good match between when we really hit those high demand periods and when the wind is blowing, wind receives a very little amount of capacity credit.

Now, there are only three wind projects, as we've heard earlier, and we take those three wind projects and we add what capacity credit is New England, give those three wind projects, versus their rated capacity, and it comes out to be 10 percent.

So if we say that Redington initially follows that same pattern, it would say that we would only hit 9 megawatts worth of credit for a 90-megawatt plant.

So 9 megawatts means that it's not going to void what we're going to need. We're going to need to build a lot of

conventional power in order to meet this increasing demand if this is in a weather unique climate.

There is a little comment -- I won't spend a lot of time, it is in my testimony. There is a question concerning how much of it is going to come from local, and there is the issue in terms of when you spend the money in terms of economic impacts, where is the money going?

Of course, a lot of it is for the wind turbines themselves. Wind turbines, the supplier is obviously a Danish firm. It has some highly specialized contractors, it is highly specialized equipment, and the question is how much of that will come in and out of the region.

There there's been no -- there's been no attempt in your application to try to address that nor has there been any attempt to address how does this project, as there are changes in wind, if there's some transmission constraints, how does it affect other places here in Franklin County.

What I want to spend more time on is avoided emissions. This is a really big issue.

Obviously, as I look at avoided emission, it's looking at what would the emissions be with and without a project.

And so we need -- and obviously this is not a project that exists today, this is a project that will exist in the future. It's also because as we become cleaner and cleaner

with time, what sort of emission profiles that we have that will change.

If you look at history in terms of the ISO New England -- they've done this marginal emission report, which has been used by the Applicant -- if you look at the time, what's happening is what's been on margin and consistently getting cleaner and cleaner.

So when we look at it, Redington Mountain is being built not because it's a conventional power plant, because it's a renewable power plant. So the question, what is it competing with.

What we have is in trying to encourage new renewable projects, is we have set aside a lot of financial incentives, some of which you've heard about in terms of renewable energy credits where they're worth $54 a megawatt hour. These are big bucks, you know, in order to encourage new wind resources.

This part, set aside, does not need to compete on an economic basis with conventional sources of power. It needs to compete with other qualifying resources.

So in that, if we look at this global piece of the pie for renewable energy and say, well, if we build this project and we only have a limited amount of demand that's been set aside in terms of if we are providing these financial resources, and there's a lot of people competing for it, what we actually are doing is we may be having if we build this

plant, we will not build another renewable plant elsewhere in New England that could also meet and qualify for those renewable energy credits.

So it is actually, in my mind, it's a renewable project -- if we look in terms of over this history, it's a renewable project competing for this set aside with other renewable projects.

So when we look at what are the emissions of another renewable project, is that other renewable projects, like Maine's hydro, most places in New England have renewable projects, we've looked at what are the initiatives associated with those projects for the same amount of output.

The way -- $CO_2$, which is the largest single component of the voided emissions, biomass does make $CO_2$; however, the way we do a counting is the thought that it does not have any incremental $CO_2$ emissions because the belief is that the $CO_2$ that's captured by the trees is being reemitted, and there's no new $CO_2$ being emitted, and so we have this issue of -- sometimes maybe it's a way one counts -- is that we have no net $CO_2$ emissions.

So if you follow along that theory is that there would be no difference in emissions associated with or without this project, if we were competing against other renewable projects.

However, if we look at, well, let's say because we

set aside this renewable portfolio standard and we have in essence saying that we are going to displace fossil fuel generation because we want to take this step in order to reduce emission, what is this renewable portfolio standard actually going to be reducing.

That's probably closer to what some of the studies when they look at existing fossil fuel, what are they displacing.

So when we look to do that, it requires an extremely complex model. In all honesty, no one here knows that. It requires knowing what the load is on each hour, what is on the margin each hour, how much wind is being produced each hour.

Various people have taken an attempt at it, and in all honesty there is significant problems with each step.

However, I have a way to simplify. As it turns out, we have, as far as the way we regulate emissions, we have what's called -- you've probably heard about casentrate.

What we've done is Congress has decided that we're only going to hand out so many emissions, and we're going to divide it up among all the different sources. Those sources are free, if they don't use them, to sell them to someone else.

And so what happens is is you displace -- let's say we displace oil. There isn't much oil displaced by wind. But let's say we displaced and there's sulfur associated with it. Well, then, that holder of what you have displaced now isn't

consuming that energy credit, that sulfur credit, and he's free to sell it to somewhere else or trade it or use it somewhere else in the system.

The same is true with nitrogen oxide. What they could do, is they could take those credits that they aren't using and apply it to another plant. In some cases they might not put out controls if they end up with enough credits or can purchase enough credits. They can therefore not do something else.

So in the end, all these pollutants that are subject to cap and trade programs, I think what happens is you can displace emissions but you can't avoid emissions because people always breathe.

The last things is, of course, $CO_2$ is a big issue. Right now there is now regulation, as you're probably aware, dealing with $CO_2$, per se, here in Maine. We have goals.

