> Maine Land Use Regulation Commission

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\text { Public Hearing Concerning } \\
\text { Development Permit DP } 4889 \\
\text { Champlain Wind, LLC } \\
\text { Bowers Mountain Wind Project } \\
\text { Carroll Plantation, Penobscot County } \\
\text { Kossuth Township, Washington County }
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\text { Tuesday, June 28, } 2011
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Held at Ella P. Burr Elementary School

Lincoln, Maine

Don Thompson \& Associates
Court Reporting
(This hearing was taken before Angella D. Clukey, Notary Public, at the Ella P. Burr Elementary School, Lincoln, Maine, Tuesday, June 28, 2011, beginning at 8:05 a.m.)

MS. HILTON: Good morning, everyone. I'd like to get started so hopefully we can stay on time. My name is Gwen Hilton and I'm the commission chair and presiding officer for this hearing. I'm going to have the commissioners introduce themselves starting with Ed on my left here.

MR. LAVERTY: Ed Laverty from Medford, Maine.
MR. HAMMOND: Toby Hammond from Naples, Maine.
MS. CARROLL: Good morning. I'm not a LURC
commissioner, but I am the commission staff director Catherine Carroll.

MS. HILTON: Gwen Hilton from Starks.
MS. MILLS: Amy Mills from the AG's office.
MR. FARRAND: Good morning. Sally Farrand from Beaver Cove.

MR. NADEAU: Jim Nadeau, Winterville Plantation. MS. HILTON: Why don't staff go ahead and introduce themselves as well on down the table there. Go ahead.

MR. TODD: Fred Todd, project planner.
MR. NADEAU: Jim Palmer, scenic expert. And we also have with us here today Angella Clukey, our court reporter;

Samantha Horn-Olsen, manager of the planning division; and Scott Perrow who is doing the sound, recording today's session. I think I've got everybody there. And I have to read my opening statement.

Today's hearing is being held pursuant to the provisions of 12 M.R.S.A. Section 685-B. The hearing will be conducted in accordance with the Administrative Procedures Act and Chapter 5 of the Commission's rules for conduct of public hearing.

Today's hearing is being held to receive testimony on the matter of Development Permit DP 4889 submitted by Champlain Wind, LLC to construct a 69.1 megawatt wind energy development in Carroll Plantation, Penobscot County and Kossuth Township, Washington County. The proposed wind energy development would consist of up to 27 wind turbines, access to turbines utilizing new and existing roads, 34.5 kilovolt collector lines connecting the turbines, an express collector line for 5.2 miles to connect to a new substation adjacent to Line 56, an existing 115 kV transmission line, an operations and maintenance building and up to four permanent meteorological towers.

The purpose of today's hearing is to allow the applicant and intervenors to present testimony and evidence as to whether the development proposal meets the criteria for approval as specified in 12 M.R.S.A. Section 685-B(4)
and (4-B) of the Commission statutes and the Commission's Land Use Districts and Standards.

Representatives of the applicant will provide a summary of the proposal and their pre-filed testimony. Following the applicant the intervenors will present opening statements and their witnesses will present summaries of their pre-filed testimony. At the conclusion of the testimony from each witness, cross-examination may be conducted first by the commissioners, then by the staff, next by the applicant and then by the intervenors. However, commission members, staff and counsel for the commission may ask a question at any time.

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

In addition to being transcribed, we will be recording the proceedings today, so I request that you speak clearly and not too quickly. All questions and testimony must be relevant to the Commission's criteria for approval for this proposal. Irrelevant or unduly repetitious materials or questions will be excluded.

The record of this hearing will remain open until

Monday, July 18 th to receive written statements from the interested public and for an additional seven days until Monday, July 25 th for the purpose of receiving rebuttal comments. No additional evidence or testimony will be allowed into the record after the closing of the record.

However, in accordance with the second procedural order, party submissions are limited and may only be made with the permission of the chair. Persons attending the hearing who wish to receive a copy of the final action taken by the Commission as a result of this hearing may leave their names and address with the staff.

And at this time I'd like to swear in any witnesses who plan to testify today. So if you could please rise and hold your right hand up. Do you solemnly swear to tell the whole truth and nothing but the truth?

PARTICIPANTS: I do.
MS. HILTON: All right. Thank you. Next I'd like to ask Fred Todd of the Commission staff to make a few statements. Fred.

MR. TODDY: Yes, I'm Fred Todd, I'm the project staff lead on this application on behalf of the Commission. I want to begin by presenting a brief administrative history of DP 4889. On March 14, 2011 the application submitted by Champlain Wind was accepted for processing. On April 6, 2011 the Commission authorized a public hearing on this
proposal. Intervenor status in this proceeding was granted to the Conservation Law Foundation, CLF, The Partnership for the Preservation of the Downeast lakes watershed known as PPDLW -- or, perhaps, the best shorthand form is simply The Partnership -- David Corrigan, Gordon Mott and the Natural Resources Council of Maine, NRCM. NRCM has since withdrawn as an intervenor.

The proposed wind energy development would be located within the expedited permitting area for wind energy development. The proposal will be more described by the applicant once $I$ finish. State agency review comments were submitted by the state soil scientists, Department of Health and Human Services, the state's Natural Areas Program, Department of Island Fisheries and Wildlife, DEP, the Historic Preservation Commission and the PUC.

Comments were also submitted by LURC's third-party peer reviewers on the scenic and sound assessments. The applicant's responses to those comments have been included in the record along with the pre-filed testimony that will be summarized at today's session.

At last night's public session I entered into the record the exhibits that we currently have that make up the record. And that concludes my statement.

MS. HILTON: Fred, thank you. Next we have an opening statement and summary of testimony by Champlain Wind and

MS. BROWNE: Good morning, members of the commission. Juliet Browne on behalf of the applicant. In the interest of time, we're not going to have all of our witnesses summarize their testimony. And I apologize if you don't get some of the traditional background on the project. I'm hopeful that with last night's overview and then pre-filed testimony you have that. All the members of our team who have pre-filed testimony will be available to answer questions.

So that being said, we're going to move right into it. We have Neil Kiely, the project manager, Roger Milliken, David Raphael and Jeff Selser who are going to provide overviews of their testimony.

MR. KIELY: Are we ready to begin?
MS. HILTON: Yes.
MR. KIELY: Thank you. Neil Kiely on behalf of Champlain Wind and First Wind. First of all, I'd like to thank the Commission for your time yesterday and today and throughout the application process. Also, I'll assume that the Commission is up to speed on First Wind's track record here in Maine in developing, constructing and operating wind farms. In the interest of time, I'm not going to touch on that today.

Instead I would like to focus my comments today on the
appropriateness of the Bowers site, our community outreach efforts and the -- the substantial tangible benefits that will flow from this project.

Now, when the Legislature passed the Wind Energy Act, they affirmed a strong policy in favor of developing and promoting wind energy here in the state. Recently in the last Legislative session they had the opportunity to revisit the Wind Energy Act. They heard from a number of opponents that they wanted some amendments to this Act, the Utilities Commission held a certain number of hearings, they heard all of the claims, allegations and concerns that you heard last night and certainly many more.

Nonetheless, they were able to evaluate those claims and allegations against the facts within their expertise and ultimately came to the conclusion that wind energy still serves the interests of Maine in terms of energy, environment and economic development. So that policy of promoting wind energy still stands today.

The challenge, as this Commission is well aware from its review of other projects, is actually siting these projects on the ground. You understand that in order to site a project you have to take into consideration numerous factors and inevitably you have to weigh a variety of impacts. What's unique about this project is the extent to which we have found a commercially viable site that avoids
the major environmental impacts that are the key constraints for these projects.

And I think it's worth taking a few minutes to walk through the siting constraints when you're attempting to site a project such as Bowers to see why this is a good site. The first major constraint, obviously, the availability of commercially viable wind resource. Obviously, the higher you go in elevation, the stronger the wind that's available. The challenge is that you quickly run into fragile ecosystems which are of concern. Bowers is unique in that we have a lower elevation site, 750 to 1,100 feet, that still has a strong commercially viable wind resource. Our projected average wind speed is 7.5 meters per second, which is rated between good and excellent on the Department of Energy's wind classification scale. I'd point out that the project also takes advantage of a technology change; we're going from the GE 1.5 megawatt machines, which have -- on the Stetson we have 83 megawatts of installed capacity with 55 machines. Here we'll have 69.1 megawatts of installed capacity with only 27 machines. So more energy with reduced environmental footprint. Similarly, the next constraint is access to transmission. By strategically clustering the Bowers project near the existing Stetson project, we take
advantage of the existing 38 mile line between Stetson and Chester. We need to only construct a 5-mile line -- a 34.5 KV line to connect. Again, economically efficient and we reduce our environmental footprint. I'd also note that that will close out capacity on Line 56.

The third constraint, expedited wind zone. The original bulk of the project is within the original wind -expedited wind zone area. The Commission saw fit to expand the expedited wind zone to include the portions of Kossuth that are also within the project.

That brings us to the host of environmental concerns and constraints which make siting wind particularly difficult in Maine. And these constraints are identified not only in the CLUP and the Commission's regulations, but also in the siting guidelines of organizations such as AMC and Maine Audubon. And I'd like to walk through some of those considerations.

They include visibility from the Appalachian Trail, fragile ecosystems above 2,700 feet, large blocks of undeveloped habitat, significant wildlife habitat, species of rare plants and concerns, eagles, bird and bat migratory paths. This project does not impact any of those resources in a material way, nor does it impact any significant vernal pools, nor are there any sound issues.

The only impact we have here is a visual impact. And
this is a component of any wind energy development and this is one that was anticipated, foreseen by the Legislature. They put certain qualifications about the evaluation of this impact; they drew an 8 -mile radius around the project; they limited the evaluation to resources of state or scenic -- I'm sorry, of state or national significance; and they set a pretty high threshold in terms of requiring a substantial adverse impact on these scenic resources. You'll here from David Raphael from LandWorks today that the Bowers project does not meet that threshold. You'll also here from the opponents about the extensive conservation efforts in the Grand Lake Stream area. I think it's important to note that this project is not sited on conserved lands, instead it's sited in an area outside of those lands that's appropriately zoned for wind energy development.

They imply that wind energy is incompatible with those conservation efforts in the area. We disagree. You'll note that none of the groups that are involved in putting those conservation parcels together are here to oppose this project. In fact, New England Forestry Foundation, which administers the conservation easement on the conserved lands closest to the project, expressly did not object to this project. Similarly, the Passamaquoddies who own and manage thousands of acres of land to the south of this
project, including 34 miles of shorefront, also did not object to the project.

Lastly you're here from Jeff Selser talking about representing landowners who are actively involved in conservation efforts about their concerns that by placing lands into conservation they were going to negatively impact the development rights for appropriately zoned development in projects or areas not in conserved lands. We also heard last night from the guides and other opponents about the concerns of the negative -- potential negative impacts of seeing turbines in the distance on their clientele.

I think it's important for $u$ s to note that if we look at the pie chart of potential recreational users of these resources, guided clients are only a fraction of the users on these lakes. You have, obviously -- if you look at that pie chart, you have open water fishing, you have an equal or greater number of ice fishermen, you have ATV users on the shore, hunters, boaters and snowmobilers. Again, guided clients are a fraction of -- of those users.

In addition, I don't think -- I think -- although, we understand their fears about how their clients will react, we do not believe that their clients are going to react negatively to seeing turbines in the distance. You heard from Charlotte Brooks last night who owns Maine Wilderness

Camps on Pleasant Lake where we visited yesterday, the closest sporting camp to the site. All of her clients are primarily from out of state -- or a few from southern Maine. They come to fish -- they primarily come to fish, they also come to ATV and snowmobile. She expressed last night she does not believe it will have a negative impact on their clients. In fact, she believes it will be an attraction for some of their clients. They went so far as to ask us for a copy of the visual sims so they can hang them in the lodge.

You'll also have testimony submitted by Cathy Whitney who managed the campgrounds we visited yesterday for four or five years for Maine Wilderness Camps. She describes the users there as local weekend warriors, folks that come on the weekends, they have their RVs there, they come to fish, to socialize, to boat, to ice fish and to snowmobile and to ATV. She is similarly confident that they will not be negatively impacted by seeing turbines in the distance. You will hear about surveys, ours and others, in particular, the Baskahegan survey, which reflects the growing body of evidence, as we get more experience recreating around wind turbines in Maine, that folks are not negatively impacted by seeing turbines in the distance. We hope that you'll keep all of this in mind as you hear from the opponents and their concerns about one small
fraction of users and their fears of how they may react to seeing turbines in the distance.

Again, in comparison to the fears of the guides about how their clientele will react and the negative economic impacts that might flow from this project, I'd like to talk about the economic realities that are already on the ground in Carroll Plantation and Kossuth and the definite positive impacts that will result from this project.

We held a number of community meetings in Carroll Plantation, they were well attended, and we received early support. In between those meetings I spent numerous Monday evenings in the town offices -- they're only open two hours a week -- listening to the assessors tell me about the town, its history and its challenges and meeting with residents as they came in to answer their questions.

I also did presentations for the Vinegar Hill subdivision, which is an 80-lot rural subdivision immediately abutting the southern part of the project. Finally, I went door to door in Kossuth and knocked on doors of the residents closest to this project.

This is what I learned in Carroll over those many Monday evenings. As they're quick to tell you, the depression came to Carroll in the 1930 s and never left. The farms that were the lifeblood of the community are long gone, there's no commercial activity in the town to kind of
share the tax burden, most of the folks, as you heard last night, are retirees from the logging industry or schools living on fixed incomes or trying to scratch out a living in an area with very few jobs. Not surprisingly, the taxes are a tremendous burden.

When I arrived in Carroll in 2009, the mill rate was \$23 per thousand compared to \$3 in Lakeville. When they assessed 4 miles of our Stetson transmission line, it dropped the mill rate from 23 to 11, it has since gone back up to 14.

Now, I know taxes are a big deal in Carroll Plantation because when you walk in the town office you'll see a giant photocopy of our first tax check stapled up on the wall. And as you heard last night, if you're living on a fixed income and you're watching your taxes creep up and creep up and creep up, it creates tremendous anxiety, especially when you're living on land that's been passed down for generation to generation, which is the primary case in Carroll, and the option of selling is not attractive at all, but the fear of being priced off your land is real.

Not surprisingly, a lot of people in Carroll Plantation are unable to even pay their taxes, which further compounds the town's financial burden. In addition, the critical infrastructure in Carroll, like many small towns, is miles and miles of dirt roads, which they can't afford to patch
never mind make the basic maintenance repairs that are required to keep these from being a perpetual financial drain.

That said, the Carroll residents pride themselves on persevering and take caring of their own; most of them have been there for generations, they've all grown up together and there's a strong sense of community. When their town photocopier broke and there was no money to replace it in the budget, the assessors ran a bottle drive to raise the funds. When someone gets overwhelmed by medical bills, they hold bean suppers and they take care of their own.

They see this project as a substantial opportunity to reduce the financial burden on their town and to relieve the anxiety of their residents and it will be a substantial impact. The average budget in Carroll Plantation is 250 to $\$ 275,000$ a year. Our projected first year tax payment will be somewhere around $\$ 239,000$. In addition, we've entered into a community benefit agreement that will pay the town $\$ 92,000$ a year.

Now, the town has not formally decided how to spend that money, but there's a groundswell of support to create an energy fund to help residents offset their rising energy costs. We have created just such a fund in Kossuth. We're going to fund it with $\$ 15,000$, two-thirds -- on annual basis, two-thirds of that money will go out to directly
help the residents there offset their energy costs. The remaining one-third will go into a fund which will provide grants to the residents that they can use to make energy related improvements to their homes.

In addition to those substantial financial benefits, we're also going to establish the Bowers Mountain Conservation Fund, which will be modeled on the Stetson fund which is administered by the Forest Society of Maine. The purpose of this fund will be to fund -- identify and fund high-priority conservation opportunities in the towns of Carroll, Kossuth and Lakeville. Again, it will be administered by the Forest Society of Maine, but it will have a unique structure where representatives will be designated by each one of those towns to help advise and determine what the high priority projects are and how the money should be spent.

We're going to -- we're going to initially fund that project with $\$ 120,000$ and then we're going to provide $\$ 20,000$ a year thereafter, for a total of $\$ 500,000$ for in conservation benefits over the lifetime of the project.

I would just point out that the usual norm for developers is to identify a high profile project with a state or national organization and to tie it up in a bow for the application. This structure reflects the fact that we listened to the local communities and local
environmentalists who advocated for a structure that would give the local communities control over identifying the resources and the project they wanted to see in their community and would get them actively involved in identifying conserving resources. We listened and then we took their advice.

I'd like to point out that Carroll and Kossuth are unique for communities in this situation because they are intimately familiar with what a wind energy farm will look like in their community, that's because they've all seen the Stetson wind turbines on a regular basis and everyone I've met has been up there on at least one or two occasions. Most of the folks report to me that they find them either attractive or that they've faded into the landscape.

They support the project not only for financial reasons, but, like many Mainers who support wind energy, 80 percent time and time again as shown in surveys, for a variety of reasons. One of the primary reasons is their support for renewable energy. And I think that stems from the conservation ethic and the tradition of hunting and fishing in that area. Others see it as an extension of the harvesting of timber and other natural resources which has gone on for generations in these areas. Still others recognize it as a respect for the primary value of
landowner rights and control, and still others recognize the benefits of the large landowners that have afforded the community with open access for public recreation on their lands.

I would just say simply in closing that the Bowers project is really well sited, it navigates the substantial commercial and environmental constraints that prevent wind development in a number of areas. I would also note there's one visual impact. That visual impact, obviously, is visual, but the growing body of evidence suggests that recreational users here in Maine and in other places no longer see it as a negative impact. In fact, they see shorefront development as a greater negative impact.

And out of -- while we respectfully understand the guides' concerns about their clientele, I think we have to contrast and you have to contrast the fear of that negative impact versus the economic realities on the ground here in Carroll and the definite benefits that will result.

Now, the Carroll residents are not wealthy tourists who can come in and hire a guide, they're not second homeowners who have the luxury of making a living somewhere else and coming up to Maine on the weekend, they're simply average Mainers who are struggling to get by and make a living. Clarence Thompson put it well last night, he said, a lot of these folks are choosing between whether to buy drugs or
buy food on a monthly basis. They're in a very difficult position.

I understand that you have to weigh a lot of factors on this project. My hope is that you'll keep the interest of Carroll and Kossuth at the forefront. Thank you very much.

MR. MILLIKEN: Good morning, commissioners, Chairman Hilton. My name is Roger Milliken, I'm the president of the Baskahegan Company which owns and manages 100,000 acres in -- in the neighborhood of the proposed farm. In fact, some of our land is currently leased to First Wind as part of the proposed development.

I want to begin by saying how much I appreciate what it is to be sitting on the side of the table on which you sit. When I was on the Lands for Maine's Future board I often found myself on that side of the table. I appreciate the attention, the dedication and the patience it takes to sit there through testimony like mine and others.

There's been a lot of conversation recently in the state about the value of LURC, should LURC be abolished. It's just this kind of proposal in front of us that to me speaks to the value of having informed and concerned citizens brought to bring their judgment to a task of balancing the values of a key area of Maine like this part of Washington and Penobscot County or, for that matter, the whole unorganized territories. So I appreciate your
service and thank you for your attention.
As is spelled out in my written testimony, which you had in advance of this hearing, I've been actively involved as a forest landowner with forestry organizations in Maine dating back to the ' 80 s and also in conservation organizations both in Maine, nationally and globally. And that's the background and perspective I bring to this question.