Maine has signed on to a group, and you've probably read that, called the Regional Greenhouse Gas Initiative. And the intent is to establish a cap and trade program in the seven signing states that will be just like the $SO_2$ and NOX, which people will be setting aside emissions and then they'll trade them. So in theory, $CO_2$ may become just like these others in which if you displace some emissions, then they don't need to buy as much or they can sell it to someone else.

So in the end, what I wanted to get across is even if

you don't -- first, if it's renewable versus renewable, there is not change. If it's renewable versus fossil, all these things are associated with cap and trade, there is no change.

So I realize it's very counterintuitive because in all honestly, I've looked at a wind turbine, too, and it doesn't emit; but the thing is that you have to understand how you regulate it to understand really what is the implication as far as avoided emissions.

And that's why I've come to the conclusion that in the way the law is written, the way we enforce emissions, the way we have power plants regulated, that in the end we may displace emissions, but we will never avoid emissions.

It is important to you in terms of the "public need" that there is going to be -- that we need this in order to reduce emissions, I would suggest to you that because the way law works and the way these programs work, there is no such benefit.

Thank you very much.

THE CHAIR: Thank you very much.

MR. TRAFTON: That concludes our testimony.

THE CHAIR: Do we have any questions from the Commission?

MR. HEWSON: People asked this question a lot. I'm asked by State legislators all the time, I'm asked by people of Congress, I'm asked by utility Commissioners, they all are

grappling with that same issue that you are grappling with.

THE CHAIR: Would you -- is it -- based on what you just said, could we correctly conclude that your conclusions would apply to any wind farm built anywhere?

MR. HEWSON: I would say anywhere in Maine, yes.

THE CHAIR: So your conclusions here are specific to the Maine --

MR. HEWSON: Oh, it was also -- I mean, the rules in terms of, you know, the way the programs work, some are regional --

THE CHAIR: Right.

MR. HEWSON: Some are in a national; but I would say yes, as a whole, the way it's set up, yes, it would be true.

THE CHAIR: Is it your testimony then that wind farm -- wind energy is not something we should consider, or are you just saying we ought to recognize for what it really is and not what we'd like it to be?

MR. HEWSON: I want to go back to what was said. Obviously Maine is only one of seven states with a $CO_2$ cap and trade program, and we're dealing with a renewable portfolio standard in Maine that we're not doing with 27 other states.

And so I have to go back and say, well, if I'm in another state, it may be a little bit different. But on the whole it is true that the vast majority is that we are not going to be displacing emissions associated.

I apologize. Your section question. I apologize.

THE CHAIR: That's all right. We can maybe move along.

Can you give me -- we hear these aspersions basically like yours was a fairly serious one, I think, basically have indicated that the Applicant overstated his capacity.

Could you give me a reason why somebody would want to do that?

MR. HEWSON: First of all, what I was worried about was that he states a very high capacity, and my concern was there was no documentation to understand how he derived that number, and I tried to show in my reasons why, you know, I was concerned.

Why would one overstate capacity? One can only surmise -- one reason that I have found in the past is that in some cases -- maybe not this case -- is that in order to attract investors, people have suggested that they would be generating at a much higher capacity.

I was involved in a project out in Michigan. The developer was saying that he would get a 35-percent capacity factor, and based upon that, two of the investors decided to invest. They were looking for money -- they were looking for the tax credits to go along with the renewable project.

They came up to me and they said, well, as it turned out, it's operating at an 18-percent capacity factor, maybe it

just hasn't hit its full potential.

He said, well, Tom, if I had realized it was 18 percent, or was at the time, I would never have invested.

THE CHAIR: Okay, thank you.

We've also heard a number of comments about the turbines and the icing and so on and so forth.

This is kind of the same question. Why would the turbine manufacturer -- do we believe that they don't know what they're doing, that they would just come in blindly, take responsibility for this project? I'm struggling with why we seem to think they're so dumb.

MR. HEWSON: I'm not saying that they're dumb.

First of all, obviously their contract has not been shared with the intervenors or I assume with the Commission. I'm not sure whether they have a minimum for performance schedule.

It may be that if there's icing and the project doesn't produce, you know, during the events, they might not have any liability or any risk associated with the icing events.

As I said, icing is a concern of mine, and the reason why I bring it up is I'm not sure how that issue was handled in terms of deriving an output estimate.

So unless you have the study and the study is supposed to identify, well, we have these issues that we've

identified. There are so many days that it's operating at these very full temperatures, and as you know it's a car in the cold, the oil isn't lubricating as well, and you're probably maybe not able to get the same amount of output as you would when the oil is more fluid or viscous.

THE CHAIR: I guess we can probably speculate.

MR. HEWSON: That was my point, that you're left to make a decision on the suitability of a wind project here, and you're not even given the basic information that's necessary in order to understand how good or how poor a site this may be.

THE CHAIR: Well, I guess I'm going to stop and let the intervenors start their cross.

MS. KURTZ: Can I ask a question?

THE CHAIR: I'm sorry, Rebecca.

MS. KURTZ: I've just been reading through my notes and I'm writing a lot of notes but my brain won't suck in any more information.

Were you saying that there's a limited number of credits and so that if this project is completed, that another one in Maine may not, that -- can you explain that again for me.

MR. HEWSON: What you have is you have a renewable portfolio standard, and renewable portfolio standards have -- we want so much of our electricity to come from these types of sources. They set aside that proportion.

So in terms of the RECs that you've been hearing about, one of the ways that we make sure that we meet our renewable portfolio standard is that we give out these RECs.

What happens is is that the distribution company who is selling the power has to have in hand the same amount of RECs as, let's say, 5 percent of his retail sales have to come from renewable energy sources.

Maine is 30 percent, he has to have based upon his retail sales for that year, 30 percent of the megawatt hour RECs. He has to have in hand in order to achieve the renewable portfolio standard, and that's the currency that we use in order to assure compliance.

So what I'm saying is that since we set aside this portioned market, anything above and beyond that portion, once we reach those limitations, will have to compete. You won't be able to get some of the special -- they will no longer be getting the special treatment.

So the thing such as what is a renewable energy credit values will be very different when the economics are different. So what happens is they have to come -- then they would be competing with conventional sources.

Now, I think what you heard from the panel before, if I understood correctly, is that renewable energy is more expensive in terms of what they're offering for the standard offer price.

This is very, very typical is that generally as far as the national average, you have to pay roughly 2.5 cents a kilowatt hour more for renewable energy than from your conventional, whatever you get from the utility.

Part of that is, of course, to cover its higher cost. Obviously, in a case like here you're talking about $150 million project that is operating at only 33.6 percent, if you use their number or maybe less time. That's an awful lot of money in terms of turning your cap to spread over that few megawatt hours.

So it tends to be very expensive, and as a result we tend to have, in order to promote it, we have people who are willing to pay for it. So we have what we'll call the types of program, voluntary program, where people can go and pay. You have it here in Maine.

Alternatively, what we've found is that often politicians believe that it doesn't create enough of a demand in order to reach the types of goals that they think are needed, and as result, what they do is they pass renewable portfolio standards, which dictates a much higher portion of the market than what they've been able to achieve voluntarily.

And so that probably the reason why we have so many states with renewable portfolio standards has to do with the fact that we didn't find enough people who were willing to pay on average -- and it changes, obviously there's high class

states and low class states, it varies -- but roughly 2.5 cents more for power from a renewable energy source.

THE CHAIR: Thank you.

Steve, have you got a question?

MR. SCHAEFER: I really would like just because this is probably going to be the last time you hear about caps and trades this afternoon.

Is there political action -- really, just make this a short answer -- in the works that would retire sounds like caps and trades to another day? Is there a political action in the works that would retire caps and trades in the interest of renewable energy? If you can say yes or no.

MR. HEWSON: First of all, as you know in a cap and trade what, of course, may happen in the future, obviously the Bush administration has proposed to reduce how many of those little, you know, the size of the pot as part of the -- so that may change.

As far as your second question, there are some states and it's part of an incentive instead of providing money. They say, for example, in Maryland we give out nitrogen oxide credits that have market value associated with a perceived what they might have displaced.

So -- but as far as the states that I'm familiar with, I've only come across one state that I'm aware of that does that specifically, but I'm told that what we believe is

going to happen more likely is that we're going to lower the cap. In essence we did that in the Clean Air Interstate Rule. EPA elected to say we're going to reduce the cap in these 28 states, and you need two allowances to cover one kind of $SO_2$ emissions.

THE CHAIR: Thank you. Mr. Thaler, are you ready? You have 10 minutes.

MR. THALER: Mr. Chairman, I might mention that Bess McGusty has been here all two days of the hearing as the energy director and Mitch Tannenbaum from the PUC is here.

So if Commissioner Schaefer and others have questions before we adjourn, of them, they're certainly here I understand to respond to questions on this.

MR. HEWSON: I would note to the Commission in that 10-percent law that passed is supposed to be implemented by the Maine Public Utilities Commission, and so if you want to get definitive word, I would suggest that you ask Mitch Tannenbaum --

THE CHAIR: The chair recognizes their attendance and appreciates their support. I guess it's a question of if we can get to them at a reasonable hour.

MR. THALER: Thank you. That would be appreciated. And I will try to do my best as well.

I do have some questions, Mr. Hewson. As you been here most of the days, the last two days, if you could just

answer my questions.

MR. HEWSON: I'll do my best.

EXAMINATION

Q. In your testimony in writing and today you said that the project is overestimated production and overestimated emission reductions.

Are you aware that the marginal emission rates that the Applicant used from Maine are lower than the rates for all of New England, emission rates?

A. Well, I think, if I understand your question correctly, one was concerning output and the other was --

Q. I'm focusing first on emission rates.

A. I'm aware that the Maine emission rates and New England are less than average.

As I said, the reason for my conclusions of overstating has more to do in terms of what is it displacing and the cap and trade.

Q. We'll get to that.

I know Professor High from the Conservation Law Foundation and Interfaith Energy Producers of Maine used New England marginal emission rates and came up with a number that was slightly higher for displacement than the Applicant, we used Maine rates; do you recall that?