I first started thinking about the impact of wind in this area, I'm guessing it was, four or five years ago when the Stetson project was first proposed. Baskahegan Company owns 100 percent of the shorefront on Baskahegan Lake, a 7,000 acre lake in northern Washington County. I think some of you have been down to the landing at Baskahegan Lake. When I was down there a few weeks ago, I could count 38 turbines across the lake.

When I first met the representatives from First Wind who came to talk to me as a neighbor and abutter of the proposed project, $I$ too was very concerned about what the impacts might be, not only on land values, but primarily on my -- on my own experience as a -- somebody who has enjoyed spending time alone, spending time in solitude on the lake and on the shores of the lake. The prospect of, you know, 400-foot metal structures being built on top of the low hills, particularly the prospect of blinking lights, was of
great concern to me.
And -- and I found myself, as I thought about it, experiencing a conflict between my head and my heart. My head was saying, we need renewable energy. As a forest landowner, I'm very concerned about the effects of climate change, $I$ believe that the emissions of carbon are changing our climate. For Maine to have a policy to promote renewable energy to me seems very prudent. Whether I look at it from an environmental point of view or from a national defense point of view or from a use of resources point of view, $I$ am a supporter of renewable energy.

The proposed Stetson project brought my intellectual support of renewable energy into direct conflict with my emotional connection of the landscape. When you paddle out on Baskahegan Lake it looks -- the lake does not look that big from the landing, but as soon as you turn your canoe and head south on the other side of Abraquidassat Point, thousands of acres of open water open up, you're surrounded by solitude, the loons are there with you. And with the exception of the sound of a chain saw in the distant woods or the sound of Jake brakes on Route 6 or Route 1, you feel like you're in the middle of nowhere in a good way. And that experience seemed to me to be up for grabs with the proposed construction of the wind site.

I can tell you that the reality of those towers being
built is not what I feared it would be. I ended up supporting the Stetson development, I guess you could say my -- my head won out over my heart, my sense of what was important for the forests of Maine, for the people of Maine and for the state of Maine, I concluded, was more important than my own personal concerns about what I feared I would lose. And my experience since then has proven to me that my fears were overstated.

Yes, the night sky looks different now with red lights blinking on those towers; yes, if I choose to focus I can count the 38 turbines from the landing or from the canoe. But in terms of my impact -- the impact that it's had on my experience of being out on that vast lake, it's barely changed it at all.

So I know this is just one data point, this is just one person's story, but I wanted to share that story because as I read the testimony and I heard people speak at the earlier hearing, I could sympathize with the fears and concerns that I heard being expressed, I was there myself four or five years ago.

I want to highlight a few areas of the written testimony -- my written testimony that $I$ think is pertinent to the decision you face. First of all, I hear a lot of talk about the mountains of Maine being destroyed by wind projects. And having visited West Virginia last summer, I
have to take exception to the exaggeration in that statement. In central Appalachia I have seen mountains literally being destroyed to provide energy. West Virginia is a rural state like Maine, its hills and hallows give rise to an amazingly vibrant forest. I walked through it with staff of the Nature Conservancy. There's springs, there's seeps, there's an amazing diversity of tree species. It's really tree heaven compared -- and I speak as a forester when I say that.

And I was appalled to witness having walked through hills and hallows like that to visit with the mining companies the sites where mountaintop removal is being practiced. Mountaintop removal is really a euphemism for what's happening there. It's really a biblical rearrangement of the landscapes when the prophet talked about the -- the high places being made low and the -- and the valleys exalted. That's what's happening. Those mountains are literally being dynamited, flattened and these verdant hallows with their amazingly diverse forests are just being filled with rubble, bulldozed flat and planted with grass. That is the destruction of mountains.

What's proposed here is what ultimately in geologic time, even in a human lifetime, is going to be a temporary change. No mountain is being flattened, no forest is being destroyed with the construction of wind turbines.

As you know, there's no perfect source of energy, every energy source has problems. For Maine to step up as it is and embrace alternative energy in the form of wind I think is not only responsible, it's very important.

I want to speak a little about my -- from my -- wearing my hat and from my position as a 30-year manager of these family lands in Washington County. I don't need to tell you that the -- the future of the forest products industry looks a little dicey at this point. The recent closing and failure to sell the mills in Millinocket and East Millinocket are only the latest example of this.

Our family has owned these lands for three generations, we're in the process now of involving the fourth generation in their management. The stability of the landownership -these are lands my grandfather bought in 1920 -- provide great benefits to the local businesses, the logging contractors, the truckers who work on the landscape. Of course, all these lands are open for recreation at no charge, people fish in our brooks, they use our roads for snowmobiling, they come and hunt on our land, they pick fir tips for the wreath industry. There's a real symbiosis between us -- our operation as a forest landowner and the local communities.

The reason this can work in such a win-win fashion is that we are able to make money through the other
operations, in our case, primarily in cutting trees. The timber economy is quite volatile these days. Things were looking good, then they were looking better when the housing markets were exploding. The bubble burst, the housing markets are in the tank, revenues are significantly decreased for our business. Two-thirds of our value comes from selling lumber into the spruce dimension market that ends up in -- in housing.

And the addition of a steady stream of income from another resource, in this case, leases to the wind power industry, will help stabilize the future for our company and our family and make it more likely that we will be able to pass this -- this asset, this beautiful forest on to the next generation and that those benefits -- that mutuality between Baskahegan Company and the communities of northern Washington County will continue.

There's been a lot of discussion about the impact on recreationists, I talked about my own experience. When I began -- as I was writing this testimony -- and I appreciated the opportunity to pull this testimony together because I had, as I told you, actively wrestled with the questions about was this a good idea, what were the impacts of the wind energy going to be. And writing the testimony gave me a chance to think through and pull my thoughts together and really make clear to myself, as well as
hopefully to you, where $I$ ended up on these questions.
And I thought about the difference between my experience in the -- the woods and mountains of Maine as a boy and what they are today. And I would say the most significant change I've seen in my lifetime has been the change to the air that we breath, to the amount of haze in the -- in the atmosphere. The views are significantly shortened. It feels outside that today might end up being one of those kind of hazy days where it gets hard to breath, it gets hard to see as far as we used to see. This is the effect of living at the end of the tailpipe where the effects of gasoline engines all up and down the eastern seaboard get funneled north to Maine, when the effects of combustion and coal-fired plants in the Ohio Valley come our direction.

Yes, there's a trade-off between having the view of the mountaintops in our area be -- be affected by the construction of wind turbines. Is it an appropriate balance and appropriate exchange for me to trade a view that I cherish so that I and my fellow Mainers can have clearer air to breath? I think no question that that's worth the trade-off. And I would say, yes, it's an important -- it's a worthwhile trade-off to make.

And I want to touch on the survey that was done by the Forest Society of Maine with this Stetson Mountain fund.

You heard Neil Kiely speak a few moments ago about a similar fund being set up related to Bowers Mountain. I advocated the creation of this fund because there was significant concern in our part of Washington County about the changes -- potential changes to the traditional recreational use in the area driven largely by the change of landownership pattern around us; and with the -- with shorter-term owners coming in, long-term traditional access to the woods and waters appear to be at risk.

The first job of that fund once it got started was to understand exactly what the recreational use of the region was in order that they could make wise decisions about how best to protect it. As you've heard, there were 47 interviews that took place on the shores of Baskahegan Lake and on Baskahegan Stream. And then they searched for long-term -- long-time users -- these are local folks who have used Baskahegan Lake and Baskahegan Stream recreationally -- to understand better what they valued about the lake, what their concerns were, if there were ways to improve or enhance the recreational experience, what would those -- what would they recommend.

The purpose of this survey was not to ask any questions about wind development, it was really to get to know these people, to get their perspective on a lake that they used for, you know, dozens of days every year. What was
striking to me when the report was produced and I heard a presentation on it a couple of months ago was that off those long-term users of the lake, when they were asked about changes, when they were asked about problems, when they were asked about concerns, not one person mentioned anything about the 38 wind turbines that are now visible from the lake, the turbines during the day or the flashing red lights at night.

And that seems to square with my experience, that, yes, the landscape has changed, but the important experience endures.

So let me respond to my handler's here. And thank you for your -- your attention and your deliberation, I think you know where I'm coming from.

MR. RAPHAEL: Good morning, commissioners. My name is David Raphael, I am a landscape architect and planner with the firm of LandWorks in Middlebury, Vermont. I reside in Panton, Vermont, and our firm was retained to conduct a visual impact assessment for the Bowers wind project. So I am representing the applicant.

We conducted this visual impact assessment in accordance with the provisions of the Wind Energy Act for assessing visual impact and scenic impact. We conducted extensive field visits inhouse, GIS analyses, visual simulations, which you've seen and saw yesterday, and also
extensive research, interviews on the ground and assisted with the development of a survey for the purposes of assessing scenic impact to users on this project. Taken together we conducted a -- both a quantitative and a qualitative analysis.

And I guess I would just add on a personal note that my work here in Maine is informed by the fact that I, too, like many of the folks you heard last night, grew up spending summers on lakes in Maine and to this day come every year with my best friend to paddle and fish on lakes in Maine.

What I'm going to provide now is a summary of our visual impact assessment. I'm going to start with the map that you see before you and just wanted to, if I can use this pointer, maybe summarize where we were yesterday for your guidance. We started out at Pleasant Lake after we visited the Bowers wind project site and then we came around and went into the Bottle Lake boat launch and then traveled into Junior Lake where we set a simulation site and then over to Scraggly Lake there where we visited -saw the other simulation site. So that was our trip yesterday. And then, obviously, came back from where we started. Several of us went back, actually, to the Junior Lake site of the Chateau du Lac.

We are charged by the Act to assess resources of
significance within 8 miles either listed as an outstanding or significant lake in the Maine lakes assessment. There are 13 great ponds that we were charged, therefore, to explore and assess and analyze. Within 3 miles of the project there were four such ponds, Pleasant Lake, Shaw Lake, Duck Lake and Junior Lake. Obviously, you saw two of those yesterday. Within 3 to 8 miles of the project there are additional lakes, Scraggly Lake, Keg Lake, Bottle Lake, Sysladobsis Lake, West Musquash, Lumbard, Norway, Upper Sysladobsis and Horseshoe Lake. Only eight lakes have visibility within the 13 mile -- I mean, within the 8-mile radius of the 13 lakes.

Our key considerations are based on, in part, beginning with the significance of the resource, the project visibility and the impact to the use/enjoyment for users of those lakes. We found, first of all, from the outset that in accordance with the Act that visibility alone, of course, is not necessarily the basis for, you know, concluding that a project would have even an adverse impact let alone a reasonable adverse impact. The reason I say that is because you've heard from others and Mr. Milliken a moment ago that some people necessarily have become familiar with and comfortable with wind power, many people think wind turbines are beautiful to look at and you heard some of that last night.

We came to a conclusion that while these resources are indeed valued and important resources, clearly to the folks who live on them and fish on them, they do not rise to the level of being so unique and so different from other resources in the region as to be iconic. While project visibility is, you know, high on some lakes and lower on others and nonexistent on still others, such as West Musquash which we passed yesterday, that visibility necessarily isn't translated into unreasonable impact as well. And, in fact, $I$ think -- hopefully you saw from seeing the simulations yesterday and the views from the lakes where we stopped -- that the wind turbines, if built, would not necessarily be dominating, looming or surrounding completely the view.

When we talk about significance of the resource, we have to look at how it relates to other scenic resources in the region and the area. In northern New England we have many mountains and hills, many lakes that are surrounded by low hills or higher hills and some which have very distinct qualities. And those are the ones that from our perspective rise to the level of being unique or iconic.

This lake also has a -- these lakes also have character, $I$ think, which is a function as much of their scenic views as of their water quality and their shoreline quality and the sense of quiet and experience on the lake
themselves, not necessarily entirely governed by the scenic view.

Another important characteristic that we analyze is the level of use. And while certainly we did hear that there are some folks who come here as tourists to visit and fish the lake, certainly the Grand Lakes area and this region as a whole doesn't have the same level of tourist infrastructure or awareness among the -- of tourists coming to Maine as places such as Moosehead, Sebago Lake, the Rangeley Lakes, Flagstaff Lakes and others.

When we look at project visibility we have to consider a number of different characteristics. We have to consider the distance to the project from the viewpoints that we -we consider. We have to consider the extent of that view, in other words, are you going to see it all the time from every location or some of the time from some of the locations. And that also speaks certainly to duration of view.

Another quality that we look at is visual absorption. And that's a function of a number of characteristics that we're still working with and that Mr. Palmer and I actually had some discussion about yesterday. Part of that, I think, is related to how much of the view is taken up by the wind turbines. And in most instances on these lakes, no matter where you see them from, that view nowhere near
approaches a sense of surrounding or a 360-degree view.
We were looking yesterday at views that had a cone of vision between about 20 degrees on Bottle Lake and 41 degrees on Scraggly Lake. Also, you have to look at, with the distance factored in, how prominent the -- the turbines are on the horizon line. And in terms of visual absorption, things like tree lines and low mountains can help actually accommodate the visual presence of these wind turbines and diminish that presence. I think Bottle Lake is a very good example if you look at the visual simulation. And I'll talk about that in a moment when we get to that.

In terms of impact to enjoyment, I think we have to look at -- and we know we have to look at what are the viewers' expectations when they come to these lakes and want to enjoy that experience and what does the research and other information that we rely on tell us? The information that we rely on includes things like the Baskahegan survey, which, again, I'll talk about in a moment, but also studies that explore what the impact of wind is on tourism. There are now of a number of studies in place that all seem to indicate that tourism and wind power is not incompatible and that, in fact, in some instances wind project can be an asset to tourism rather than a negative.

I think it's also important to know that while you did hear from a number of people last night who clearly are opposed to the project, folks who aren't opposed to the project don't tend to come out and express their -- their views. We -- as a matter of course, whenever we get involved in these types of projects, we take every opportunity to talk both informally or in some instances formally with people who use these lakes. And from those research surveys and informal explorations and discussions we have with folks, we found that generally speaking people understand what wind represents and do not see it as an impediment to their enjoyment.

With regard to the Baskahegan study, it really does serve as a defacto post-construction survey. And I won't repeat word-for-word what Mr. Milliken just shared with you, but, again, $I$ think it was very interesting to note that wind turbines and their presence on the lake did not enter into folks' thinking or considerations or concerns with regard to their experience on Baskahegan Lake.

And that was confirmed with an interview that Mr. Kiely conducted with the principal researcher for that study. Use has certainly not declined on Baskahegan Lake, again, from that survey and from what we know. And, if anything, there is a concern about overuse in certain respects. And, again, as Mr. Milliken said, camp development and shoreline
changes are perhaps a greater concern to folks other than seeing wind project in the distance.

So, again, in summary, with looking at a number of other user surveys that have been conducted by others on wind power projects in Maine and elsewhere, the conclusions were clear, that visibility of wind projects are viewed either as a positive or neutral factor by the majority of those who participated, that visibility of wind overall does not have necessarily a negative impact on recreational users' enjoyment of the resource, that visibility of wind turbines do not affect their likelihood to return, and that other forms, as I mentioned a moment ago, of activity and development are more of an impact to users on lakes generally speaking than wind.

And, again, that's something that I would share from my own personal experience seeing the rise of jet skis, for example. I live on Lake Champlain in Vermont, which is not only considered the state's scenic jewel alongside the green mountains, but it's also an, obviously, very popular destination tourism location. And the concerns there have to do with things like overuse and boat traffic and jet skis rather than other factors.

In several locations that are known and valued for their tourism and their landscape and their recreational opportunities, professionally-conducted surveys have found
that, again, wind power is not incompatible with those uses and that perception of those landscapes as being scenic or valued. Prince Edward Island north of here, a study, you know, again found that not only was the impact not overwhelming in terms of wind, but that, in fact, users and visitors found that wind was consistent with the notion of Prince Edward Island as being a green province and part of the brand, perhaps, as time goes on for that area.

Very compelling testimony was provided by a professor of tourism from Johnson State College, Todd Comen, who found that 95 percent of the northeast kingdom respondents that he surveyed said turbines would not deter them from visiting the area. He did a comprehensive review of other projects. He cited the Searsburg wind project one year post-construction study, which Mr. Palmer himself conducted, as an example of how attitudes change once projects are built and people can actually see what they perhaps beforehand had fears about. And once they saw those turbines in place, their support or their opposition greatly diminished. And he also found -- he conducted a number of interviews with hospitality providers, innkeepers, restaurants in the Searsburg area and two to one they all said it did not impact their business. Thank you. I'm just told $I$ have 14 minutes left, so I'm going to not run through, you know, this in great
detail. Again, all this information is in your pre-filed testimony that's been submitted by Champlain Wind. Suffice to say this table reflects the analysis process that we go through to address the significance of the individual lakes, the project visibility of these outstanding or significant lakes of the project, the impact to enjoyment and then a gauge of the overall scenic impact. And in summary we only found that four lakes rose to a level of having a medium versus a high scenic impact. And you saw three out of those four lakes, so I think you have a sense of that in regards to Pleasant Lake, Shaw Lake, Junior Lake and Scraggly Lake.

So I'm just going to run through these, the lakes with lower scenic impact include Bottle Lake, Sysladobsis Lake -- I have trouble with that one -- Duck Lake. And these are photographs of the shoreline character. And, again, I think it's important to note -- and this is something I always have to do with reviewing wind projects -- is to remind all of us, including you as commissioners, that while our focus in all of this is where you can see the project from, there are many views and many experiences that will still occur on this lake and that you will still be able to have on these lakes that will not have views of the turbines. And so we've provided views away from the project on Bottle Lake and Duck Lake.

And, again, you saw the visual simulation -- and I apologize, the translation from screen to projector it's hard to see the turbines in there, I realize. And forgive me for that. And that's why we won't spend a whole lot of time with this other than to say if you remember our trip on Bottle Lake, I just wanted to point out that this is where I think visual absorption is a quality that has to be considered. The turbines rise barely above the treeline here, you have some trees, the tall pines which we pointed out yesterday, which are just as high, if not higher, than what the turbines will be. And collectively the serration, if you will, and the irregularity of the treeline and the low nature of the turbines on the horizon all combine to assist in terms of visual absorption. Also note that there is very limited cone of vision for the view on Bottle Lake and so the turbines do not dominate the shoreline nor the lake in terms of their presence in that 360 -degree view. And that's similar with other lakes.

Lakes with medium scenic impact, as I mentioned, we found there were four lakes, Pleasant, Junior, Shaw and Scraggly. These are shoreline characteristics for those lakes, some with development. You actually saw that picture yesterday at Pleasant Lake with the campground area and the picnic table. And, again, views away from the project from Pleasant Lake and Junior Lake also need to be
noted.
The visual simulation from Junior Lake, which we looked at yesterday. Simulation from Pleasant Lake and the boat launch there. And, again, you heard last night from the owner of the Maine Wilderness Camp that she felt unequivocally that this project would not impact the use and enjoyment of this lake of her visitors and guests. And that's what the view would be just offshore of the camps. The camps do not face in the direction of the project.

Scraggly Lake, again we were out there and saw this shot from Scraggly Lake. And this is what the project will look like from Shaw Lake. And, again, I apologize it's a little hard on this screen to pick out the turbines, but trust me, they're there. And I guess this is a good opportunity to tell you that the other thing you have to remember about wind turbines is that they look different under different conditions. And the weather and the atmosphere changes constantly in Maine. When I got up yesterday morning on Junior Lake, you know, it was as hazy and socked in and then as the day went on it got clearer. Depending on the -- the location of the sun, the turbines will look white or they won't look white at all, they'll look darker gray in shadow.

And it's also interesting to note -- and this is something I talk about in a lot of projects -- that in
places like Maine when you're out fishing, some days it's foggy, some days it's cloudy, some days it's raining. In fact, in Grand Lake Stream I believe there are 120 days on average with precipitation. So -- and in this part of Maine maybe a third of the days have clear sky and clear weather. So two-thirds it's cloudy or raining and that, too, impacts visibility and alters the perception or the presence of wind turbines.

There are also a number of lakes with no visibility in the project area, Horseshoe Lake -- or visibility that is, I'm sorry, beyond 8 miles. However, West Musquash Lake, for example, has no visibility of the project at all. It is shielded from visibility by intervening topography.

Lighting, we've heard a little bit about lighting. Last night we heard a number of people talk about the fact that lighting was going to ruin the night sky. I'm sorry to disabuse them of that fact, but it does not affect night sky viewing. Wind turbines with lights do not create any impact to the night sky and seeing the stars. Indeed, they are an annoyance and there's no getting around that, but they do not create glare, they do not create light pollution in the sense that there's a glow around them that is extensive or frequent, and, again, they do not mask the clouds -- I mean, the stars in the sky, they will still be twinkling and shining long after this project is built,
should you approve it.
The other thing about lighting, as I'm sure you're aware, that there's really no choice. These turbines are high in the air and FAA requires lighting to -- for safety for aviation safety. And I guess I would also point out that, you know, recreational use particularly on the lakes themselves tends to lower at night and, therefore, really the impact is going to be mostly to, perhaps, camp owners who might see the lights from their -- their homes.

So, again, our overall conclusions led us to the unequivocal conclusion that this project would not result in an unreasonable adverse impact to the use and enjoyment of these lakes, to viewer expectations and to the scenic beauty of the lakes and the regions around them.

And let me just take a couple last minutes while $I$ have a minute left to, again, summarize that for you. This project will result in change, there's no question about that, that the scenic views will change and will be altered by the presence of the wind turbines. We do, as you know, have to ask ourselves, is that change so significant and so dramatic as to warrant an unreasonable finding? And I think we can come to the conclusion -- I know that we can come to the conclusion that that will not be the case.

We do sympathize -- I do sympathize with the local guides and their concerns. And I think change is a very
difficult thing for folks to get their arms around and there's a certain level of unknown of what this is going to do to the impact of their businesses and their clients. But I think we've got enough information on the record and in our testimony, in particular, that indicate otherwise. We have the author of the Quiet Waters Maine book on record as saying that he does not believe that wind turbines are incompatible with the wilderness experience.

I also think it's important to say at this point that it's very important to make a distinction between a wilderness feel and true wilderness. We heard many people last night say these are pristine lakes. The waters may very well be considered pristine, but pristine really means untouched by the hands of humans. That's the definition of pristine.

When I flew over this area, I was -- I was startled to see the number of roads and logging clearings and activity on the land. That wasn't a shock, but -- because I knew of the use and tradition of resource use in this area. But that was an indication that these lakes are not, from a scenic perspective looking at the mountains and looking at the shoreline, are not -- could not be considered pristine. Wilderness areas are often roadless, wilderness areas don't have motorboats in them. So I think that's an important factor to consider. But when we look at the visual impact,
in conclusion, you know, those turbines will not be so close, they will not be so extensive on the horizon, they will not be so tall or so dominant to alter the user's sense of place and to result in an unreasonable impact.

Finally, I would just like to kind of reiterate the fact that it is hard to accept change and, again, there will be change on these lakes from the visibility of the turbines. But it's important to also remember that the fishing won't change, there's still going to be good fishing; there still will be quiet waters on the lakes, you will not hear the turbines; there will still be the same shoreline conditions on these lakes, the turbines won't change that; people will still look at the views; the waters will still be pristine in the minds of the folks who are on them; the sun will shine every morning as it did when I woke up at Junior Lake yesterday. And, in fact, I recognize what that wilderness feel meant, it meant looking at the water, seeing the sun sparkling off them and -- and experiencing the close-in feel that these lakes will still afford.

Finally, I really do like and would like to quote the gentleman from Carroll last night who said two very important things. He said, and I quote: You do not stop seeing the scenery; and he said also: People need to see the future. I thought it was very compelling that of all
the people who testified last night, you heard two young people, two young people, who said turbines were not going to bother them, were not going to change the way they feel about these lakes and their experience of them. And I think I will leave you with that. Thank you.

MR. HAMMOND: I have a question.
MR. RAPHAEL: Please.
MR. HAMMON: All right. There is some technology which is being used I think in Canada and some in Europe to mitigate the lights at night. Can you speak to that and where it is in the process here and if it's a viable consideration for this project?

MR. RAPHAEL: I will do my best to do that. It is called -- the Obstacle Collision Avoidance System is the one product that I'm aware of that is being considered. It is not yet in use, I don't believe, in the United States. The FAA has yet to approve it for use in wind projects. And I think that every wind project will have certain conditions which would provide for or preclude its use depending on radar which controls that system. I know it's being considered for a project that I've been involved in in Vermont, but they are not yet sure whether it can actually be employed for that project because of the circumstances on the ground.

So I think it's a potential mitigation possibility for
wind projects, but it is yet to be approved or tested here in the United States.

MR. HAMMOND: Is the project in Vermont -- is approval contingent or in any way tied to the use of this technology if it becomes available?

MR. RAPHAEL: Not at all. The -- the project, in fact, just got approved a couple of weeks ago. And the Public Service Board, which is the body which reviews and approves utility-scale projects of this sort, did not make it a condition of that approval. What they did say is that they wanted the developer to explore the use of that project, but did not make it a requirement for that approval.

MR. HAMMOND: Thank you very much.
MR. RAPHAEL: You're welcome.
MR. LAVERTY: Mr. Raphael, just to follow up on that, I know -- perhaps a question directed to the applicant, but should that technology become available, be approved by the FAA, it seems to me that assuming that it could meet the technological requirements for application to this project and it was reasonably cost effective, that this would go a long way to addressing some of the concerns. It seems to me it would be in everybody's interest to the extent possible to reduce the lighting impact if it's technologically and financially feasible.

Would the applicant be willing to consider when that
technology -- when and if that technology becomes available to perhaps consider retrofitting this project with that technology?

MR. KIELY: I think, you know, we would be willing to consider any issue. I'm not prepared to answer that in terms of retrofitting. I think we are continually monitoring all advancements in technology and especially ones that would mitigate any kind of impact. And for the reasons that Mr . Raphael just stated, this is an up and coming potential technology, it has yet to be formally approved by the FAA, it also has yet to be approved by lenders and insurance companies that finance our projects. There's additional hurdles that have to come through there.

There's also, as I understand it, substantial financial costs that attend this. So we've only been evaluating a look at this technology coming down the horizon. I can't answer this today, we'll get back to you about whether we'd be willing to consider to retrofit the project. Typically our projects are capitalized and financed up front and we typically don't go back and, you know, contemplate making that kind of retrofit. So I'm not in a position to answer you right now.

MR. LAVERTY: I understand your hesitance to make a commitment to perhaps what might end up being a condition to retrofit, I understand that. But it would seem to me
that as a gesture at least of goodwill, it might be really important to say that, yes, we certainly would consider any alternative that would diminish the visual impact of the lighting that was technologically available and financially feasible. I mean, it just seems to me that -- I mean, a great number of people have raised substantial concerns about this lighting, it's a major issue. And I would certainly hope -- and knowing your record, I would assume that First Wind would openly embrace this opportunity if it was feasible.

MR. KIELY: And I -- again, I'm not prepared to kind of answer on what would be a policy answer for the company on embracing this technology on a retrofit. So I will certainly -- we will take that under advisement and come back to the Commission, but I certainly understand where you're coming from in that perspective. And the goal -the mutual goal that we all have is reducing impacts to these projects. I agree with you.

MR. LAVERTY: Thank you. Mr. Raphael, back to the -the visual impact assessment, I'm trying to get some numbers straight. I'm a little -- I'm a little confused. There seems to be some contradiction about how many areas of state and national significance we're assessing and how many we're not. My understanding is that there's a general agreement within the 8 -mile distance, which is what
circumference -- within a distance of 8 miles from the project, that is the statutorily required area of assessment, that there are 14 resources of state or scenic significance, that people pretty much agree on that.

MR. RAPHAEL: Yes.
MR. LAVERTY: Well, then there are six that apparently are removed from the assessment because there is no visual impact -- there's a general agreement there's no visual impact, and there remains eight that are actually assessed; is that correct?

MR. RAPHAEL: They're not necessarily removed because there's no visual impact, they're removed because they're not outstanding or -- they're not outstanding or significant lakes.

MR. LAVERTY: So then there aren't 14 resources of state or national significance? MR. RAPHAEL: Yes, there are. MR. LAVERTY: There are? MR. RAPHAEL: Yes. MR. LAVERTY: And these lakes are, in fact, of state and national significance?

MR. RAPHAEL: Yes.
MR. LAVERTY: Then why aren't they being assessed? MR. RAPHAEL: Well, they were assessed. We looked at these lakes and --

MR. LAVERTY: And the conclusion was?
MR. RAPHAEL: Excuse me?

MR. LAVERTY: And the conclusion was?
MR. RAPHAEL: The conclusion was those lakes either were outside or -- you know, only a tip of them or a portion of them were within the 8 -mile radius, number one, or they had no visibility whatsoever in the case of West Musquash or the congregational church, there was no visibility whatsoever.

MR. LAVERTY: So the areas that we're focussing on are eight --

MR. RAPHAEL: Yes.
MR. LAVERTY: -- and they happen to be lakes; is that correct?

MR. RAPHAEL: Yes. And that's the charge of the Act to do so.

MR. LAVERTY: All right. Now, my first question is, last night Representative Cathy Johnson from Natural Resources Council of Maine suggested strongly that there was another, that there was at least a ninth. And that was -- and, again, forgive me, $I$ don't recall the testimony off the top of my head -- but a bay or a portion of Grand Lake Stream -- of Grand Lake that was a bay or a cove, I'm not sure exactly what it was, and that that needed to be considered in the assessment. Do you agree with that,
disagree with that?
MR. RAPHAEL: Well, I don't necessarily. And we were -- we were checking on that. We don't believe that portion of the lake is -- it's called Pug Lake and there are actually three lakes called Pug Lake in the project area. And none of them, we believe, are either considered outstanding or significant. They are on the list of the great ponds, but they are not considered -- Pug Lake is on that list, but it's not considered outstanding or significant.

MR. LAVERTY: And is it your understanding that our consultant, Jim Palmer, agrees with you?

MR. RAPHAEL: Because this came up last night, I don't know that.

MR. LAVERTY: Okay. Well, I mean, I'm just trying to get it clear in my head. Either it is or it isn't. And I -- I mean, it seems to me that before we leave here today or at some point we need to clarify that.

Second is that she testified that -- and, again, I want to be able to talk to Jim Palmer about this -- as I recall, she said that she agreed with the assessment of Jim Palmer that you had substantially underrated -- underestimated the visual impact on two particular resources, one being Duck Lake and one being Keg Lake. Do you recall that testimony last night?

MR. RAPHAEL: I do.
MR. LAVERTY: Would you respond to that please? Do you have any response to that?

MR. RAPHAEL: Well, I think we -- again, I'd have to -you know, if we look at the analysis and the factors that we consider in that analysis, which includes, you know, the level of use of the lake, the development on those lakes, the extent of visibility, we came to a different conclusion.

I think if you look at Mr. Palmer's review and our review of that analysis, there's -- we don't differ greatly in our assessment qualities, we may differ slightly in the conclusion we reached. And the reason for that is that while we look at these lakes from sort of a numerical or sort of a quantitative-type of analysis, how many turbines do you see from the lake, how extensive is that visibility, we also factor in a number of other kinds of qualitative considerations including how prominent is the lake in the user's mind, what's the nature of shoreline development, things of that nature. And I think when we took that into account, we came to the conclusion we did.

MR. LAVERTY: Okay. Thank you. And, Mr. Palmer, I'm assuming that you may have -- maybe want to respond to this in questioning, but, obviously, I'd be interested -- I'd be interested in your response. You were -- your pre-filed
testimony was characterized as stating that you believed that the visual assessment for Duck Lake and Keg Lake were understated. Is that correct?

MR. PALMER: I would say that, yes, I think that they are a little -- a little more severe. I don't think that they reach the threshold of unreasonable, but, I mean, I think I did evaluate them as more severe, yes.

MR. LAVERTY: Could you just quickly address the issue of the potential ninth area of statewide and national significance?

MR. PALMER: As far as $I$ can tell, there isn't a separate -- what's called Pug Lake is part of the larger lake as represented last night. I missed that, so I have not had an opportunity to go back and look at that in detail.

Part of the problem is there's a whole bunch of Pug lakes in this area, there's at least three. The two that I was focussing on are not -- they're further north -- within the area, but further north and they're not scenically significant lakes. So, I mean, it could be that it slipped through a crack, I have not been able to really look in detail either.

MR. LAVERTY: Again, I'm making no assertions one way -- I'm just trying to get the facts, you know.

MR. PALMER: I would agree.

MR. LAVERTY: If in fact -- if it was determined that a portion of Grand Lake did fall within the 8 miles and was considered a resource of state and national significance, in your view should it have been or should it be evaluated in terms of the VIA.

MR. PALMER: Yes, of course, it should and we should get a simulation from it. But $I$ don't expect it to be particularly different than the other simulations that we have that are, say, 7 miles from the project. I don't know how many turbines would be visible and, you know, what portions, but it's going to be of the same kind of caliber as other projects that we've seen, not -- not the kind of impact even from Pleasant Lake or Junior Lake.

MR. LAVERTY: Right. Well, I'm just trying to clear up the record. I mean, how many are we looking at, how many have been assessed? I mean, it may be that --

MR. PALMER: Yeah, it's a lot of lakes.
MR. LAVERTY: This goes into the -- into the pot for assessment, but then is immediately determined to be in the company of the six that were not evaluated because there are no visual impacts. I'm not -- I'm not making a judgment as to that, I just want to know, how many are we dealing with?

Do you agree that the ratings were -- for Duck Lake and Keg Lake were understated irrespective of the ultimate
impact? I just want to make sure we've got some agreement here about what's going on.

MR. PALMER: My judgment was that the impacts were a little more severe than LandWorks judged, that's correct. And if in fact this Pug Lake is considered part of West Grand, then perhaps it should have been evaluated and wasn't. And that might be a ninth lake that has some visibility, but I have not been able to go back --

MR. LAVERTY: And just so I'm clear in my mind, you go on to say that: Although the assessment of Duck Lake and Keg Lake may have been underrated, in your view they do not rise to the level -- the impacts do not rise to the level of being unreasonable impacts?

MR. PALMER: That's correct.
MR. LAVERTY: Okay. Thank you.
MR. RAPHAEL: Commissioner, if I may, just to clarify one other thing and to Mr. Palmer's comment, two out of the three so designated Pug Lakes have absolutely no visibility of the project, number one. And, number two, if Pug Lake in the end of West Grand Lake were to be considered, you know, part of the mix -- and we did look at it; I mean, our viewshed analysis takes that into account -- it's only about a mile and a half of that far little bay portion of it and, you know, the visibility tends to be relatively limited, all things being considered. As you go closer to
the shoreline, you see fewer and fewer turbines in that instance based on the viewshed analysis. And then closer into the shoreline, no visibility at all.

MS. HILTON: I'm going to jump in here. One thing that we're doing -- and I just want to note this -- is we're talking about -- we're really jumping into the discussion about visual and scenic aspects here. And I think, Jeff, you were going to talk about conservation; is that right? MR. SELSER: Yes.

MS. HILTON: Okay. What I'm thinking might flow best here is if we continue our questions on the part of the commissioners and staff with respect to the scenic resources and once we sort of get through that, we go back and then we jump into the conservation. I don't know that you had a lot of time left, but -- okay. Does that sound like that will work for you folks? MS. BRowne: I would suggest that Joy Prescott of Stantec come up for your questions on scenic lake designation and the --.

MS. HILTON: Okay. Is that okay with you, everybody? Just because we're into this discussion and I'm -MS. BROWNE: I think that makes good sense. MS. HILTON: Okay. So why don't we keep going on the scenic. If you have more questions -- you have a question you want to --

MR. HAMMOND: Well, just one more comment. Going back to my previous, we have a meeting in July?

MS. HILTON: Yeah, the first Wednesday of July.
MR. HAMMOND: The first Wednesday of July where this is going to be continued and, perhaps, you would be willing to come back with a statement of what your company would or would not consider --.
(A discussion was held off the record.)
MR. HAMMOND: I just asked if -- we have a meeting in July which reopens this issue and it would give you time to talk to whomever you need and see what kind of a statement or what kind of a commitment that you might or may not be willing to make regarding the -- mitigating the night lighting.

MS. BROWNE: I've also asked Matt Kearns from First Wind to come up, he's on that panel. He wasn't up here originally because he wasn't giving a summary. So he may be able to respond to that as well.

MR. KEARNS: Commissioners, good day. I do -- we would be pleased to review the technologies available to us. We've been talking about -- we've actually -- when we went to AWEA, the American Wind Energy Association, meeting, we met with a number of vendors that manufacture kind of narrow spectrum lighting. We're continuously evaluating the technology all toward the end of minimizing the
viewable spectrum in a manner that would be acceptable to the FAA. But, you know, you -- you clearly recognize the position that we're in sort of balancing between the need to fix the -- you know, decide what the technology is going to be as part of the application, that we then finance the project, build the project, and as Neil mentioned, you know, the notion of making changes later is very -- that's very difficult for us.

So we would commit to evaluating all available technology today and come back and present that to you, if that's acceptable.

MR. HAMMOND: Yeah, I guess my thoughts on that would be that you've already evaluated them and there isn't anything there that's going to help. It would be disappointing to me if this became a usable and economically feasible system in the next few months or the next year on -- this is a 20 -year project, that we couldn't revisit that and certainly will weigh on my decision.

MR. KEARNS: Understood. We will take a very hard look and come back to you with our information. I appreciate it. Thank you.

MS. HILTON: I have a few questions, but I don't want to take us off in a whole different direction if you have more --.

MR. TODD: Just to flesh out the -- the record on the
issue of the lake that Cathy Johnson mentioned last night, I wasn't here for her testimony, but I think I know the lake she's talking about. And I haven't had a chance to dig back into the files, but I was around for the lakes assessment. And one of the difficulties we had is when you have a large chain of lakes like this area or like the Pemadumcook chain of lakes around Millinocket is you have all these bays and at what point does one of those bays become a distinct lake in itself and should be evaluated separately? And what we used in our evaluation to make that determination was whether or not that bay was managed separately for fisheries purposes by Inland Fisheries \& Wildlife.

And the example that comes to mind right now is -- it's not in this area, it's Mooselookmeguntic up in Rangeley area and Caribou Lake. And if you look at a map you would think that's all one lake, but in fact they manage it separately for fisheries purposes. So we rated it separately for all of its characteristics including its scenic value.

So what I need to do is go back into the file and figure out whether this particular bay -- if I'm identifying the appropriate one, is that part of Junior Bay, is it part of West Grand Lake? I don't -- I can't say. But if it was -- if we find it was managed separately
for fisheries and wildlife, then we'd look at what was its scenic rating. And if it was of outstanding or significant scenic value, then it would indeed be part of the groups of lakes that we would evaluate in this project. But I don't have the information at hand to make that finding.