A. I do indeed.

Q. Second, you testified to the Commission in writing and

today that the Applicant seems to have used a too high or excessive capacity factor because you said it was higher than anything else on a list that you had as an exhibit to your testimony; do you recall that?
A. I do indeed.
Q. And as a matter of fact, what you didn't tell the Commission today is that when you look at that list of the eight facilities, two of them are 30 and 32, while the capacity factor estimated for this project is 33; is that correct?
A. I believe it was 33.6 percent, and if I remember, 33.6 percent is greater than 32 and 31.
Q. Pretty close, aren't they?
A. Yes. There's also --
Q. Are you aware as whether the ones that are 32 and 31 are using V90 turbines, 2006 models?
A. As I said elsewhere in my testimony, I believe that this would be one of the first applications of the turbines that the 3 megawatt turbine, and that was, obviously, another concern that I had.
Q. Mr. Hewson, based on your resume and some research I've done, it appears that you go around the country testifying in wind farm proceedings; correct?
A. I've been involved in a number.
Q. And a number of those you've testified against the project on behalf of what you term public interest groups; correct?

A. I would say that what I've testified about were issues associated with wind permitting.

I have not been either in support or against.

Q. Excuse me, but you have been testifying and retained on behalf of the groups opposing a particular proposal; correct?

A. That's correct. Not in all cases.

Q. In most cases; correct?

A. Yes.

Q. In your prefiled testimony, you also said that Maine Mountain Power might not pay its fair share of taxes; do you recall writing that?

A. I do indeed.

Q. And you said here that for a $100 million project, the project will only be paying $500,000; do you recall that?

A. If you look at my testimony specifically, it says $130 million in terms of "over one-half million" and not specific because there was no impact study.

I took one-half a million, divided by $130 million, and figured out the percentage, and compared it to what the Franklin County rate was, and it was a small fraction of the Franklin Country rate, and therefore suggested that I didn't know what was going to be subject to property taxes or not, but it appeared to me that if we took over half a million as half a million, it was likely that there might be some tax abatement.

Q. Mr. Hewson, I don't want to cut you off, but I have

limited time and we all have limited energy right now.

Did you look at the Applicant's responses to State agency requests that were filed the end of May 2006 and made available to your client that indicated that the -- at that time the project was estimating that if the valuation was $100 million, it would be $1 million taxes paid annually?

A. I don't remember that testimony. I do remember the $130 million being on the application, and I remember in July of 150 million.

Q. But you didn't read the response that gave the million dollar figure in writing to the Commission?

A. I first came across it in the testimony of Mr. Mann in July.

Q. You also have suggested that a wind project does not create any NOX or SOX emission credits; is that right?

A. I am saying that they don't emit NOX or SOX.

Q. Is it your testimony that -- let me strike that.

You've also testified with respect to carbon dioxide that it's not a pollutant and therefore the project shouldn't be given any positive support or whatever for displacing carbon dioxide.

Is that your position?

A. I believe my statement was simply that carbon dioxide is not rated a pollutant by the state of Maine or by US-EPA.

Q. Are you aware that the state of Maine and 11 other states

have a case pending in the US Supreme Court now taking the position that carbon dioxide is in fact and should be regulated as a pollutant?

A. I remain that as of today that Maine does not regulate $CO_2$ emissions, and once they do, they're implementing regulations for the regulation process, the Greenhouse Gas Initiative. If the legislature so deems, I believe that in the next few months it's likely that you will adopt such legislation.

Q. Are you aware that Maine's already adopted legislation several years ago to reduce greenhouse gas emissions?

A. My understanding is that there was a goal as father as --.

Q. Are you aware that there currently are not enough RECs to meet the demands in New England?

A. I am aware of that, yes, in particular in Massachusetts.

Q. Well, and Maine as well because we're part of the NEPOOL system.

A. I believe that -- my understanding in Maine is that given the definition, as I put in my testimony, is that 41 percent of the generation in Maine qualifies as renewable resource. I find it very difficult to believe that Maine is not easily achieving renewable portfolio standard.

Of course, you can ask Mitch. I'm sure he's made sure that they've qualified that they make it.

Q. I'm sure they are, too.

Are you aware -- I'll just pick this up to move

quickly -- that in terms of what percentage of the existing renewable capacity in Maine is cogeneration, which can include burning black liquor, coal, and oil?

A. I have those numbers and unfortunately not instant recall, but I know where to look them up.

Q. But you agree that part of the so-called renewable standard would be those sources; correct?

A. That's the way Maine defined.

Q. Are you also aware that at the present time you've talked about Maine being, in terms of having a surplus of power, that a substantial amount of that are natural gas plants?

A. Yes.

Q. Some of them fairly sizeable, like Westbrook and Rumford and a few others like that. Are you familiar with the individual plants in Maine?

A. I have a listing. I can tell how much they're generating each year.

Q. Right. Are you aware that one of them was just recently moth balled and there's no plan to reopen it?

A. Off the top of my head I don't remember that.

Q. That's Androscoggin Energy, which is shut down.

If one or two others of these natural gas plants in Maine were to have the same thing happen, that would have a substantial adverse impact on both Maine's energy production as well as economic impact on prices; wouldn't you agree?

A. I suspect. The reason --
Q. I only have a minute, Mr. Hewson. That's a general question.
A. I was trying to answer it.
You mentioned Androscoggin, and I assume that Androscoggin last year didn't produce much electricity at all.
As far as how much it would reduce the amount versus what it did last year, I assume that's very small.
Q. Would you agree that if -- strike that.
The Commission has in its record statements from both the Governor's office of Energy Independence and Security, as well as the Maine Public Utilities Commission providing review comments on this project and talking about the benefits from the 90-megawatt Redington project in terms of improving the reliability and decreasing insecurity of Maine's energy supply as well as economic impacts because of over dependance upon natural gas.
Have you read those filings by those two agencies?
A. I have not.
MR. THALER: I have nothing further, Mr. Chairman. Thank you.
MR. HEWSON: Androscoggin last year produced 223,000 megawatt hours.
BY MR. THALER:
Q. And it was rated originally at what, 175 megawatts; is

that correct? 165, would you agree?

THE CHAIR: Bill Plouffe or his group. I'm not sure who's going to do it.

I'm sorry, Steve, I didn't see you there. I just have Bill. He's next on the list, that's all.

Bill's got -- he's got 5 minutes.

EXAMINATION

BY MR. PLOUFFE:

Q. Mr. Hewson, did you have occasion to look at the Application with respect to potential transmission congestion problems in this area and the effects of this plant on that, if it exists?

A. I had the opportunity to review the Redington Mountain System Impact Study that was part of this by the ISO New England, particularly Central Maine Power.

I had an opportunity to talk to the transmission people at ISO New England in trying to understand whether my interpretation of the document because a system impact study is not designed to address congestion directly, but it sometimes indicates that there is congestion, so I talked to them.

So yes, I spent some time trying to understand the transmission issue. I'm not probably as versed in the transmission as perhaps TransCanada.

Q. Is the study that is part of the record here by Central Maine Power, I guess on behalf of ISO New England, does it

provide information to you and to the Commission about the ability to transmit this power from what I understand would be Bigelow station to Wyman and then downstream from there?

A. What I learned was yes, as part of this project they were going to expand the line to Bigelow and export. That would address the issue south of Wyman.

As a result, there will be times in which in their study -- or doing their evaluation -- you'll see that there's a Redington on/Redington off.

If you look at differences, it backs out hydro. So one of the things I was asking about is there a congestion problem downstream of the Wyman hydro export.

Yes, there are conditions in which it is congested, and there will be times -- according to the ISO New England people I talked to -- in which we have renewable versus renewable competition for times it will be congested.

Q. If this plant goes on line at 90 megawatts and will join Stratton Energy, as I understand it, in use of the line from Bigelow and then downstream; is that right?

A. Right. The big load of Wyman will be shared by both Stratton and this project.

Q. If they were both operating at the same time, is there going to be any capacity left on that line for other significant generators?

A. As you will find TransCanada -- which I think was much

more eloquent -- has a lot more data than mine is yes, it appears that there's very little casting left in that line.

Q. What happens if there's more generation than capacity in the line?

MS. JACOBSON: Objection. Forgive me, but are we talking about TransCanada's project, which is speculative at this point?

MR. HEWSON: If there's congestion in the line in terms of line to hydro, what happens when leaving the area is that what ISO New England does is it figures out, it goes from the cheapest power to the most expensive power.

As you could imagine, a hydroelectric facility is something that we'll call a high stake. They take whatever the marginal price is, as will a wind project.

Stratton is a biomass project, and they generally bid for their portion, as I understand talking to Steve Holt of Stratton, is that they have cogeneration.

So that portion of their generation is associated with they need -- that they produce steam for their own facility, and the power associated with that, they also produce it, "at whatever is the price."

Anything above that you start then adding, well, what's my marginal cost. So if there's congestion leaving Wyman export and they have to cut back generation, what they'll do is if Stratton -- depending upon how they bid it -- they

will perhaps back out Stratton would be my guess. So we would end up with less biomass generation.

So in cases -- whatever the conditions are that lead to congestion, at that point is that only renewable energy that's backed up that point, and so you're limited to in essence in this case renewable versus renewable energy, and some energy won't be produced.

MR. PLOUFFE: Thank you. That's all the time I have.

THE CHAIR: CLF. 5 minutes.

EXAMINATION

BY MR. HINCHMAN:

Q. Mr. Hewson, did I understand you to say that because Maine exceeds it's RPS and always has, that would you agree power from this project is sold in Maine and will be no RPS credits generated through the Maine RPS?

A. This project is a renewable portfolio. There are RECs because it is a renewable energy credit facility.

The question is it probably qualifies in several different regions. Probably would get them for Massachusetts, Rhode Island.

Q. Right. But the point you were making is there's a limited capacity under the RPS, and the only reason the project is being built is because RPS credits, but Maine already meets its RPS.