MS. PRESCOTT: And if I can just add to that that our -- I certainly don't have the context of Fred from having worked on the original piece, but --

MR. LAVERTY: Excuse me.
THE REPORTER: Could you state your name, please.
MS. PRESCOTT: Sorry. Joy Prescott, Stantec. Our understanding was similar to what Jim said, that we heard Cathy Johnson's statement last night, we tried to look at it and realized that there were multiple Pug Lakes and we wanted to make sure we had all the information necessary. So I think we're in the same place as Jim, that we want to understand it and certainly bring it forward if there is -if it is found that based on what Fred and Jim and -- going back to the documents -- and part of it is that there is a long list of documents. We have internally created our own map, but there's not a specific map. So it's sort of you look at the DeLorme, you look at maps, you compare that with the resources, check against the lake IDs and understand that.

So I think that Jim and LandWorks and Stantec need to
look at that and make sure we have the correct information and certainly bring it forward.

MR. LAVERTY: Well, Cathy presented an exhibit last night and her testimony was based on that exhibit. And that exhibit, at least to me from this distance, clearly identified the area in question. So I think -- which Pug Lake, I think, could be clearly cleared up by referencing that exhibit.

MS. PRESCOTT: Part of it is that in the Maine wildlands assessment that's a list that has a specific lake ID. So we need to just --

MR. LAVERTY: Oh, I see what you --. Not just where it is, but what is it officially designated as for classification --?

MS. PRESCOTT: Right.
MR. LAVERTY: Okay. I gotcha.
MS. PRESCOTT: And that's what we want to make sure we crosscheck rather than stating it now without all of us having looked and specifically crosschecked this lake ID goes to this Pug Lake in this location rather than this Pug Lake in this location. So I think we certainly will do that, but have not had a chance to compare her exhibits with our exhibits and make sure we have exactly the right information.

And as to David's point, certainly if it turns out that
it is, then $I$ think we're all in agreement that absolutely it should be included and evaluated as part of the VIA. So we'll certainly look at that as soon as possible and consult with Fred and Jim to get that information.

MR. HAMMOND: My notes, although not always accurate, reflect that she was referring to Junior Bay, so that should narrow it down some in scope. And if that doesn't, she can.

MR. LAVERTY: I wanted to pursue another slightly different line with regard to scenic impacts. Is it appropriate to do that?

MS. HILTON: Sure. Go ahead.
MR. LAVERTY: And this would be David Raphael again. And, again, Cathy Johnson raised the issue -- and I don't want to use -- well, I'm going to use it, probably inappropriately, but the cumulative impact of scenic -- of -- the impact of turbines on a particular canoe trail. And the suggestion was that if you take these impacts individually based on specific resources, you may come to one conclusion, but if you realize that there is an experience going on that continues through a series of scenic views, that that may have a different type of impact that may -- I think the implication was -- and I make no judgment -- may rise to the level of unreasonable. Do you have any comments on that?

MR. RAPHAEL: Well, I think -- I think the key point in that regard is that my understanding is that there may be two trips that are conducted that sort of do that long -formally conducted and maybe others do it informally -that conduct that sort of long route through the -- the chain of lakes, if you will. But it's important to remember that only a portion of the trip is through these lakes in the project area within the 8 miles and that the greater portion of the trip is outside of the project area that we are charged to analyze and impact -- analyze the impacts for.

You know, secondarily -- and, again, I don't want to dwell on this too much, but, you know, I think some of the trips are -- as she may have mentioned or others may have mentioned last night -- you know, are youths going on the canoe trips and being led on those trips. And, you know, the youth of our country are growing up with the notion that wind energy is part of the picture, it's not something we have a choice about.

This is something that's confirmed -- I'm also on the facility at the University of Vermont where I teach every year. And I query my students every year about what do they think about wind, what do they think about wind if they saw it in the green mountains or on a lake. And almost two to one they are very more accepting, they don't
see that as an impediment to their enjoyment.
So the key there is if you see the project for a portion of that trip, which is only, you know, a portion of the overall trip, would that deter or unreasonably affect the experience of those canoeists or paddlers? And we could come to the conclusion -- we came to the conclusion that it would not be unreasonable.

MR. LAVERTY: A very good answer, but it wasn't really what $I$ was asking.

MR. RAPHAEL: Okay. Then I -- maybe I miss --
MR. LAVERTY: I wasn't asking whether or not the impact was important or unimportant to children who may be taking canoe trips. My question was about a way of -- does this create a cumulative visual impact that might need assessment as compared to the visual impact that's undertaken with regard to sort of a snapshot of each individual resource? And her argument, it seemed to me -now, I -- she's certainly capable of representing herself -- was that it isn't merely a matter of the impact to individual resources of national or scenic significance, it's that small impacts to numerous of those may have some sort of cumulative impact. And I think the suggestion was it might be unreasonable.

So, I mean, I'm getting at the cumulative impact issue, not whether or not kids are going to grow up liking or not
liking wind turbines.
MR. RAPHAEL: I understand now what you were getting at. Thank you. You know, I think, again, you'd have to look at it from that experience of being on the lake. And I would -- I would state that, you know, your views of the project are going to be somewhat a function of the route you take, how close you are to the shore. Oftentimes when you're paddling -- these are big lakes. And as an experienced paddler, I know that when the wind kicks up, you don't -- if you're in a canoe, you don't want to be out in the middle of these lakes, you've got to be along the edges or off the water.

So people are going along the shoreline, they'll have glimpses of the project. Cumulatively the experience of that I do not believe will result in, you know, an increase in the impact. You're going to come in and out of view, you're going to be facing away from the view, you're going to be along the shoreline for great extents where you'll have no view. For example, when they go in -- if they start in Bottle Lake or they come in and out of Bottle Lake, as you saw yesterday, there's a whole stretch where you go through Bottle Lake Stream where there's no view whatsoever of the project.

So that's the kind of cumulative experience that I think folks paddling will have. And I don't think it will
be so extensive in terms of the view, the presence of turbines, where they are on the horizon line and how close they are that will result in an unreasonable impact to those users.

MR. LAVERTY: Thank you. Jim Palmer, do you agree with that?

MR. PALMER: I don't know that we know enough about how the cumulative impact is experienced to be able to say and particularly with wind turbines. It may be that people would relate to these as sort of landmarks to orient themselves in the landscape as they're sort of weaving around through these lakes. I just don't know. We'd have to study it.

MR. LAVERTY: And, again, I want -- I want to be sure I understand it. I mean, I understand that they're going to be going past many more camps than they are turbines. I understand that. So, I mean, there's some question about the nature of that wilderness experience even without the turbines. But $I$ think it is an interesting question about the cumulative impact of individual scenic impacts if one is moving through the landscape, not just standing in one particular place.

MR. PALMER: Yeah. No, I would agree -- I mean, the only time that $I$ can think of this -- a different, but sort of simulative -- similar cumulative impact was there was a
proposal before $D E P$ to put in a power line parallel to the Stud Mill Road, but several miles off. And at that time I was real concerned about the cumulative impact because you'd hit bridges and stuff and then you'd hit -- you know, a couple miles after you get back into your wilderness feeling, you come across this incredible huge power line. So I was recommending to put them together. But the -- the difference there is that you're kind of going under and you get surrounded by these things. The turbines aren't that kind of experience, it's a back -- it's an out there orientation.

And I don't know, I just don't know --. I can project what I would think, but that's not always the best way.

MR. LAVERTY: Well, thank you for your frankness. I appreciate it.

MS. HILTON: As usual, Ed, you were right on where I was -- some of my thinking. And, actually, both of you. So thank you for those questions.

I want to take it maybe just a little bit further. One of the things that I -- well, there's a couple ways of looking at this. One of the things I think that we all know that everybody fears is that we don't know where it all ends. You know, how -- how many turbines will there be spread across the landscape.

And so I always like to ask questions like, when you --

I think it was you, Neil, that commented and said, the closeout capacity on Line 56 will -- we will have arrived at that with -- with this project. But that doesn't mean that that line can't be upgraded and -- correct? But that would take a considerable amount of additional capital to do that?

MR. KEARNS: Commissioner, since I was the developer responsible for putting together Line 56 and the Stetson project, $I$ thought it would be appropriate for me to answer. So the way we thought about Line -- so-called Line 56, which is a 38 -mile radial line that runs from the Chester substation up to -- it's actually at Keene Road in Chester -- runs up to the Stetson project, it has a -- it is a radial 115 kilovolt line, it has a 200 megawatt capacity. And we thought of it as kind of a backbone for these projects and really an example of kind of, you know, careful planning. It is a bit of an economic leap to invest roughly $\$ 30$ million in an electrical backbone that you then have to kind of fill up.

So the line has a 200 megawatt -- nominally 200 megawatt capacity, there's some line rating issues that reduce that slightly. So the notion was we would sort of pay that down effectively through the incremental addition of each project. So Stetson was the anchor tenant, if you will, for the generator lead and then with each project you
begin to cover the costs. So with the addition of the Bowers project, that does in fact occupy the full electrical capacity of that 115 line.

It is a radial line that sort of goes -- and by that I mean it just goes one way. And it's a single purpose entity that serves just our projects so we're not providing transmission service to other entities. So it's really done from our perspective. When we thought about Stetson 1, Stetson 2, Rollins and Bowers, that's the plan. So from our perspective -- from our business planning perspective, from the electrical and design perspective, that work is -- that work is done from our perspective. So the 115 line is full.

If you wanted to make significant upgrades, it would be tremendously extensive and you are kind of already at the branch of the branch of the tree. And I can explain that if you need me to.

MS. HILTON: Okay. That was very helpful. And my -another question, $I$ guess and this is for Roger and David. What -- in your mind, where is the tipping point? You know, I always try to think about, okay, at what point in time would there be too many turbines such that it would totally destroy the experience? And what would that be, say -- I guess Baskahegan Lake is a good place for you to comment on.

MR. MILLIKEN: Well, it's a -- a really interesting question. I had not been exposed to the visual analysis before this morning. I think this issue of how much of the view it takes up, you know, are we looking at an angle that's, you know, 15 or 20 degrees, are we looking at 180 degrees in the sense of are they looming over you and are they surrounding you is a -- probably has a lot to do with the tipping point.

But this -- I had to smile when I heard, you know, this discussion about the visual impact and the cumulative visual impact. At the Nature Conservancy meeting I was just at, the lead scientist of the organization -- and, of course, it's a kind of quasi science that we're talking about with visual because we're trying to take a subjective experience and quantify it. But the lead scientist said, conservation is an art and science can inform that art. And I think that's the situation you face. It's really an art to feel how much is too much.

And my sense of looking at those, particularly the analysis of how wide the view is on the lakes, would be a key element. And the fact that they are in the distance and it's a portion of the view -- and I think part of what I do when I go to Baskahegan Lake these days is I'll stand on the -- at the landing, I'll count the turbines to see if I can get all 38 and usually $I$ have to count, you know,
once or twice to find the ones that I've missed and then my attention goes to the wave patterns and the, you know, birch trees on the shore and the loons. And so it's a long way from being overwhelming.

And I guess I can't quantify this, but, you know, when it begins to feel overwhelming and to overwhelming define my experience instead of being a feature on the landscape, I would say a tipping point has been reached.

MS. HILTON: So, like, 50 turbines or --?
MR. MILLIKEN: Well, $I$ think it's more about do $I$ feel dominated by them or not, rather than the number. Because if there were 50 and they were all kind of lined up like that, it would be more like one.

MS. HILTON: Okay. I gotcha. And I guess more specifically to the project at hand, David, what would you say would be a tipping point for you in this particular project?

MR. RAPHAEL: Well, first of all, I think Mr. Milliken was very eloquent in sort of describing that situation and the fact that it is indeed an art and a science. And I think that's really the challenge of undertaking this kind of work. And it's never easy to -- to assess the visual impact let alone, you know, what the threshold would be for cumulative.

However, I think, you know, it's kind of like you would
know it when you see it type of thing. But I think I would -- I would defer to some of the comments that Mr. Palmer has made in terms of that notion of, you know, surrounding you. If we were on these lakes and there was no escape from the view, if everywhere you looked there were turbines, that would be too many, that would be too much. I think if you were on a small lake and, you know, you had turbines really close to that lake, you know, less than a mile or a mile and -- and they were surrounding you on two sides rather than all four sides or 360 , that might, you know, seem -- depending on the view.

So, I mean, there are a lot of factors that would come into play. Mr. Milliken's point, for example, about the long array of turbines is really well taken because I was at Baskahegan Lake and indeed you look at it as a unit. So it also might depend on the placement of the turbines, the array, is it a jumble, you know, do you see some near, some far so, therefore, there's actually discordance between the placement of the turbines.

And Wind Power in View, which is a book I've often referred to, probably the most comprehensive book, you know, about wind energy and aesthetics that's been, you know, published thus far talks about the notion of the layout having a relationship to, you know, whether you see these as a unit or in harmony or disharmonious. So that
if, again, you have a jumble of turbines everywhere, that would obviously be a cumulative impact that might be untoward.

One last point is that -- and where has this come to roost? There was a project very recently in Vermont that proposed a series of turbines on a number of ridges in a whole region; it wasn't just one ridge, it wasn't just one kind of line of turbines, but it was a number of ridges with a number of turbines with valleys in between. And there was a sense in just looking at it on paper that there would be too many and that there would be -- you know, if you looked in one direction, you couldn't look away in another direction without seeing more turbines.

So I think, you know, this notion of being surrounded by the turbines really would be one element that might result in a cumulative impact that was unreasonable. It might also just have to do with the nature of the layout and having several projects in a region, different projects where you could see them all at once. And that also might reach that threshold. But $I$ think that's a very good question and a challenging one at that.

MR. FARRAND: Can you refresh my memory, because in this context I'm thinking of the Scraggly Lake skein of turbines. What's the -- what's the cone of visualization there? Because I'm scanning through the various files that

I have and it doesn't come to mind. But there -- what did we say, there are 23 out of the 27 that are visible in that --

MR. RAPHAEL: That was a 41-degree cone of vision. So you were -- you were sitting in that simulation location and if you -- if you took your eyesight and kind of took two lines to where the beginning and the end of the array was --

MR. FARRAND: It's 41?
MR. RAPHAEL: Yes.
MR. FARRAND: So that's a pretty long string of -string of turbines. And that's -- I think that's the only lake that $I$ recall where it's that extensive.

MR. RAPHAEL: Correct. Pleasant Lake is about the same. Shaw Lake might -- I don't have that number in front of me, but that might be a little bit wider, it might be close to 50, 45 degrees.

MS. HILTON: I'm going to -- I have one more -probably more observation than question. With respect to the lighting issue which we discussed earlier and -- this cumulative impacts related to the lighting, I think, is huge. And I guess I just want to say that I'm concerned about that particular -- you know, we haven't really delved into that I don't think, but I -- I would like to see us at least begin to address the lighting issue as has been
suggested here.
So I will ask, does anybody else -- any of the other commissioners have any more questions on the scenic that we --?

MR. LAVERTY: I just have one. Going back to this notion of feeling surrounded or -- I forget the other term, dominated, whatever it's called, okay. Several people last night, citizens of Lincoln, expressed concerns that seemed to touch on that, but in a way that we haven't really discussed or hasn't been addressed here. And that is, I mean, when we -- when $I$ first came here for Stetson 1 and we went up and did the site visit and all of that and then we come back today and do another site visit, it's extraordinary to go through downtown Lincoln and see the development at the east end of the lake, both at day and at night, to drive down Route 6 and to see, you know, all along that the indications of wind power.

And one begins to get the sense that this is a real wind power corridor, that wind power is beginning to at least -- maybe perhaps it's new, but at least it's beginning to get people's attention as sort of everywhere around here. I'm not suggesting that's good or bad.

My father used to take me up to see Ripogenus Dam all the time and tell me what a great feat -- you know, human feat it was to do that and we should be so proud of
ourselves as Americans for having accomplished that, it indicated we were forward thinking, the application of our technology. You know, so I'm not suggesting that in and of itself that's necessarily bad, but in terms of this sense -- rather than it be an individual project, but the cumulative -- I suppose it's a cumulative impact of projects in a particular location that begins to define that location, you know, as a wind power area, that seems to have -- to some people has this sense of beginning to say we're hemmed in, we're overwhelmed with the project. MR. MILLIKEN: Yeah, I think that's a really interesting perspective, Commissioner Laverty. And I, you know, travel back and forth regularly. What strikes me, if I were sitting on your side of the table looking at the whole unorganized territory in your care, to me it's like cluster development and, you know, there's sprawl -- a choice between sprawl and cluster development.

And so as it turns out, First Wind has focused on areas of low elevation to avoid endangered species, to avoid people, to avoid dramatic scenic impact. And so from a statewide perspective, even though I'm a landowner here, it makes sense to me that this would be the place that wind energy infrastructure would be concentrated instead of along the high peaks or in view of the Appalachian Trail or other places.

So I think you're right, it is beginning to define this region. But looking statewide, if we were to pick a region that ought to be defined by wind, I think this is one of them.

MR. RAPHAEL: I guess I would also add to that point a couple things. One is that, you know, it's important to remember that when you're on these lakes that we're talking about today you're not going to see Stetson, you're not going to see Rollins from any of these lakes. So you won't have that sort of sense of sort of cumulative impact in that regard, number one.

Number two, you know, the view from Route 6 is a very distinct view in the sense that, you know, you come in and out of glimpses. But $I$ was struck -- to your point about seeing it from Lincoln, I went down to the park yesterday, you know, and -- and, again, not to overstate this, but the park was packed, people were having fun, they were swimming, they were playing volleyball, they were doing all kinds of things. The wind turbines were right out there and, you know, life goes on and it didn't -- you know, if we were to say impact to enjoyment, they seemed to be enjoying themselves, you know, quite readily in full view of the wind projects.

MS. HILTON: I'm not sure. Staff? Go ahead, whoever. MR. TODD: Are we sticking solely on scenic for the
time being?
MS. HILTON: I think so.
MR. TODD: All right. I'm going to let Jim take over.
But I have one question just to be sure Jim does -- in case he doesn't cover it. David, in your testimony you mentioned a number of studies of recreationists and their views on the impact of wind power on their experience. Were any of those studies of canoeists? MR. RAPHAEL: Well, I think the Baskahegan study probably took into account folks who were using canoes and paddlers, yes.

MR. TODD: And other than that study?
MR. RAPHAEL: Not off the top of my head I don't recollect that canoeists specifically were interviewed. You know, again, when the -- when Portland Research Group, you know, conducted the surveys for this project, you know, I would think -- and I'd have to go look back at the data, but I would imagine some of those folks were would-be paddlers or canoeists, but $I$ would have to confirm that. MR. TODD: Okay. Thank you. MR. PALMER: How long do I have? MS. HILTON: Well, we do have to take a break in about five minutes. So that's your first and we'll see where we're at. How is that?

MR. PALMER: That sounds good. So I do have a series
of questions, obviously, on scenic.
MR. RAPHAEL: Sure.
MR. PALMER: On your pre-filed -- and I'll try to clarify where I'm picking up these quotes that I'm going to read -- in your pre-filed rebuttal testimony on the first page you're talking about the Lawrence study. And one of the things -- you're critiquing that you say, quote, specifically this testimony addresses the following issues -- meaning your testimony addresses these issues about the Lawrence study -- the Lawrence report lacks an objective quantifiable data and analysis which undercuts the report's usefulness as a means for assessing the project's compliance with regulatory standards. You recognize that?