So there's no competition for Maine RPS credits in

the current market; is that correct? Yes or no.
A. Maine produces more renewable energy than what it has as far as a renewable portfolio standard.
Q. Thank you. In Massachusetts are you aware that the more recent report for the 2004 year there was a shortfall of 265,000 megawatts under their RPS program?
A. Yes.
Q. Are you aware that that was a 1.5 percent renewable criteria?
A. Yeah, I knew it was up one-half percent.
Q. It's 2.5 this year, it will be 3 next year, and that they will have shortfalls and predict shortfalls for '05, '06, and beyond?
A. I do not know how long they project shortfalls.
Q. Are you also aware that Massachusetts is one of six states that retires NOX credits under its RPS program and also for energy efficiency?
A. As I said the, one that I testified to that I knew about Maryland. I wouldn't necessarily know about Massachusetts.
Q. So in summary, Massachusetts had some shortfalls in its RPS, it does retire NOX credits.
So the argument that this is renewable competing against renewable, how many larger renewable projects are being promoted right now through New England that are in the application process and chance of being built soon? Who are we

really competing against?
A. Obviously, we're looking at the project in the near term. Obviously, there are numbers that are currently being pursued.
How many of those get built, it's a matter of speculation. Are you asking me to speculate?
Q. You're not aware of the actual numbers of the competition of renewable against renewable?
A. Well, I'm aware that a number of projects are being pursued in terms of both in biomass they're being pursued, in terms of -- there are wind projects that are being pursued, there are landfill gas projects that are being pursued.
Q. And even with all of those projects, Massachusetts predicts ongoing shortfalls for the life of its RPS program?
A. I do not know that they have projected a lifelong shortage.
Q. Would you agree that RPS portfolios -- construction of a plant, that they have nothing to do with the operation of a plant in terms of the way the market would back down one facility as against another?
A. The renewable -- the renewable portfolio standard, in order to achieve it, is based upon the amount of megawatt hours that are being produced, and so I would disagree that that's associated with construction.
Q. My point would be that by ensuring increased value for the price of power generated that the investors can be sure of a

sufficient rate of return in order to build the project that the RPS program does not, however, affect competition within the market on the day market for generation of power.

So for instance, if there was 20 percent of the NEPOOL generators were wind, would the RPS system have any affect on how those wind generators competed on a day market event fossil fuel generation? If they're already built.

A. If they're already built, what happens in dispatch is that you use your cheapest source of power first, and then you work your way up to the most expensive power.

Q. And you've already testified that wind would be zero. The RPS has no effect on -- once it's built, it has no effect on whether there's some avoided emissions or not; is that correct?

A. Once a renewable project is built, it will continue -- hopefully it will be maintained and continue to generate power, and therefore it will continue to supply power in that special set-aside market.

So yes, in terms of that special set-aside market, it would be used -- it will get credit for that, as well as power as a whole.

Q. Then your testimony as to Redington versus fossil fuel, so wind versus fossil fuel, you testified that there would be zero incremental avoided emissions because of the cap and trade program; is that correct?

A. They're subject to cap and trade programs, yes. It may be

displaced but not avoided.
Q. Is there currently a cap and trade program anywhere in the United States?
A. Yes.
Q. I'm sorry, a $CO_2$ cap and trade program in the United States?
A. Not presently.
Q. Are there two proposals that have been voted?
A. There's actually the RGGI, it's the one in this particular, the Regional Greenhouse Gas Initiative that has been signed, a letter of intent.
Q. Did the State of Massachusetts pull out of RGGI?
A. It sure did.
Q. So if this power was sold in Massachusetts and RGGI was enacted elsewhere, there would be no cap and trade effect in Massachusetts?
A. It should be noted that Massachusetts has in essence a $CO_2$ cap state program.
Q. They have a limit on emissions?
A. Yes, as well as New Hampshire, as well as an emission rate.
Q. Are you aware of any state that has enacted RGGI, has passed the cap and trade program?
A. I am familiar with the State of Maryland, as far as the Healthy Air Act. One of the provisions of that was to direct

states to join the regional gas initiatives. I would say that that was probably -- might be the first ones.

THE CHAIR: Steve, you're almost out of time.

BY MR. HINCHMAN:

Q. The last piece is the -- you testified that neither of the two models for avoided emissions are sufficient.

Have you modelled -- have you done the modelling, do you have an alternative analysis?

If we have two models that predict highly similar numbers, do you have an alternative analysis to offer with a model?

A. As I said, to do it correctly would require a lot of effort, and I doubt the Friends of Western Maine are going to pay me to do it.

MR. HINCHMAN: That's all I have. Thank you.

THE CHAIR: Is it IEPM? Mr. Holt, 5 minutes, please.

MR. HOLT: Thank you, my name is Ed Holt for the record.

My first question is to Mr. Trafton.

EXAMINATION

BY MR. HOLT:

Q. Your written testimony said that Maine doesn't need more electric power. Maine doesn't need more renewable power; is that right?