MR. RAPHAEL: Yes.
MR. NADEAU: And then at the bottom of Page 9 you say -- you're summarizing: In short, the Lawrence report fails to create a substantive, analytic objective case that the project will result in an unreasonable adverse effect on the scenic character of the project area for the following reasons. And then you start listing reasons. I won't go into those, $I$ don't think that's really important, though, I could if you'd like. So you recognize these statements. What I'm interested in is sort of the commitment of LandWorks to trying to get at the data-driven objective
process to the extent possible.
MR. RAPHAEL: Good question. You know, I think the basis for that, you know, has to do in part with some of the technical analysis that we do and how we really look at, for example, viewsheds and, you know, the extent of visibility and the number of turbines that are visible. We try to look at, you know, fact based, you know, the surveys, that do provide data. So we -- we reviewed a whole range of intercept surveys for this project as well as the work that was done specifically for this project.

You know, we -- we really do try to use, you know, objective analyses techniques, you know, to the extent that they have been developed and are continuing to be refined in this -- in this arena of work. And I think it's really important to base your -- you know, base your analysis on those kinds of sort of objective assessments of where you can see the project from, how far, the extent of that visibility.

For example, if we're -- if we're on a scenic road, will -- to the extent that we have a technical analysis, we'll assess those points along that scenic road where you're going to see the project and for how long you're going to see the project. So we have, you know, a real sense of the extent of visibility. And, in fact, when we were looking at the Rollins project a couple years ago,
even though it wasn't part of our charge necessarily, we did go up and down Route 6, we did go up to Winn and to Springfield to really get a sense of how widespread would this project be visible. So that's our point of departure.

You know, I appreciated Mr. Lawrence's, you know, sort of eloquence in part with regard to his feel for these lakes. My sense was that it was focused more towards Grand Lake Stream than specifically to these lakes. And while his observations and conclusions, you know, are his own and certainly he's entitled to them, I felt it lacked the rigor of analysis that we are compelled to go through under the provisions of the Act.

MR. NADEAU: So -- but it sounds to me like you would say, where we could find ways that are relevant, we should be trying to do these kind of measurements and you can measure qualitative things, too. So, for instance, it would be helpful if we could figure out some way to measure something analogous to what you were talking about, the exposure as you're going down a scenic road. And the problem is we don't know where people are on these lakes so it's really hard to do that. So we're lacking some information.

But as an objective, a goal, you would agree that that's where scenic assessment should be going if possible? MR. RAPHAEL: Absolutely. Absolutely. Because that
will help us all because it will give us better tools with which to really understand the full breadth of this project. I think we're all -- I mean, I think those of us who are involved in this field of study, like yourself, I think we're -- we're looking for -- we're constantly trying to improve our tools and our understanding of how to use them.

MR. PALMER: So I'd refer back to your comment about the chief conservationist that actually you would be amazed at how reliable scenic assessments are, that the statistics would put anyone doing a timber cruise to shame. It may be qualitative, but it's actually pretty amazing. Compared to most social science, it is way out there in terms of reliability and validity.

On the other hand, I also agree that there is some art and skill and interpretation involved, we don't always agree, just as there is in good conservation planning, it's not just science. And it's evolving and developing, we don't have the perfect answers yet.

So I -- I think I just wanted to make sure that LandWorks and I were in agreement with that. There's more development to be done, but there's actually a whole lot that's already known and it doesn't need to just be all professional-based stuff. Just like we wouldn't send out somebody to go look at bat habitat and say, yeah, this is
pretty good bat habitat and not do studies for a couple years like you're forced to do. I don't see any reason why that would be true for the scenic stuff either.

MR. RAPHAEL: Yeah, and I think just to.
MS. HILTON: Can I just jump in here? This sounds like a great conversation and I'm sure you guys could go on and on, but Angie over here needs a break. So why don't we pick up on this when we come back. And we need to be back here in about ten minutes.
(Whereupon a recess was held at 10:09 a.m., and the hearing was resumed at 10:28 a.m. this date.)

MS. HILTON: Okay. Here's what we'd like to do. Jim Palmer has a few -- wants to continue the questioning on the scenic impacts and $I$ know Fred has a few questions and I -- well, actually, we'll finish up the scenic impacts and then I think we need to give Jeff some time to talk about conservation. And then we do have other more general questions with respect to the project that we haven't even touched on yet, so --. Go ahead, Jim.

MR. PALMER: So I'll keep going. So I -- I'll let you know a little bit about where I'm going first. I'm going to talk some about the survey stuff. In our experience -your experience, but our experience, the evaluation of scenic quality is going to get affected by things like how many turbines we can see, how big the turbines are, you
know, the horizontal angle that the project occupies, all those kinds of things. And you agree with that?

MR. RAPHAEL: Yes.
MR. PALMER: Okay. So I'll admit that $I$ was in on the planning of the telephone survey, $I$ won't lay all that responsibility on you. You know, I thought it was an experience well worth trying. But in retrospect, the responses don't make sense to me when they're saying what they think the scenic impact is going to be because they have no idea what they're actually going to look like, they don't have any visuals that are accurate.

So they may be imagining Mars Hill or they may be imagining offshore turbines in Scotland. We have absolutely no idea what they're imagining, but we know that specific locations make all the difference in the world and we know that the Wind Act only cares about specific locations. So, like, Route 6 is irrelevant even if we wanted to evaluate that.

So I guess I'm asking for your agreement that probably our experiment -- not the survey itself, but a visual impact -- a scenic impact assessment without visualizations, a survey of that doesn't make sense, you've got to have visualizations. And I would like your opinion about that.

MR. RAPHAEL: Well, I wouldn't -- well, first of all, I
might let Bruce speak a little bit to the survey and its efficacy and purpose. But let me just preface that by saying, I don't necessarily agree with you that it doesn't make sense. I think -- my feeling is that the more information that we can have, the better, number one.

Number two, while I agree with you unequivocally that when you're on a mountaintop or you're at a very specific advantage point and you give someone a visual simulation, they'll have a better idea of yes or no, whether they're looking at something they can accommodate or they're looking at something they will find offensive. I think it's a lot more difficult in lakes because lakes have so many different advantage points.

And, actually, Bruce and I were just talking about that. How would you get at that because --. We were talking about bass fishing. I mean, bass fishermen are on the shorelines, they're close into shore where they're going to be less likely to be focused on a long distance view to a turbine, you know, taking up part of the horizon line. So that -- you know, while I agree unequivocally that when you're talking with a very specific advantage point that lots of people frequent like a scenic mountaintop with extensive views that include a project, that's where -- that's where a visual simulation makes all the sense in the world, is really the only way to go.

But I think on lakes you're going to have views of the project and you're going to have views without the project in view. And how do you get at that, you know, reaction, how do you really assess -- again, we were talking about this. When people paddle, unless they're fishing for something specific in the middle of the lake and the conditions are propitious for that, there -- you know, I go from Point A to Point B. I go -- I get into my boat, whether it's a canoe or a kayak, and I'm going to a point maybe for lunch or something. And I think a lot of paddlers are like that. We've talked about the boat -- the paddle tours, for example.

So that's why I think it's a little bit more challenging to, you know, have one intercept survey at a Pleasant Lake boat launch and assume that's the visual impact and show them a visual simulation and that's what they're going to get because they're going to get a lot more than that in many of these lakes.

MR. NADEAU: But you're assuming that I'm saying it should be an intercept survey. I'm not. I'm just saying that they have to have visualization. So I could see, for instance, that what we do is give an iPad to people at the beginning of their trip, assuming they're going to come back, and that at 100 different places on their trip they get a beep and the simulation pops up and so they get
information about what the relative scale is going to be and they evaluate that.

You know, that -- there are marketing surveys that would -- they're not using I-pads, but use that kind of information --. All I'm doing is saying that it's a complicated experience and we know it changes by location and so the visualizations are important -- not that we -that the previous studies would have captured it either. I mean, that's why we haven't done anything on water is because nobody could figure out an easy way to do it.

It's really that visualizations are important to doing a scenic assessment. Yeah, I wouldn't argue with that overly except to say that $I$ think in the case of the telephone survey, and in some instances with regard to wind, you know, I think people either get it or they don't. In other words, I think they either -- there's increasing awareness and knowledge of what wind turbines look like and what wind projects look like in Maine. So I think there is some basis for asking people, as we've done in Maine and Vermont and other places, whether if you saw wind power on the ridge line, can you -- can you agree with that or not? Without a visual simulation $I$ think people are beginning to have enough knowledge to say whether they like it or they don't without having to see the visual simulation.

Having said that, in terms of the specific resource in
getting more information and more quantitative analysis, I would not argue with you that that would be a very, very good tool to give us more specific information. But I think in terms of the validity and the utility of the telephone survey, I'm going to let Bruce maybe add a couple of comments, if you would.

MR. PALMER: Before you start, Bruce, having looked at it, if you're doing a Nova, there's differences between both, whether people support or oppose wind, and different locations. So the -- I mean, yeah, we -- you know, in the telephone survey you can capture the part -- I'm sorry this is technical -- you can capture the part of the evaluation about whether they already have a predisposition toward or against wind, but I don't see how you capture the part that different locations are different and, in fact, even if you're a supporter, your reactions are going to be different, you'll recognize that.

So if you could address that part, that would be of interest to me.

MR. LOCKWOOD: Bruce Lockwood, Cape Elizabeth, representing Portland Research Group in Portland, Maine. One of the great challenges of market research, as you well know, is trying to figure out the best way to get a representative sample of the target population that you're addressing in your research. So so far in working on these
types of projects I've actually used four different methodologies. And we're trying to do our best to reach the people who are most relevant to -- to share their opinions for the questions that we're trying to answer as part of the research. And so intercepts to show visual simulation certainly came to mind when we were considering this project and so forth. And for all the reasons that David stated, we were entering a season that wasn't going to allow us to do that.

And to do a perfect visual assessment using photo sims, what you really want to do is have somebody rate the actual view -- rate the photo of that view without the project imposed upon it and then rate the same photo with the project imposed upon it. So as you can imagine, from all the different lakes and so forth there would have been a number of different photos and photo sims that would have had to have been created and try to find people. And we didn't feel that we could collect in a reasonable amount of time and effort a representative sample of people using the lakeside. So that's why we decided to go with the telephone survey.

Another reason for the telephone survey was one of our hypotheses going into the research was, just what is the level of awareness of this particular part of Maine among people coming to Maine taking part in outdoor activities
that are suitable for this region for the study area? I, being a very avid hiker, a through hiker, a member of the Appalachian Mountain Club, I had to go to my DeLorme Gazetteer and look up where some of these lakes were located. And so we thought that part of the equation for this assessment is to get a sense as to just what is the level of awareness of this beautiful region of Maine that we have here in Washington County. So a telephone survey serves that purpose much better than say a web survey, which as you know, we used for another -- another effort -research effort that we did because a telephone survey you can get top of the line awareness of the lakes in the study area and so forth.

So to -- then we did a snowmobiler survey where we went to an actual function in the Stetson project and we intercepted snowmobilers, because that was a winter activity that takes place around these lakes. And we were able to speak with snowmobilers while they were in the midst of one of the wind projects. So we were trying to use these as proxies.

What came out in the telephone survey is that the 30 -we were able to gather a sample of 31 individuals who actually were aware of one of the -- at least one of the eight lakes in the study area and had used the lakes for one of the outdoor activities that you could easily do
around the study area. And among those 31 individuals, 94 percent said that they had seen a wind turbine in the state of Maine. So there's a proxy.

So we took that proxy, we took the proxy of the Stetson project for the snowmobilers and we compared it to other wind-related market research that has been conducted -that has been conducted in recent years for these various projects. And the consistency between the results of these different research initiatives, granted totally different projects, different levels of impact and so forth, but the consistency between the results on expectations of seeing wind turbines, impact on enjoyment and likelihood to return, while not perfect, were very much in line and gave us some confidence in the proxies that we used in place of doing the actual photo simulation research.

So we felt confident that our results indeed reflected the kinds of results that we would have gotten from a photo sim type intercept.

MR. PALMER: Except that we know that, for instance, the impact from Duck Lake or Shaw Lake is going to be higher than, say, the impact from the Pug Lake that we didn't look at because Pug Lake is so far away and you can't capture that, you don't know about that.

You raised the Highland web survey and the Highland survey as a whole. So you did an intercept survey there
and you did the web survey there?
MR. LOCKWOOD: (Nods head affirmatively.)
MR. PALMER: As you know, one of the other interests that I have is that the Wind Energy Act wants us to get a sense of the extent, nature and duration of activities. And especially on the water we don't have a whole lot of knowledge about that. And what David did do is interview, I don't know, three or four sort of civic leaders in Lakeville and, you know, got some -- some numbers, which then I used in my report, more, not in a way that I'd ever thought of until he'd done what he did, but just kept trying to pull it. So it was developing a more quantitative approach like we were talking about before the break.

So one of the things that I'm interested in is that in the Highland example are you aware how -- how accurate the estimate of usage was compared to what the Appalachian Mountain -- Appalachian Trail Council -- I don't know what they're called now, AMC. Your figure was real close to what they thought the figure was for using it. So, I mean, one of the things that's really nice about an intercept study is you can actually get some -- assuming your days are probability chosen type days and you crunch the numbers, you can figure out what the usage is. And we -we really don't have a good example or sense of that in
that case.
So it's not necessarily a choice of one or the other. And I agree during the winter is not the time to do that maybe because I don't know what ice fishing is like. But, you know, you were caught in a season --. But one of the reasons I'm asking these questions is because I think we should be establishing a protocol just like we evolved the protocol for birds and bats. So I'd like you to comment on the usefulness of the intercept model in some form as a way to estimate, as we're required to do, the extent, nature and duration of use, say, on these lakes.

MR. LOCKWOOD: Right. I think the intercept surveys have been used most often for sites that are on ridges where there's one point of view. For example, for the Highland project we were on -- we were on a portion of the Appalachian Trail that was the only viewshed within the 8 miles of the project. So you're able to get a representative sample because everybody comes to that one specific point. What we were afraid of in this situation is that, as you -- as you mentioned, Dr. Palmer, there's all kinds of viewsheds that would have some level of impact, was to fairly represent all of the viewsheds that would be impacted in a survey and make sure that we did get a well-rounded view of what those impacts would be and what the perceptions are of the individuals using the resource.

You're able to do that on a mountain summit because there's no other places to go. I'm sorry, I don't mean to be --. Whereas, here we took out -- again, we took out our maps and started to plot out the different boat launches, there's -- there's public boat lunches, there's rustic boat launches, there's campsites, there's rustic campsites. And we felt we would try these other tools and then see how well they aligned with some of the more traditional approaches such as intercept. And we thought they aligned pretty decently.

MR. PALMER: But we still don't get an estimate of use meaning that -- what we're doing is getting responses. We don't know about -- necessarily about the quality of those responses, but we're getting an estimate of those sort of perception sides, but we're not getting an estimate of what we normally think of as the harder quantitative thing, that is, the counts of people, estimates of what -- like, we have no idea whether the Lawrence report's characterization of, you know, heavy canoe usage, all this paddling is accurate or not. It may be, but we don't have -- all we can do is talk to people and get their gut -- their gut reaction.

And, in fact, we know ways -- the Baskahegan study is an example -- we know ways to get good estimations. I mean, we have an estimation from them of how many boats and
how many people are in each boat for the summer. Right? I mean, the Baskahegan study did that.

MR. RAPHAEL: And that's one -- but that was easy because there's one public boat launch.

MR. PALMER: No, no, they did three public boat launches and it's not just Baskahegan, it's Baskahegan and then -- oh, there's a town that begins with D. I'm terrible on names, I'm sorry. Danforth. There's a Danforth launch and there's a third launch. They did three launches, only one of which is on Baskahegan, that's the furthest away launch.

So they -- I mean, that -- and they talk about that in their methods, that's one of the challenges that they had. They'd spend a certain amount of time at the Baskahegan launch and then get in their vehicle and tear up -- up the road to get to the other launch. So it wasn't easy. And it doesn't all necessarily have to be that way.

Again, as you know, you could leave postcards, for heaven sakes, on the windshields or in camps for people -you know, there's only three or four questions that we actually care about because the Act is pretty specific about that stuff. You know, we -- there are other ways that we could gather this data that are commonly used in recreation research and we could be doing that.

But I agree, you've got to do it in the season that
people are doing things. We can't study canoeing in the winter. We could study ice fishing in the winter, though, or snowmobiling --

MS. HILTON: Hey, Jim.
MR. PALMER: I'm sorry, yeah.
MS. HILTON: I know this is very important and I know that it is a developing science. If there's some way to sort of wrap --

MR. PALMER: Yep.
MS. HILTON: And I know where you're going, but is there a way to wrap it up? And then I know you have a few more scenic questions.

MR. PALMER: I'm sorry, I have one other major one and then I'll stop.

MS. HILTON: Okay.
MR. PALMER: So it's for David and it's about the visual absorption capability stuff. So I distributed or had LURC distribute a couple selections, one of them was from the -- the Forest Service Landscape Aesthetics Manual, I'll just call the SMS, the Scenery Management System for short. And the other was your, as I remember, award winning report of Lake George, which I learned about because we used it for Plum Creek because it was a good example of hillside development regulation.

So quoting from the Scenery Management System handbook,
that appendix: Landscape visibility as a perceptual factor is dynamic, it varies dramatically depending on the location of the observer. So that's the visibility part. Although many think landscape visibility is part of visual absorption capability because it's associated with perceptual aspects of the scenery, it's not. And then a little later it gives a definition. Visual absorption capability is a classification system used to indicate the relative ability of any landscape to accept human alteration without loss of landscape character or scenic condition.

And I need a blank sheet of paper, but the basic gist is the Forest Service was interested in how you hide clear-cuts. And if you drew a patch on a piece of paper and you put it at eye level horizontal, you could see that it's very -- it's not possible to see that clear-cut. But as you tip it up, i.e., you put that clear-cut on a slope, it becomes highly visible. So that's the image. And they developed a system to evaluate that.

The difference is landscape absorption capability is a characteristic of a site and visibility is a perception characteristic that's not a -- it's not about the viewpoint, it's how much of the landscape out there, everywhere but the site, can be perceived from a viewpoint. So there -- they're very different.

One is a perception measurement, even though the way visibility is done is all geometry, but the Forest Service still considers it perception. And the other is an intrinsic physical characteristic or the --. Can this specific point site hide something?

So I'd like you to turn to your simulation -- your simulation for -- let's try Exhibit 10, which is Pleasant Lake boat launch. Actually, you could pick any of them. MR. RAPHAEL: Okay. I've got that right here. MR. PALMER: So, I mean, I don't want to beat you over the head with it, but if you think of the back, the visual absorption capability as a characteristic of a site, so not a characteristic of the viewpoint here, but a characteristic of the base of each turbine, are those sites able to hide these turbines?

MR. RAPHAEL: No.
MR. PALMER: Yeah.
MR. RAPHAEL: And -- yeah. And, you know, in all
honesty, I use the Forest Service terminology and concept really as a point of departure. And I think as we discussed, I'm, you know, still trying to find the best way to express how I have tried to adapt this notion of visual absorption for utilities and utility scale. And so there -- I think that might be the difference between the strict interpretation of what the Scenery Management System
intended, which is, absolutely you're right, can the landscape hide it versus does the landscape have enough going on or other elements within it that the project is not as prominent? And that's probably the best way I can explain it.

MR. PALMER: So my -- it's not that I disagree that there isn't something that considers, say, the effect of distance and how the dominance of an object in the landscape diminishes as distance increases, I don't disagree with that. All I'm disagreeing with is that visual absorption capability is something that the Forest Service has developed since our national landscape in '79, there were two papers on it, and that what you were doing was not that.

MR. RAPHAEL: Correct. That's right.
MR. PALMER: Okay. And that we need to find some different language that everybody can agree on to describe what it is you were trying to express, but it doesn't help to use the thing in a way that it was never intended to be used.

MR. RAPHAEL: Understood. And I think I -- I interpreted the concept differently, I used the term without necessarily using how that term was developed and applied in the Forest Service. So I wouldn't argue with that.

MR. PALMER: So I won't go on other than to say, for those of you that are interested in ridge line development issues, LandWorks did a great report for Lake George about that that basically has several recommendations that -that say, you know, keep big development off of ridge lines. And, frankly, the reason that that's not applicable here is that the Legislature already told us the turbines are going to be on ridge lines, they understand that and they're going to be visible and they understand that. MR. RAPHAEL: Absolutely. MR. PALMER: And, you know, that's not an effect that -- that the developer has to address because the Legislature already said that, per se, they don't have to address that, they already know that that's going to be the case.

MR. RAPHAEL: And that's why I've argued that we need new standards to evaluate these types of projects. And I think you agree with that.

MR. PALMER: Yeah. And I think, actually, the survey work is a central thing -- a central way to do that and I have a lot of ideas about that. But I think visualizations are going to be messy and we can talk more about that, I'm sure that we will over time.

I just have one -- maybe one other and I think it will be short. I'm -- I mean, you understand that the Wind

Energy Act has six criteria to evaluate scenery with. And I'm interested why you resisted the obvious utility of just using exactly their six with their words and why you changed the language a little bit and you added some in your VIA, but then in your testimony you collapsed them down to three? Why not just do it the way that the Act lays it out? Because that's actually what the Commission is supposed to do, they're supposed to use exactly what the Act tells them to do, not add -- I think you'd agree that they're not supposed to add things, or they open themselves up to a court case, and they're not supposed to subtract things for the same reason.

MR. RAPHAEL: Right. Yeah, I would agree with that except to say that I think the reason we did expand or alter maybe a little bit of the language was only because -- only in the interest of trying to better understand and better assess this project. And, you know, I guess it's my active mind always looking to find new ways with which to understand these impacts and assess them.

MR. PALMER: So my suggestion would be that we use the six -- and I've got to say, I mean, you should come back to me. I used seven because I split one of them, right, because -- because the use one where you count numbers, I see that as different than the perception half of that question. So E is E-1 and E-2 in my category. So I'm not
doing --
MR. RAPHAEL: Fair enough.
MR. PALMER: I mean, I'm not doing it exactly the same either. But I think what we need to do is define -- we have to define those criteria. And I -- I need partners here, it's not right for me just to be writing these reports and defining them. I -- I need developers and opponents to help clearly define what those criteria actually mean. So it would be my strong preference that if we start with what the Act says and then we somehow dialogue, in this horrible process that we have to all work in, to try to get some common definition of what those types of things are.

But the Legislature gave us our marching orders and until that Act is revoked, we really don't have an honest choice to do something different.

MR. RAPHAEL: I agree.
MR. PALMER: That's all I have, Gwen.
MS. HILTON: I appreciate all of -- all of that. So at the little bit of risk, does anybody have any more scenic questions at this point in time that they'd like to --? All right.

Why don't we talk about -- give Jeff Selser some time to talk about -- tell us about conservation. Is that --?

MS. BROWNE: That is. And what I was going to ask is
-- I think you said we have two minutes?
MS. CARROLL: Three.
MS. BROWNE: Three minutes. And in the interest of not having him rush and give the court reporter heartburn, I would request for an additional three minutes and I will forgo cross of Gordon Mott at the end of the day. We have five minutes set aside. So if the chair is okay --?

MS. HILTON: That sounds fine.
MS. BROWNE: Please don't speak too quickly, Jeff. MR. SELSER: That's a tall order. So I have six total now, three plus the three.

While she's getting the exhibit up, my name is Jeff Selser, I'm an attorney with Verrill Dana. My background and qualifications are in my pre-filed rebuttal testimony. I'll just summarize by saying that for more than a decade I've focused my legal practice almost exclusively on natural resources law related to forestland and conservation and recreation issues. I've worked in 27 states, in three Latin American countries, I've handled some of the largest land transaction and conservation projects in the history of the United States. I have at times represented landowners who own more than one-third of LURC's jurisdiction. So I have a unique perspective on conservation policy and initiatives all over the country and I'm intimately familiar with the federal and state
programs.
So I think it would be really useful to start by addressing a comment that Commissioner Hilton made a little while ago when she said, we don't know where it all ends, related to cumulative impacts of additional wind power coming online. In this case, however, we do to some extent know where it all ends because this project, as you can see in this slide here, sits on the very periphery of a vast conservation resource. So we know that -- here is the Bowers project -- or the proposed Bowers project, no wind or any other development is going to invade the core of this conservation project. So you've got 400,000 acres of either easement or fee conservation lands that will never be impacted by any additional development.

So in this case you have a benefit in that, to some extent, you do know where it will end here. And that's -that sort of highlights the great benefit of this conservation project. It was really a pretty remarkable project in how it came together. You've got 312,000 acres of easement, which is this light green area here, you've got a fee -- 33,000 acres of fee acquisition that's owned by the Downeast Lakes Land Trust which is known as the Farm Cove Community Forest, you have ownership of 500 miles of shoreline along the St. Croix and other rivers, and then that all connects with state lands here -- or federal
lands, national wildlife refuge, and state public reserve land here at Duck Lake and Nicatous, and you also have vast conservation resources across the Canadian border. All said, you've got about 1.4 million acres of conservation resource.

This little piece here -- I say little, it's 22,000 acres -- right there that's outlined in red, that is the West Grand Lake Community Forest, that is the final piece of this conservation project. It is not yet online. As I said in my testimony, fundraising is underway. But there is an option, so the rights are secured as long as the money can be secured.

This is what is presently the number one funding priority under the Forest Legacy Program. One of the reasons this has a number one funding priority is because it's an in-fill project. And in-fill projects are huge right now at the federal level because it's a way to leverage federal dollars to really maximize a conservation impact. But it's important to note that this is the only piece of this whole project that's the number one funding priority, it's only for 2011 dollars and it sits well -well away, in some cases 15 to 20 miles away, from the project area.

So it's not accurate to say that the number one funding priority sits at the -- in the shadows of Bowers Mountain,
it's quite some distance away. And it also talks about, you know, the importance of these federal dollars. You know, right now we have -- there's a lot of competition for federal dollars and conservation easements are the way to go, it's a way to leverage conservation funds so you can conserve more land for less money.

The problem is you have to have a willing landowner. All the regulations require a willing landowner. And as Roger Milliken said, conservation is an art and conservation easement negotiation is a particularly tricky art. These are very difficult to come by. And there are some very significant issues that need to be addressed at the negotiation stage of easements.

I've negotiated some easements for six or seven years, including what was then the number one conservation easement priority in the country under the Federal Forest Legacy Program using 2010 dollars, and that easement specifically carved out a corridor for wind power. It was not an in-fill project so it had more sort of pure conservation value than this project does.

And so landowners and conservation groups and regulators are doing this delicate dance. In order to leverage conservation funds it's more beneficial to buy an easement. It costs a lot less money, but if the landowner is retaining the land, they need to retain the value and
the ability to continue to work that forest as a working forest. And so we always walk the line and the negotiations are incredibly tenuous and they've broken down in several circumstances.

If you add another layer to that, if you say to these landowners, not only are you giving up value on the land for which you're being paid under the conservation easement, but you are potentially subjecting land outside of the easement to an additional higher level of scrutiny on uses that are allowed uses under the zoning, you are really setting a precedent that is going to put a horribly chilling effect on future conservation priorities. From my experience representing landowners all over the country and in South America on conservation projects, I can tell you in many cases that will tip the balance and landowners will walk away from the table.

Landowners need to know with certainty what they're giving up. It would be impossible to put any sort of qualitative description around what they're giving up outside the boundaries of the conservation easements if there's going to be a loss of value related to additional scrutiny because of the proximity of easements. And this is specifically contemplated under all of these funding programs and under the conservation easements themselves. Maine's assessment of need for its Federal Legacy

Program specifically allows carve-outs for wind power projects to sit right inside or right next to conservation easement projects that are funded through these programs. So Maine is already -- Maine is actually at the forefront of this. Maine is already saying, look, we recognize that wind power and other uses are vitally important to the economic health of the forest products industry, but we also still want to be able to capture these conservation -critical conservation pieces. So we understand that they're going to, you know, sit side by side with each other.

So it's -- and I really urge you to think very carefully about the weight that you would give to the proximity of conservation lands in assessing whether or not to have further regulation on adjoining properties. That's really the point I -- I wanted to get across.

I'm happy to answer any questions. The reason I went last is I can talk for hours about conservation policy and Federal Legacy scoring criteria.

MR. LAVERTY: Are you familiar with the Moosehead Lake concept plan that was approved by the Commission?

MR. SELSER: Yes. I actually helped negotiate the easement.

MR. LAVERTY: You -- then you appreciate that in that there is a provision for wind power.

MR. SELSER: Absolutely. In fact, that -- that's an excellent point because that's not even a carve-out, that is within the easement boundaries itself.

MR. LAVERTY: So I guess what -- you're preaching to the choir here in a sense, but $I$ think it's important that it be on the record and that everybody understand that. MR. SELSER: Right. And, see, what's going to happen if we start -- if we start further regulating or further restricting land outside the easement and landowners are then losing value that way, eventually you're going to come to a point where landowners have nothing left to seize on to or to get value out of their land than the recreational use. And right now that's open to the public for free. The easements help secure that forever for everybody. In a lot of other states that doesn't happen. In a lot of states recreational use is a private preserve for the limited lucky few with a lot of money. That's not the case in Maine, but Maine is an anomaly in that. And if you force landowners into a situation where they can't figure out where their value is, their investors are going to insist that that recreational access be shut down and monetized. And we really want to avoid that.

So we've got to encourage conservation through these conservation easements, but not make it so uncertain as to what happens outside of the bounds of that easement that
you scare landowners away because you're already -- we're already right on that line here in Maine.

MS. HILTON: Does anybody else have any questions for Jeff?

MR. PALMER: So the easements here do not allow for any wind projects, is that what you're saying?

MR. SELSER: These easements have some fairly specific defined purposes. And it's -- I want to make sure we understand that there's a -- this piece here, this is owned outright in fee by the Downeast Lakes Land Conservation Trust. These are state lands, these are tribal lands. So all connected you get your 1.3 million -- it's actually 1.4 million acres once this is done. This big green -- light green here is a conservation easement and this will be a conservation easement. And these easements are primarily designed to serve as a working forest, to create economic continuity for the working forest.

Shoreland conservation -- and this is, you know, 10 percent of the loon habitat is here -- I mean, 10 percent of the loons go through here. So there's a loon management agreement that's in connection with the easement and it's really designed to protect those resources. It's not designed to protect outside scenic resources. There are legacy easements that protect scenic resources. There's one right here in Maine, the Millinocket forest, protected
the viewshed from Katahdin.
In all of this massive conservation effort when all of these resources were identified, the ridges of Bowers Mountain were not included in what was sought to be protected even though it certainly could have been included in the legacy project. I mean, this is -- and it was done at a time when wind power was known. I mean, this -- we're talking 2005 to 2008. Ridge line development was a significant issue that we were talking about in the Plum Creek project. So this wasn't done at a time when wind power wasn't contemplated. You know, if that was vitally important to protect those ridges at the very periphery of those easement projects that could have been included.

MS. HILTON: Did you get your question answered, Jim? MR. PALMER: It was really just a yes or no. So wind power is excluded?

MR. SELSER: Yes, it -- almost all development is prohibited. It does not relate, you know, to, like, forest roads and stuff.

MR. PALMER: But $I$ assume on the tribal lands if there's an appropriate place one could be proposed?

MR. SELSER: If it was consistent with the tribe's policies for those lands, that's correct. But everyone -at least currently the current conventional wisdom is that those lands are treated as conservation lands. Sort of in
the thinking of let's talk about the -- how much of contiguous property we have, usually the tribal lands are -- because public reserve land there's no -- you know, public reserve land could -- you know, the state could do something with that.

MS. HILTON: So could you put a wind power project on the tribal reserve lands?

MR. SELSER: They're -- it would have to be an allowed use. You know, it's the same as a state public reserve land in that the state has ultimate control over what to do with that land. The state could --

MS. HILTON: So yes is the answer? Maybe?
MR. SELSER: Maybe. I would have to look at your zoning and -- and look at what the tribe's policies are for that land. So it's -- it's not a definite yes and certainly not a definite no.

MS. HILTON: Okay. All right. Thanks. Anybody else?
MR. LAVERTY: You're not suggesting that all tribal land is primarily held for conservation?

MR. SELSER: No, I'm not at all. No. It's -- in connection with this project, this -- the Downeast Lakes Forest Project, when they're counting the acreage of the contiguous conserved land, when they promoted this to the feds, that land was included as being part of this contiguous block. And contiguity is a huge scoring bump
for the feds, in-fill and contiguity and -- and how ready it is to come on line.

Those are -- you know, those are just as important to the feds as the actual conservation values of the project. In fact, in some cases they're more important. You know, the dollars need to get spent.

MS. HILTON: Okay. Why don't we -- I know Fred has some more questions about decommissioning and tangible benefits. Do commissioners want to lead off or do we want to let Fred lead off with the questioning of those questions?

MR. LAVERTY: I just have a clarifying question and that is that apparently there was a question to the applicant by staff for additional information on decommissioning. Has that information been submitted?

MR. TODD: I couldn't hear the question.
MR. LAVERTY: Okay. I'm sorry, Fred. The applicant was requested by staff, I understand, to submit additional information into the record regarding decommissioning. Has that information been received by staff?

MR. TODD: Yes.
MR. LAVERTY: Okay.
MR. TODD: It was in the supplemental filing of, I think, April 22nd.

MR. LAVERTY: Okay. Thank you. If that's the case,
why do I have an e-mail from you Fred on June 26 which says that the information has not been received?

MR. TODD: I'm sorry? You've got to remember I'm hard of hearing, Ed.

MR. LAVERTY: Okay. I'm sorry. Don't worry about it. I'm sorry. You have the information from the applicant about decommissioning?

MR. TODD: I did request, as did Don on Bull Hill, additional information on decommissioning. They responded to that in a supplemental filing on April $22 n$.

MR. LAVERTY: Okay. Thank you.
MR. TODD: And I have a question on the issue of decommissioning.

MR. LAVERTY: Please.
MR. TODD: In Appendix -- or excuse me, in Exhibit 20 of the application there's an explanation of how the funds would accrue and at what point you would revaluate the -the procedure for that fund. It says the funds would accrue for a seven-year period. It's on Page 2 of Exhibit 20. And then on or prior to the end of calendar year 15 you would reevaluate the decommissioning cost. My question is, why wait another eight years, why not reevaluate at seven if that's the end of the cash flow, if you will?

MR. KEARNS: So -- this is Matt Kearns, VP of business
development for First Wind. And the answer is, basically, that what we have proposed traditionally is the seven year -- there's a seven-year true-up and a 15-year true-up. And, basically, those are check-in points to check the scrap value and make sure there hasn't been any change. And if there is, resize the security to make sure that there is ample security to cover the full decommissioning costs or the -- the costs required at that point by the permit.

MR. TODD: Okay. But my question is the timing of when you do that. I mean, why wait for another eight years after the cash flow has ended or just been discontinued to reevaluate what the decommissioning costs would be?

MR. KEARNS: So why do it at seven and --?
MR. TODD: Well, it -- you don't say you're going to reevaluate at seven. At least that's not what I'm reading. You're saying you're going to wait another eight years before you're --

MR. KEARNS: Right. So as I understand it, we have now proposed to check in at seven so that we --

MR. TODD: Oh, you have?
MR. KEARNS: Yes. Yes. I apologize for --
MR. TODD: Was that in your pre -- your --
MR. KEARNS: I think it's in the -- in the follow-up information.

MR. TODD: Okay. All right. My next question has to do with the -- the tangible benefits. I'm not sure who to direct this to.

Neil, in Intervenor Gordon Mott's testimony, his pre-filed testimony, he tries to make a comparison with the per turbine tangible benefits, which is roughly $\$ 5,200$. He tries to draw a comparison between that -- essentially, an expenditure by the -- by the company to the return by the power that's generated by the turbines. He says that it equates to roughly three to four minutes out of a day.

Is that a fair comparison and would you agree with the values that he came up with?

MR. KIELY: I have not analyzed his math on that thing, but I think it's important to back up a little bit and talk a little bit about the tangible benefits statutes because I'm not sure that's an appropriate analysis or point.

As the Commission is aware, last -- I think it was last March the Legislature reevaluated kind of local economic benefits and they said, you know, separate and aside from taxes we want to set a baseline of tangible benefits to these local communities. And they made a determination to get that at $\$ 4,000$ per turbine. So they kind of -- this is not something that existed in law before, it doesn't apply to any other energy generation source in the state of Maine or, in fact, any other developer in the state of Maine. So
this is a unique burden for wind power.
And the Legislature came to that figure which was negotiated by, obviously, a number of stakeholders during that process and that's the $\$ 4,000$ per turbine, that's where that $\$ 4,000$ per turbine figure came from. So it wasn't tied to production, et cetera, it was a number that was negotiated and deemed appropriate by the Legislature as a threshold, if you will.

Obviously, they gave the developers in the law a certain amount of flexibility of how that money could be delivered to the local communities. There are essentially three buckets, community benefit agreement to the communities which was a direct payment, a conservation bucket or an energy fund bucket. But, again, they gave the developers flexibility on how -- which bucket they would use and how they would meet that. And, obviously, we're using all three in this project. And we're well in excess of the $\$ 4,000$ per turbine in the project.

MR. TODD: Okay. My -- the purpose for my question was the Commission has to make a judgment as to whether or not that's significant. That's the term that's used in the law. So I was just wondering if that -- the analogy that Gordon used was an appropriate way of looking at whether or not it's a significant benefit.

MR. KIELY: Again, I haven't looked at his math, but I
also don't think -- I don't think that would be a significant approach to doing that.

MR. TODD: My other questions are to Kevin -- excuse me, Adam Gravel. Is he here?
(A discussion was held off the record.)
MS. BROWNE: Can I just clarify one point because I think it's created a lot of confusion? On the decommissioning costs, the application actually had the true-up occur at year 15, which was really a holdover from the prior project. And in the Bull Hill project this question came up and the applicant committed to doing a check in, a true-up, in year seven, there was a post-hearing submission confirming that.

There's nothing in the record yet other than the testimony today that for this project the applicant is also willing to do a true-up in year seven as well as year 15 . We'll certainly put that in writing following the hearing, but right now the evidence in the record is just the testimony from First Wind here.

MR. TODD: Okay. Thank you.
MR. FARRAND: Can I ask a decommissioning question as long as we're on it? Under Section 4 in the third paragraph it says that in the interest of increased efficiency and minimal transportation impacts, components and materials may be stored on site in a pre-approved
location until the bulk of similar materials are ready for transport. Is there any kind of a time frame of when that material would be transported? Are we looking at the 15-year point or the seven-year point or --?

MR. KEARNS: So I would probably defer to James Sewall who prepared this plan -- the details of the plan. Patrick, maybe you can answer that.

MR. FARRAND: And I guess what I'm really looking at is that we're not talking about an endless storage of materials after a facility has been decommissioned.