A. Yes.

Q. Would you say that Maine does need more power, that that power was going to reduce the price of electricity to Maine consumers?
A. If there were a cheaper supply of power, that would be desirable.
Q. Are you aware that the Maine PUC's written comments on this project state, "To the extent new generation is constructed within Maine's borders, the benefit to Maine consumers is more direct in that the result would be lower prices within the Maine zone"?
A. I don't understand that statement. Would you explain it to me how it's going to happen? It usually has to do with creating price stability and that part I can understand but --
Q. You're taking up my 5 minutes.
A. I'm sorry.

MR. HOLT: I'll move on to Mr. Hewson.

EXAMINATION

BY MR. HOLT:
Q. You testified that wind development in Maine is limited to 104 to 208 megawatts or perhaps slightly higher.

How did you reach that conclusion?
A. If you look at my testimony, it's pretty straightforward. I used a report. I would need to look it up.
Q. How did you -- did you base it on your report?
A. The report suggested, and I can quote from the report if

you like.
Q. Perhaps I can just tell you what it said and save a little bit of time.
I believe it said that 10 to 20 percent of installed -- rather, of peak demand can accommodated of wind; is that correct?
A. That sounds correct.
Q. So it's a simple multiplication then, 10 to 20 percent times peak demand?
A. That's also correct.
Q. Peak demand is what?
A. Peak demand is -- when I do the calculations -- peak demand of the region. In this case, as you know, ISO New England has separated all into zones and you all are part of a zone.
Q. In fact, didn't yesterday I believe Mr. Garwood testified that ISO New England operates the whole region as one controlled area?
A. It does. It's the central Maine, Saco Valley, New Hampshire.
Q. That's the subarea, but it's not operated as an independent control area, is it?
A. It is tracked separately by ISO New England.
Q. It's tracked, but it's not operated separately?
A. The whole system is operated --

Q. And the study that you referred to by Ryan Parson, et al, what does it say about what peak demand area should be applied to, the 10 to 20 percent calculation?
A. It depends on probably versus wherever the box that you draw around it.
Q. And the studies in which they summarize, what was the box that they were drawing around?
A. They were using the studies -- in terms of that they were evaluating studies, look it up -- they looked at several different -- -
Q. Isn't it correct that they were studying entire control areas?
A. I believe that they were looking at control areas.
Q. So the 10 percent to 20 percent calculations, simple multiplication time the peak demand in the ISO New England control area would be 10 to 20 percent of 7,000 megawatts; isn't that correct?
A. If they draw the box that way. I was obviously drawing the box around this particular region given that there were some issues in terms of some congestion.
Q. But congestion is a pricing issue, not physical issue?
A. If you back it up. One of the reasons, of course --
Q. Answer the question.
A. As you're well aware, concerning backing up is you have a variable resource and if you are backing -- you're at minimum

load and you're backing down, things already in the load creates problems.

So yes, in terms of if you look at, for example, testimony up in South Dakota, I was in last month, they had situations in which different parts of the grid would go to zero because of the issues in terms of wind.

Q. Ancillary services are required on purchase from the control area operator; isn't that correct?

A. Right, and --

Q. Thank you. I'm complete with that question.

I'd like to move on to talk about capacity.

THE CHAIR: You have 1 minute left.

BY MR. HOLT:

Q. You testified that this project will receive only a minimal capacity credit. You suggested it would be 10 percent or 9 megawatts; is that right?

A. I said based upon -- it's currently 10 percent if I applied that to this project.

Q. Does this capacity factor -- or credit, rather -- relate to the output of the facility?

A. Yes, it has to do with in particular the output at high load periods of time. So yes, it has a lot to do with output.

Q. So how would it affect the output, the calculation of 260,000 megawatt hours?

A. It isn't determined that way, as you well know. It's

based upon --
Q. You said it would affect that output number. That's what I'm asking. How would it affect the output number?
A. It's calculated on capacity. Does it affect the output number in terms of what capacity credit is given, no.
Q. Thank you.
A. I thought you were asking another question.
Q. Would it affect emissions calculations, the amounts of emissions that would be voided?
A. The 10-percent capacity credit?
Q. Yes.
A. I think it affects the decision in terms of how much capacity do we need to build in order to meet the reliability reserve margin requirements.
Q. But isn't it also true that a particular number, the real impact of a capacity credit is a question of how much the Applicant or the project will get paid by ISO New England for the capacity that it provides?
A. It's also a matter of how much capacity credit is towards the reserve margin requirement, which is what ISO New England uses in order to track whether we need new capacity, how much.
MR. HOLT: Thank you.
THE CHAIR: Thank you, Mr. Holt. I gather that you folks -- I guess, Mr. Craemer, nobody had a question of him. You got off pretty good.

Thank you very much.

We have one more person who was an intervenor, and he has promised faithfully that he was only going to speak for a minute and a half.

So Larry, do you want to -- I think obviously like everyone else, he submitted his testimony in writing to us, we have it in the record, and I assume he wants to make a couple of comments.

MR. WARREN: The Western Mountains Foundation recently completed an agreement with Maine Mountain Power.

THE CHAIR: Larry, you've got to swallow that mic and you've got to tell Lisa your name and your affiliation, so she can make sure you're on the record if you want to be there.

MR. WARREN: Lisa, my name is Larry Warren. I'm the president of Western Mountains Foundation, a nonprofit local community development organization.