MR. GRAHAM: Sure. Good morning, Madam Chair Woman, commissioners. My name is Patrick Graham, I'm director of renewable energy services for James W. Sewall Company, a resident of Bangor, Maine. In terms of your question, what we're referring to in that is when the project is decommissioned, which right now is presumed to be at the end of the lifetime, which is estimated at 20 years, that's when the storing of material would be.

So, for example, as one turbine is disassembled and components are arranged, then there may be limited storage so that they can be packed most efficiently on the various trucks that would be used to transport them to the scrap facility. So that's really what that's getting at. So we're talking a matter of maybe a couple of days material would be stored on site while it's awaiting transport to
the scrap facility.
MR. TODD: Adam, there was a late submittal into the hearing record from Stantec to U.S. Fish \& Wildlife in regards to their concern about some evaluation of lynx habitat. And can you tell me, first off, have you had a response from U.S. Fish \& Wildlife on that study and are they -- if so, are they satisfied with what you provided?

MS. PRESCOTT: We -- I talked to Mark McCollough from U.S. Fish \& Wildlife Service who that was directed to, I talked to him before we were submitting it after the request came in and let him know it would be coming that week. And I checked in with him again last week and at that point he indicated that he had been instructed to specifically work on other issues at that point and he was not certain when he would be able to review it. He also indicated that he thought this issue should be reviewed by Maine Fish \& Wildife -- Maine Island Fisheries \& Wildife.

We had copied them on our submission to U.S. Fish \& Wildife and my understanding is that they're reviewing it at this point, so --. And, unfortunately, U.S. Fish was not able to indicate when they would be able to review it and provide a response.

MR. TODD: Okay. And I have a follow-up question to that. And maybe this may be an unfair question to put to you, but since U.S. Fish \& Wildlife are not here, I can't
pose it to them. But the way you assess the lynx habitat in that report was to, essentially, determine whether or not there was snowshoe hare habitat. Is that the -- is that the U.S. Fish \& Wildlife protocol for determining lynx habitat is to, basically, look for the -- the habitat for its food source.

MR. GRAVEL: Yes every -- my name is Adam Gravel, I work with Stantec Consulting. We -- that is typically the method for mapping potential habitat for lynx. Snowshoe hare are their primary food source, almost 75 percent of their diet. So that is how you try and key on where lynx could potentially occur.

MR. TODD: So there's a written U.S. Fish \& Wildife Service protocol on how you do that and --?

MR. GRAVEL: I'm not necessarily aware of any written protocol, but it's based on recommendations from Mark McCullough at U.S. Fish \& Wildife Service.

MR. TODD: Okay. Could you describe the current understanding between Stantec or First Wind and Maine Fish \& Wildlife on the issues of the post-construction mortality survey and the -- the operational curtailment to avoid bat fatalities?

MR. WEST: My name is Jeff West, I'm the environmental coordinator for First Wind. And I can address that comment for you, Fred. We have been working with I F \& W, Maine

Department of Island Fisheries \& Wildlife on this curtailment study. As you may be aware, during the Bull Hill project $I$ F \& $W$ requested a curtailment from 3 meters per second to 5 meters per second with the cut in speed from the time period of April 20th through to October 15th when they felt that you might see the highest risk to bats on the project. Based on the literature and a number of the studies, we worked with I F \& W to develop a curtailment study that looks at curtailing a portion of the turbines, in that case, 50 percent of the turbines, to various cut in speeds and the -- the remaining 50 percent would be fully operational.

They agreed with that study and we're going to have a third-party or a principal investigator such as Bat Conservation International really plan that study and carry it out for us. We may also have additional contributors like the University of Maine at Orono and possibly the Bat and Wind Energy Cooperative. So I think it's going to be a good statistical robust study to tell us, A, if curtailment -- is it significantly reducing mortality in bats; and then, $B$, what are the actual time periods that we should be curtailing our turbines.

You know, Maine is -- we're at the kind of northern extent so we may see different migration patterns of bats in Maine at different time period. So this study, I think,
combined with our efforts at the Bowers project -- we're proposing a similar study there, a minimum of a two-year curtailment study -- will provide us with, I think, a pretty good sample size when you combine the two projects to give us a statistically robust result.

MR. TODD: Okay. So the study will involve Bowers, not just Bull Hill?

MR. WEST: Correct.
MR. TODD: Okay. And there's information in the record from I $F$ \& $W$ that they would like to have the post-construction fatality studies outlined before the permit is issued. Is that going to occur or --?

MR. WEST: Yeah. We've -- you know, historically with these projects we've -- we've set up a -- kind of a plan, a concept plan, for our post-construction mortality studies. And then as we get further along and prior to commercial operations, we finalize that plan. In this kind of field there's the study and how you, basically, search for carcasses under turbines and come up with an estimate of total mortality for the project is continually evolving.

So we use the best available literature to adjust those study plans. And so we have a final study plan typically prior to commercial operations and we're constantly in review and consultation with $I$ F \& W. Like our Stetson 1 and Stetson 2 permits, we're required to meet quarterly
with $I$ F \& W as well as U.S. Fish \& Wildlife Service to discuss the mortality in those study plans. We submit, I believe, for the -- our pre-filed testimony a revised study plan that is a little more detailed and is what $I$ F \& W is looking for.

MS. PRESCOTT: If I can just add to that as well. One of the things with that that's an example of the consultation is that on Bull Hill they provided some specific comments that they wanted to see incorporated into the post-construction plan. And realizing that those would be similar comments that they would want for Bowers, we worked productively with them to incorporate those in. And that's part of what was submitted as a revised plan. And then we'll work continually with them before it goes prior to operation so that if there are additional things that are found, those can be incorporated as well.

MR. TODD: Okay. So -- so in terms of the timing, are you anticipating that you'll have some understanding with Fish \& Wildlife, assuming the Commission issues a permit for this project, that that will be in place prior to the permit issuance; is that correct?

MS. PRESCOTT: (Nods head affirmatively.)
MR. TODD: The other question -- and I'm -- it was in Adam's testimony, there's a map that's -- I think it's Exhibit $H$ to his pre-filed testimony -- and it's this -- I
printed out a separate copy, but it's this -- this map here. And down in the lower left corner of that map there's a note, which I didn't notice until just recently, that says: In the Maine Wildlands Lake Assessment, Keg Lake is listed as inaccessible, undeveloped, Lombard Lake and Junior Lake are listed as accessible, undeveloped. However, based on field information, these lakes are categorized as accessible, developed.

Did that change in the Commission's findings affect the outcome of your analysis in any way?

MS. PRESCOTT: Well, I can answer the first part of the question, but $I$ think the second part of the question is probably for David Raphael. We were simply providing information that under -- in the Maine Wildlands Assessment those lakes were ranked as, I believe, either inaccessible and undeveloped or accessible and undeveloped. And based on our observation, both of doing desktop analysis of the structures that are around the lakes as well as visiting those lakes, it was clear to us that there was development such to the point that it would not be considered undeveloped. So that's the piece that's there.

MR. TODD: The -- I should have explained the purpose for my question, which is those findings are fixed in rule, they're codified in rule in Chapter 10 and the way to change those is through a rule making petition to the

Commission as opposed to -- I mean, it's perfectly understandable as a researcher you like to change those things on the fly when you find that they're no longer accurate. But my major concern was did your changing of those findings affect the outcome of your analysis in any way?

MS. PRESCOTT: I think that's probably a question best directed to David Raphael rather than --.

MR. RAPHAEL: The answer is, no, we were perfectly aware of the classifications. We may have made observations in the field that might warrant changing those classifications because of the time when they were first made and what's changed in the elapsed time since then. But, no, we -- that did not alter our conclusions at all.

MR. TODD: Okay. All right. Thank you. That's all I have for questions.

MR. HAMMOND: I have just one additional question. And you'll have to indulge me a little bit, I'm coming up to speed here slowly and probably you've gone through this numerous times. But just -- just a brief description of from a practical standpoint what will the site look like after it's decommissioned? What's left, transmission -and probably it's all in writing somewheres, but I haven't caught up with the curve yet and it's just something I'd like to know.

MR. GRAHAM: The -- just sort of in basic form, the decommissioning process involves taking down, disassembling the turbines, taking down meteorological towers and removing the pad mounted transformers. So, basically, anything above the ground. In terms of project components that are below the surface, for instance, like, the foundations for the turbines, those will be removed to 2 feet below the ground surface. After all that work is done, these areas will then be filled in and graded -graded back so that you don't have, basically, pits left so it's nice and smooth so you don't have problems with erosion or anything like that.

So once the -- once the project is complete, in terms of what you would see, immediately after decommissioning you would see potentially the -- the clearings that were made for construction of the turbines as well as the project roadways. And the -- over time those clearings would likely re-vegetate naturally. I think that the project roads would probably continue to be used by the -the underlying landowner, potentially for logging or something like that. Obviously, that would be up to them. But into the future you will probably still see the roads. That would be my speculation on that.

MR. HAMMOND: And what -- regarding collector lines and transmission lines, how far back and where do they go?

MR. GRAHAM: Yes, thank you for your question, I forgot about those pieces. So all of the aboveground components in terms of the electrical system would be removed. So all the poles would be removed, the electric wire would be spooled back up and -- and taken to be scrapped or recycled. And particularly with this project there are small sections of underground electric conduit and those would also be removed for those section -- pieces that are certainly within 2 feet of the surface.

MR. HAMMOND: Thank you very much.
MR. LAVERTY: I have just a clarifying question with regard to $I F \& W$ 's comments concerning operating regime curtailment and post bat mortality studies. Has I F \& W -is there -- is there information in the record, evidence in the record, that $I F \& W$ has accepted the study option and perhaps a different operating curtailment and is -- no longer has reservations in this area?

MR. WEST: Yes, I believe Mark Caron had submitted some -- some regarding that. And I know I F \& W is here today, I don't know if they can come up and say. And Mark's comments specifically address our curtailment study. So I would say, yes, but if you want to ask him, he's here as well.

MR. LAVERTY: I would like to. I don't want to put our colleague on the spot. If he feels it's appropriate, I'd
like to have him comment to that effect.
MR. WEST: And there's some clarification. It was in -- we included the Bull Hill letter that I wrote to I F \& W in our record as an exhibit, but I F \& W has not specifically commented that they are -- or accepting -- or it's not in the record that they're accepting a curtailment study.

MR. LAVERTY: Could we ask I F \& W?
MS. HILTON: We do have time set aside on the schedule at our next commissioner's meeting at July 6 --

MR. LAVERTY: Okay. So we'll have that opportunity then. Thank you very much.

MS. HILTON: -- so we can thoroughly go into that.
MR. WEST: And I'll just reiterate that they did accept it for the -- it's in the Bull Hill record and they accepted that. So in conversations with them, I mean, today even it's -- it makes sense that we would increase the sample size and get a more robust study by including this in the same program.

MR. LAVERTY: Thank you.
MS. HILTON: Any other questions? Okay. I think what I'm going to suggest -- we are behind schedule. But why don't we move forward before taking a break for lunch. The next session is cross-examination by PPDLW and that's about 25 minutes.

MS. BROWNE: Madam Chair, a housekeeping request. I've spoken with the PPDLW and David Corrigan and neither have requested to cross-examine Roger Milliken. So if there's no objection, I would like to -- he has got scheduling conflicts and if he could be excused, that would be great.

MS. HILTON: Okay. That's fine.
MS. BROWNE: Do you want to remind us who you want up here and we can just make sure we have that right?

MR. GURALL: Actually, due to the great job that the Commission and staff did, I don't think we have any questions for Sewall anymore, our questions would be for Mr. Raphael.

MS. BROWNE: Okay. And what about Stantec, any of the Stantec people?

MR. GURALL: They're not on our list to begin with, no.
MS. BROWNE: Okay.
MR. GURALL: My name is Kevin Gurall, I represent the Partnership for the Preservation of the Downeast Lakes Watershed. I live in Lakeville, Maine and have lived there for the past 10,11 years.
EXAMINATION OF DAVID RAPHAEL

BY MR. GURALL:
Q I just had a couple of questions for Mr. Raphael here. In regards to your testimony about the Baskahegan Lake surveys, is it true that this survey would not meet the
criteria of a non-biased survey?
A I don't know if $I$ can answer that question and I don't have a basis for determining bias or unbiased in that regard. I did not conduct the survey, so I couldn't --

Q Well, you've certainly referred to it numerous times, so I thought perhaps you would have an opinion on that.

A I do not.
Q Let me ask, is it true that everybody who was surveyed in the Baskahegan survey was already on the lake -- at or on the lake, which, therefore, would preestablish that they didn't mind recreating in the shadow of the Stetson turbines, which, therefore, make the -- the survey biased?

A I don't necessarily agree with that. I mean, I think, yeah, they were out -- they were at the lake, but, you know, they may have -- didn't necessarily predicate what their opinions were about wind when the survey was conducted.

Q Did -- did Mr. Palmer not make a rebuttal to your comments regarding the snowmobile survey that it was of little relevance because snowmobilers were already there, they had been fed a dinner, fed drinks and everything else, so it's really not a -- you know, an unbiased survey, I'm not sure how this would be considered different.

I mean, if the people are already at the lake recreating under the turbines, then $I$ think it's a fair
assumption that all of those people are okay with it, so it's going to skew the results pretty dramatically.

A I don't necessarily agree with that. I mean, they may be at the lake, that doesn't necessarily indicate that they liked having the turbines in view or -- or disliked having the turbines in view.

Q Okay. Do you realize that Baskahegan Lake is not a scenic resource?

A Yes.
Q So aren't we comparing apples to apples or apples to oranges here?

A I think it had to do less with the designation and more with what the viewers' response was to seeing the turbines in view or not response because there was no -- no response in that regard. So I don't think whether the lake was designated as scenic or not scenic was necessarily relevant in that regard.

Q I'm a little bit confused with your testimony this morning. When you first asked -- answered Commissioner Laverty's question regarding the possible ninth lake of statewide or national significance, you didn't seem to have any awareness of this ninth lake was your immediate response; is that correct?

A Well, it -- you know, we certainly were aware of the lakes, we looked at all the lakes in the region, our analysis --
if you look at our maps and so forth --
Q I didn't ask what you had looked at. I asked if that was your response?

A Okay. Please repeat the question then.
Q This morning when first questioned by Commissioner Laverty if, in fact, you were aware of a ninth lake referred to as Junior Bay or Pug Lake, you initially said that you didn't have any awareness of that resource; is that correct?

A It did not -- the listing did not come up as it being outstanding or significant and that's why it was not addressed in that regard.

Q Why is it then that you came back two minutes later, roughly, saying that you had looked at it and that there's 1 and a half miles of that lake that would be impacted?

A That's because --
Q There seems to be a conflict here.
A Well, no, not really because I became aware of it, obviously, last night when it was brought up in testimony and, therefore, I did some research over the evening to kind of look at it, look at what we had -- you know, how it had appeared in our report and was aware of the viewshed in particular hitting a -- you know, a corner of that lake which, you know, again, has been determined to be Pug Lake, so --.

Q So is your testimony that that is a ninth resource or is it
not a ninth resource?
A
We're still trying to sort that out.
And what's going to determine that? I assume you've had your 8-mile limit mapping done that you would know if it cuts across that body of water.

A It does cut across that body of water. I think there's still uncertainty as to whether it's actually considered either outstanding or significant as a resource.

Q You've also said several times here that you're a paddler and sportsman; is that correct?

A Yes, sir.
Q Do you consider yourself fairly active in that area, an experienced paddler?

A Yes.
Q Is it true in your VIA that you describe the thoroughfare between Junior Lake and Scraggly Lake as narrow, rocky and shallow and suitable only for small crafts such as kayaks and canoes?

A That may have been a mischaracterization. I realized after getting back to the lake and paddling that -- or traveling over that it's a little bit wider. I don't know exactly what the depth is. There are definitely rocks there. I'm also aware that the lakes are drawn down periodically and that the water level drops.

So I haven't been on the lake when the water level is
low, but $I$ know there are certain of those kind of navigable areas that become trickier.

Q I just was wondering if maybe part of the tour that went yesterday was a little concerned about that because they were in a 21 -foot -- I mean, Lund boat with 135 horse motor on it and they didn't seem to have any problem negotiating that thoroughfare. And I can tell you as a person who lives on those lakes that the water there is approximately 30 feet deep and in the fall after drawdown it's around 14 to 18 feet deep at that spot. So I --

A I would imagine more rocks -- are more rocks exposed at that time?

Q Not in the main travel fare. That lane -- I mean, that thoroughfare is pretty well divided left and right. The right-hand is rocky and shallow, the left-hand is adequately deep for any boat that could possibly go on that lake. So I just wanted clarification there.

A Thank you.
On Page 10 of your VIA you listed eight different books, eight websites and eight tour guides. However, unless I've missed them, I didn't see any footnoted references to any of these books, websites or guides. Is it true then that you found no redeeming qualities in any of these 24 documents that you would include in your report?

A You know, we review these, we don't necessarily have to
site them to accommodate or understand what they might imply or if there's any information that specifically relates to the visual impact assessment.

Q The reason I'm asking is I noticed in your -- in your pre-filed testimony it does not say that you read those, it said you gathered them. So I was wondering if you had actually used those. If you're going to list 24 resources, one would think that there was a reason for you to list them, such as you actually read them or --

A Either myself or my staff and associates reviewed them. I wouldn't -- I couldn't tell you that I read them cover to cover. For example, the AMC, you know, Quiet Waters -- I mean, the Quiet Waters Maine, I definitely looked at that and read sections to -- that were applicable to this area so that I had an understanding of, you know, paddling in the region.

Q So it is your testimony then, am I correct, in stating that of the 24 resources you listed, eight books, eight websites and eight tour guides that there was nothing that you took from them and footnoted in your report?

A The second part may be true, although, actually, there was a reference to the Quiet Waters Maine in our report. We may have read them. If we didn't footnote them, that didn't necessarily mean that, you know, we didn't corporate information in our analysis.

MR. GURALL: Okay. That's all the questions I have. MR. RAPHAEL: Thank you.

MS. HILTON: So I guess, David, do you want to -- David Corrigan.

MR. CORRIGAN: Hi. David Corrigan. And I think I'd like to start with Stantec Consultants today. All right. And I believe since most of the testimony I'll be referring to is -- was signed by Adam Gravel, Dale Knapp and Joy Prescott simultaneously, I'll direct them and let them decide who's best to answer. MS. HILTON: Okay. And remember to slow down. EXAMINATION OF ADAM GRAVEL

BY MR. CORRIGAN:
Q For you folks, is it true that in your pre-filed testimony on Page 7, Table No. 1 in listing other wildlife you listed no threatened or endangered species or habitats that support these species for the project area?
A You said Page 7 .
Q Page 7, Table No. 1.
A That is correct.
Q Okay. And on Page 26, No. 6, other wildlife, is it correct that you said: Other predators expected to occur in the project area based on their habitat requirements include red fox, bobcat, fisher, long-tailed weasel and raccoon? Is that a proper listing?
A Yes, that's correct.

Okay. And in the same paragraph did you say: Listed species in the state such as Canada lynx, northern bog lemming, spring salamander, roaring brook mayfly are not known to occur in this region of the state or the habitats within the project area and are not expected to be impacted by the project?
A That's correct.
Okay. And finally on Page 27, Section 4 in the conclusion, did you say: Importantly, the project area does not include unique habitat that requires protection from development and does not host the species that require special protection?

A Yes, that's correct.
Okay. I've heard from commissioners a little bit of -- a question about the lynx studies. I'd like to follow up on that a little bit.

Can you tell me the qualifications of the people who did your tracking -- winter tracking studies?