Western Mountains Foundation recently completed an agreement with Maine Mountain Power for public recreational access through their project area.

Western Mountains Foundation is developing a hiking trail system that when completed will stretch about 200 miles from Moosehead Lake to the town of Bethel.

Maine Mountain Power has agreed to provide Western Mountains Foundation permanent access across their property for purposes of constructing and maintaining cross country ski and

hiking trail.

This right-of-way and easement would provide the necessary access. The Western Mountains Foundation could pursue its trail corridor in Carrabassett Valley in Rangeley and ultimately between Rockwood and Bethel.

We recognize that the final design and trail location will be based upon assuring a safe and enjoyable experience for the traveler and not interfering with the operation of the power project.

Western Mountains Foundation anticipates that if the Maine Mountain Power project is approved, there will be many trail users who will find the wind farm of considerable interest.

Furthermore, Western Mountains Foundation appreciates Maine Mountain Power's willingness to provide multiple-use opportunities within it's project boundaries, and we hope that the trail opportunity will provide insights into the issues regarding alternative energy solutions.

Thank you, Mr. Chairman.

THE CHAIR: Thank you, Larry. Is that -- make sure you give that to --

MR. THALER: Mr. Chair, I think I was signed up for 3 minutes.

THE CHAIR: I'm sorry, I didn't see anybody by Larry's name.

EXAMINATION

BY MR. THALER:

Q. Mr. Warren, my name is Jeff Thaler. I'm an attorney for the Applicant.

Given what you just said, is it safe to say that at least you on behalf of your venture see that hiking and recreational trails can exist harmoniously with a wind farm project?

A. It's our belief that if this project is approved and if wind power turbines become part of the Maine landscape, that we and others will exist harmoniously.

Q. Your trail that you are planning will not just be for hikers. You said also cross country skiers, snow shoers, mountain bikers, people like that as well?

A. That's right.

MR. THALER: I have nothing further. Thank you.

THE CHAIR: Thank you. That concludes our testimony of all the intervenors and I believe brings us to the conclusion of this rather long affair.

I'm going to read -- I have a closing statement that simply reiterates the details of the record, and we'll bring the hearing to a close.

As of this point, the record is going to remain open ten days until Monday, August 14th, in which you can submit written statements and then there will be an additional seven

days until Monday, August 21st to receive written statements filed in rebuttal of those filed in the first two weeks.

So after that, no additional evidence or testimony will be allowed into the record as it will be closed.

Are there any questions about those dates?

MR. THALER: Can I just ask, Mr. Chairman, I think at the prehearing conference, the question is if any of the parties submit any further comments, do they have to be notarized or in narrative form? What is the preference of the Commission?

THE CHAIR: My -- erstwhile attorney has left my elbow.

I don't recall in the past that we required these submittals to be notarized.

The prefiled is the notarized testimony. I think that -- assuming I see no objection from all the attorneys setting here, that I'm on reasonably safe ground; is that true?

Do you have an objection?

MR. THALER: I don't have an objection. If Mr. Pidot's abandoned you, then I'm willing to --

THE CHAIR: Thank you. With that being said, I want to first off say that I appreciate all the effort on both the Applicant and the intervenors to make this process work I thought reasonably well, better than I thought it was going to be, based on our prehearing conference.

And I especially appreciate the prefiled testimony. I thought that on the whole it was well written. I did try to make an effort to read it all. It's well written and well presented. There were a few misspellings in there, but other than that, nothing that but an English professor would enjoy.

So thank you very much for that effort.

In addition to that, I want to acknowledge the LURC staff, who have been here and made this thing run, particularly Melissa, who kept us on track generally. Obviously, our court reporter who's been through a marathon session here. I'm not sure this is typical for all these legal proceedings or not, but these have been long, long days.

And of course, members of my Commission who have all toughed it out here, so we appreciate it. I particularly acknowledge the work of Marcia in putting -- she's been trying to keep track of this and all of you for a long, long time. So I appreciate all the effort that's been made.

MR. WIGHT: I'd also like to say thanks to the staff of Sugarloaf USA. We put you through your paces and you did well.

THE CHAIR: Yeah, this has probably been one of the best places we have had a hearing as far as witnesses go. We can hear you. I can hear you, anyway.

Other than that, it's a beautiful spot, of course. So thank you all very much. With that, we'll declare this

meeting -- this hearing adjourned.

* * * * *

(The hearing was adjourned on August 4, 2006 at 5:35 p.m.)

CERTIFICATE

I, Lisa Fitzgerald, a Notary Public in and for the State of Maine, hereby certify that on August 2 through 4, 2006, a hearing was held by the Maine Land Use Regulation Commission regarding Zoning Petition ZP702, Maine Mountain Power, LLC, Redington Township and Wyman Township, Franklin County, Maine; and that this hearing 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 witnesses.

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 18, 2006.

LISA FITZGERALD, NOTARY PUBLIC
Court Reporter

My commission expires: May 10, 2011

## C

## D

## E

## F

## G

## H

## N

## O

## Q

## R

## S

## W