A What studies are you referring to?
Q Did you do winter tracking studies?
A No, we did not.
Q You did not. Can you tell me how many area bobcat hunters or other outdoorsmen or trappers you spoke to about lynx in the area?

A No, I can't.
Q So you spoke to none; is that correct?
A We spoke to the relevant experts of the state, which include the U.S. Fish \& Wildlife Service and the Maine Department of Island Fisheries \& Wildlife.

Q Okay. Did you consult with the local game warden, Paul Farrington, about lynx in the area?

A No, we did not.
You did not. Okay. On that note -- just give me a second to find the right paper. Are you aware of a document entered into the record from U.S. Fish \& Wildlife Service dated November 17, 2009 originally addressed to Sean Casto at Normandeau Associates where the U.S. Fish \& Wildlife Service -- it was in reply to the initial request for information from the U.S. Fish \& wildlife Service on endangered species and such?

A Yes, I am.
Okay. On Page 2 of that document it says: Wind power construction activities may cause adverse effects on the Canada lynx depending on size and scale of habitat alteration the project may cause. It goes on to say: Evaluations of boreals, spruce fir habitat and/or snow tracking surveys in the vicinity of the proposed towers, roads, transmission lines and other facilities would help assess the potential for the occurrence of lynx. Maine's

D I F \& W conducted lynx snow tracking surveys in northern and western Maine in recent years. And you should contact Jennifer Vashon, M D I F \& W lynx biologist, with an address, to determine if surveys were conducted in your project area or nearby townships. Ultimately, this information will be needed by federal agencies permitting or funding your project to determine if adverse effects on lynx or critical habitat are anticipated. Are you familiar with that section?

A You -- excuse me, I missed the last couple words. I'm sorry. Are you familiar with that request that -A Yes.

Q -- that was in the record? Did you in fact consult with Ms. Vashon?

A No, we did not, but we did stay in contact with Fish \& Wildife Service.

Q Okay. So you did not follow up on the request of U.S. Fish \& Wildlife Service to consult with the I F \& W on this? MR. WEST: I think I -- this is Jeff West, environmental coordinator for First Wind. I think what Mr. Corrigan is getting at is whether or not we consulted with the Fish \& Wildife Service and I F \& W on the lynx issue. Let me just -- and if he would let me -- permit, I will kind of give you a brief overview of how we do our environmental assessments and risk analyses, because that's
what we're getting at here is a risk assessment.
MR. CORRIGAN: If we could get a brief statement of that, I'd find it helpful.

## EXAMINATION OF JEFF WEST

A First of all, the letter he is referring to is a letter that was sent out when we consulted with U.S. Fish \& Wildlife Service on our met tour application. At the time our met tour application did not trigger any federal funding as the letter would request additional information on or, you know, fill of any wetlands that are permitted by the U.S. Army Corps of Engineers. So the met tower itself didn't have any impacts that they would require Army Corps permitting; and, therefore, consultation was not necessary between the Army Corps and Fish \& Wildlife Service.

Q May I make one clarification here? That letter that he's referring to says: Thank you for your letter dated July 14, 2009 requesting information on recommendations from U.S. Fish \& Wildlife Service concerning the proposed wind project located at Bowers Mountain. It does not mention met towers. Just for clarification.

A Yeah. And that was part of the -- our critical issues analysis that we do. So as we're developing and we're putting up the met towers, we do a critical issues analysis that looks at issues in the area. It's kind of a high level approach, 35,000 foot approach, in determining what
kind of issues we need to spend more time on and study in depth. So it looks at sensitive habitat, it looks at resources, endangered species, state listed birds, bats, historical properties, cultural properties, flood plains, FEMA zones, aviation constraints. It's kind of a whole -a whole breadth of studies. And so it helps us identify where our risks are and what we need to concentrate on.

The lynx critical habitat is over 29 miles away from the project. The historical review areas are north of the collection line. We - we didn't feel that the lynx presented a substantial risk to this area or used this area at the time. And -- and we also knew if the project was permitted and going forward within the Army Corps process that the U.S. Army Corps of Engineers would consult with U.S. Fish \& Wildife Service.

And that's exactly where we are today. We have submitted Army Corps application and the U.S. Fish \& Wildlife Service has requested a review -- a risk assessment review of -- or habitat assessment for lynx in the area and the potential to occur. So the best way to do that is a desktop analysis and looking at potential hare habitat.

And Adam can talk more about the biology, I'm just talking about the process that we're going through. So we've identified, you know, in the area of 4 percent of
potential hare habitat that intersects with our roads. So out of 11 miles of roads, we have .4 miles of potential hare habitat that intersects with our roads. And it's moderate value hare habitat. And this was developed -- or we concluded this from our aerial photography that we took in 2009 under leave-off conditions. And these are high resolution ortho photos that we used. And these are the similar assessments we've used at Oakfield -- at the Oakfield project as -- and that was also used, I think, at the Kibby project.

Q I appreciate the overview of what you've done and it seems to match everything that's in the record to date, but I'm still wondering why you never followed up -- now that we're in this position why you never followed up on the U.S. Fish \& Wildife's recommendations to check with I F \& W about tracking surveys, actual on the ground field research to see if lynx use this area?

A Well, we meet with I F \& W as well as we're -- was we're developing a project. And we come out -- we develop a study plan in consultation with $I \mathrm{~F}$ \& W . This was not an issue that was raised by I F \& W, it wasn't something that was requested like in -- in our similar project in western Maine in the Bingham project where I F \& W actually identified tracking surveys and we conducted them. Basically, the risk here is not high enough to warrant

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    tracking surveys or -- or more studies on lynx.
    Okay. To follow that up, if it's not high enough to worry
        about lynx and tracking surveys, are you aware that in
        December of last year I F & W issued emergency rule making
        to change the trapping rules for this area because they
        were concerned about accidental catches of lynx?
    A As I understand that, that was for the entire state of
    Maine, especially the critical habitat --
    Q That's not correct.
    A -- where --
        That is not correct. They issued -- on December 10th they
        specifically issued the rule making change for WMD that
        this project is in which made it similar to the critical
        habitat because there had been -- had been incidental
        catches in the area and they were worried about it
        continuing.
        Does that not contradict what you're telling us that
        this is not a lynx area?
    A Well, WM -- you're talking about wildlife management area
        at 19?
    Q That's correct.
    A That's a fairly large management area that covers a wide
        breadth of Washington County. There is potentially lynx
        habitat in the rest of that management area of Washington
        County, I would not disagree with that.
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Q Okay. Are you -- are you aware that -- that there are historic lynx sightings from Route 6 south through the project area?

A Yeah, I believe there are several and I think Adam Gravel probably has more expertise on those sightings than I do.

Q So you -- the fact is you were aware of historic lynx sightings in the area, you're aware that I F \& W was worried about trapping -- accidentally trapping lynx in the area and yet you decided to do nothing but desktop surveys and do no fieldwork to determine if lynx use the area; is that correct? I would just like a yes or a no.

A As I follow-up, yes, based on our -- our initial habitat assessment, yeah, we do not -- we do not feel that it warrants further tracking surveys.

Q Okay. I tend to disagree and I wish the Commission would look further into this because while U.S. Fish \& Wildife Service is charged with handling this on the federal level, I believe LURC commissioners are also charged with this on a state level as far as looking out for these species and requesting further information for agencies as appropriate. So I will let off on that one.

A And if -- if we will, I would let Adam, who's got -- the biology expert, maybe he could talk about in terms of habitat and the risk associated with the lynx there. MS. HILTON: It's your time, David, so --

MR. CORRIGAN: I would rather not get into right now. I believe the fact has been established that they have not followed up on the questions that were asked from U.S. Fish \& Wildlife Service and I will leave it to the Commission to possibly follow up on that later.

MS. HILTON: Okay. And you know that on Wednesday the agencies -- you will have an opportunity to.

MR. CORRIGAN: Yes. But I also know Fish \& Wildlife will not be there. So I would like to just keep it in the commissioners' minds that it's something that needs to be followed up on as appropriate. All right. I would like to move on to -- if I can get my paperwork right here -Mr. Kiely, Kearns and West. I think I'm done with the Stantec consultants on the wildlife issues.

And this is in relation to their pre-filed testimony that came in under the names of Matthew Kearns, Neil Kiely and Jeff West all together. So I'll let them decide who to address.

## EXAMINATION OF NEIL KIELY

## BY MR. CORRIGAN:

Q On Page 6 of your pre-filed testimony under Section 3, No. 1, it's headed Potential to Generate Significant Energy in the Proposed Location, is it correct that you said the Bowers project has the capacity to generate significant energy at the proposed location, specifically the average
wind speed projected for the Bowers project as 7.5 meters per second -- which is between a Class 4 and Class 5 wind resource. The 27 turbine project is expected to produce up to approximately 200,000 megawatt hours of energy per year; does that sound correct?

A I'm waiting to find the exact location, if you don't mind.
Q In Page 6, Section 3.
A I think we have different pages here.
MR. CORRIGAN: This was page 6 of the testimony of Kearns, Kiely and --

MS. BROWNE: The direct or the rebuttal. MR. CORRIGAN: -- and West. I'm sorry? MS. BROWNE: The direct testimony? MR. CORRIGAN: Yes, direct testimony.

A Section 1?
MR. CORRIGAN: I believe it's Section 3, No. 1.
A Okay. Yes, I have you.
BY MR. CORRIGAN:
Q Okay. Is that an accurate classification of what you say there?

A $\quad 7.5$ meters per second, correct.
Q Okay. Have you entered -- I have not been able to find -have you entered into the record any actual meteorological test data from the Bowers site to confirm that?

A We have not entered that into the record. We've never
entered that into the record during application process.

Two -- I'm sorry. It has never been a requirement, it is also -- we would consider that proprietary wind data. We do enter into the record the projection on the actual hours that will be produced. And we -- we also, as part of our post-permitting process, supply that information to LURC. So, for example, Stetson you have now operational data for Stetson 1 and Stetson 2 that you can compare to the projections that were made to that application process. So you are basically asking us to take your word for it and you will tell us afterwards if it worked out without providing any documentation beforehand?

A track record that speaks for itself in our ability to predict and project the wind speeds. And, obviously, we're getting financed and we're attracting folks that are reviewing this information.

In other words, in discussions, I think, with staff, this data really, without the appropriate sophisticated software modeling techniques, would be unintelligible to the staff.

Q I would like to ask, how can you consider proprietary information -- if you have told us what you believe the average wind speed is, you already have options tied up on
the land, obviously, and a permit before this Commission, how could -- how could giving us the actual hard data compromise -- compromise your company?

A This hard data -- I mean, there's a difference between the actual number of hours that are produced and the quality of the winds and the way we take advantage of the quality of those winds with our technology and the technology we select that is really an art and that -- you know, it could be considered our secret sauce, if you will, about how we approach wind sites. So that is proprietary data to us. But the data that tells us 7.5 meters per second, how can that be proprietary if you've admitted openly that that is what you have?

A average wind speed, but we're not talking about the underlying --

I'm not asking for that, I'm asking for the proof that that is the actual wind speed on the site that you've documented. That's not entered into the record. I don't -- I wonder how the Commission can take that into consideration if it's an unsubstantiated claim not entered into the record as fact. That's what I'm getting at.

A Well, that's not been a requirement of the permits in the past. We provide our protections and we've actually followed that up with post-construction production.

But is it not true that any claims made by either applicant or intervenor has to be -- legally has to be followed up by hard, documented facts? Is that not a requirement of these hearings?

A I don't think this a requirement.
MS. BROWNE: I object. If he's asking for legal conclusions, that's not an appropriate forum to do so. MR. CORRIGAN: I'll withdraw that. I'm sorry. My concern is that we are being asked to take your word for data that's not in the record and I don't believe that's appropriate. So with that, just a couple things -- give me just just a moment here. I have pre-filed rebuttal testimony of Patrick Graham, Jeanine Murchison and Jody O'Neal which came in too late to ask for cross-examination time on them, but I believe, perhaps, Mr. Kiely and the rest could address some of this and if they can't, we'll move on.

MS. BROWNE: I mean, if they're the appropriate people to ask --

MR. CORRIGAN: If they're here, I'd like to ask them. I just didn't know if they're available. MS. BROWNE: Yep. All our witnesses are available. MR. CORRIGAN: Okay. Yes, I would like to address Mr. Graham, Ms. Murchison and O'Neal. And I'll keep this as brief as possible, $I$ just have a couple of questions
here.
EXAMINATION OF PATRICK GRAHAM
BY MR. CORRIGAN:
Q All right. If you folks are ready, on Page 2 of pre-filed rebuttal, Section 2 of groundwater, second paragraph in that section, they say -- and I say -- they say: That for this project and based on designs of similar wind power projects it's expected that the larger concrete foundations will be approximately 50-by-50 feet at the base and on average 6 to 8 feet deep. Depending on the type of foundation, the volume of concrete for each turbine pad is approximately the same as one to three average-sized homes. As a result, the total amount of concrete is not going to exceed that which is used in two or three average-sized municipal subdivisions, hardly massive quantities as Mr. Corrigan has suggested. Is that your testimony?

A Yes, sir, that is correct.
Okay. Just to clarify, this was based on my initial concerns about blasting and pouring concrete up on those mountains and the effect on groundwater aquifers. And I don't disagree with what's in here substantially as far as the amounts of concrete, $I$ believe that's in the record. I would have a question, though, about the appropriateness of that -- of that comparison. Are you aware of any -- any multiple municipal subdivisions being
placed at the headwaters of a similar watershed in Maine on ridges?

A
I can't say that I am because I haven't done that kind of a study of the whole state of Maine. What we were attempting to do in the rebuttal testimony was just provide some sort of measure that was -- that could be easily recognized in terms of being able to relate to the amount of concrete --

Q I appreciate that.
A -- that is in the foundations to something that an average person and certainly the commissioners would be familiar with.

Q No, I appreciate that. So on average we're looking at each one of these turbines taking the same amount of concrete as two to three average-sized homes; that's your opinion?

A Yes, approximately.
Q Okay.
A Obviously, it depends on the size --
Q There are differences, but that's a good approximation we can all kind of understand. And you say there will be -these foundations will be on average 6 to 8 feet deep.

What about the -- the retaining bolts for these turbines, how deep are those holes drilled or blasted or placed in the bedrock?

A Are you referring to the anchor bolts.
Q The anchor bolts that hold everything down, yes.

A Okay. The anchor bolts -- and these are -- I guess if I could take one step back to clarify so that everybody is aware. There are typically two types of foundations that have been used so far in the projects that we've been working on here in Maine. One is called a rock anchored foundation and the other is called a spread footing foundation. And it depends on the underlying substrate, namely whether or not we have bedrock close to the surface. And so the foundation that you're referring to is a rock anchor foundation. And in that type of foundation there are borings that are drilled for the rock anchors that are approximately 40 feet deep into bedrock. That is so that the foundation can be secured properly to safely hold the turbine.

Q Okay. So in this project we're talking the major excavation will only average 6 to 8 feet, but there will be holes bored approximately 40 feet into bedrock at every one of these turbines?

A Yes, there will be borings for any of the rock anchor foundations. And --

Q Can you tell me approximately how many rock anchors per turbine?

A I can look that up for you. I can't tell you right off the top of my head exactly how many rock anchors there are. I would -- just without looking --

Q Just a rough estimate.
A -- I would say roughly two dozen.
Two dozen. So we're looking at a couple dozen times 27 to get a rough figure for the project? That would be roughly correct without looking up the specifics?

A Well, I would say that that's assuming that every turbine had that type of foundation. And currently we don't know for each turbine what type of foundation it will have because that requires geotechnical studies that have not been completed as of yet.

Q So at this time we have no idea how many 40 -foot holes will be drilled in the -- in that ridge line; is that correct?

A I can't tell you exactly how many, no.
Q Okay. That's what I wanted to know. And this gets to my concerns over -- over deep groundwater. I have reviewed and haven't come up with too much to dispute on their surface water -- surface water plans as compared to other wind plans I've seen, but I still have deep concerns about groundwater in this issue. And I think the Commission -- I wish they would keep an eye on --

MS. BROWNE: Is there a question, Madam Chair, as opposed to testimony by the -MR. CORRIGAN: I apologize and I will conclude. Thank you. I'm all set.

MS. HILTON: Thank you. We've got redirect and then
we'll break for lunch. And I guess that's you, Juliet. MS. BROWNE: Yes, I do have some redirect.

## EXAMINATION OF MATT KEARNS:

BY MS. BROWNE:
Q Thank you. There were some questions early on -- and this is for you, Matt -- about the OCAS technology for night lighting of turbines. And I have two questions. The first is, what has First Wind done with respect to evaluating that technology? And then the second question is whether you could elaborate on the question you received earlier about the willingness of First Wind to evaluate it moving forward?

A Thank you. So we have done, as I indicated to Commissioner Hammond and Laverty, we have done this kind of rolling due diligence of the technology that's out there and we are really interested in finding that perfect solution. We haven't found it yet, but we are working on it. And OCAS came -- they've actually spent, as I understand it, a fair amount of time talking to agencies and LURC may be among them, I'm not sure. But the technology is new and, as I understand, it is very, very expensive and not quite there in terms of FAA approvals.

So -- but I would say, you know, we are in the process of diligencing that further. So we're going to keep doing that and see if we can figure out a way to address the
concerns that have been raised here because, frankly, it's -- you know, we realize it's a critical issue. To the extent that we can mitigate lighting impacts, we're going to find a way to do that. So we're committed to finding solutions.

We don't think we're quite there yet with OCAS, the cost was just staggering, frankly. And the -- again, the idea about timing, maybe pushing it down the field, I mean, we will certainly take those thoughts under consideration and try to come up with a -- with a solution. So I hear where the Commission is coming from and I'm anxious to find -- and folks often say to us, you know, if only the turbines weren't visible, right, I mean, because that's the key issue and the lighting is -- is similar.

But the FAA makes us paint a certain color, they have to come in in a certain paint chip, and the lighting requirements are also dictated to us by FAA. And then we're boxed into the cost constraints, just the straight economics of the project. So I just wanted to further address that. Thank you.

EXAMINATION OF PATRICK GRAHAM:
BY MS. BROWNE:
Q Thank you. Patrick, a quick question for you. You were asked whether you're familiar with any residential subdivisions that are built on ridges in sensitive
watersheds. Are you familiar with any wind power projects that have been built on ridges and sensitive watersheds?

A Certainly. There are a number of them. And if you look at the projects that have been built in the state, almost every single one of those that have been built to date would fall into that category. So this is something that we have dealt with before many times and certainly we've used these types of foundations on all of these projects. So this is standard practice and we know it works and can be done safely.

MS. BROWNE: Bruce Lockwood, have you come back up? I had a question for you.

## EXAMINATION OF BRUCE LOCKWOOD

BY MS. BROWNE:
Q I can't remember -- Dr. Palmer asked -- it may have been David or -- I think it was David about the telephone survey done by PRG didn't give us any information on the level of use of these lakes. My question to you is whether the telephone survey gave you any qualitative information about the relative use of these lakes?

A Yes. Bruce Lockwood again from Cape Elizabeth representing Portland Research Group in Portland, Maine. The telephone survey -- one thing that we were able to determine from that survey is from the -- we surveyed from the New England area and the state of Maine and all of the respondents that
we interviewed where we got to the point where we were able to ask if they were aware of this region and actually used the study area for some of the outdoor activities that you can do around the lakes, we found that only 5 percent of the people that we actually spoke with were aware and used, at least rarely, at least one of the eight lakes that we've been looking -- researching in the study area, so just 5 percent.

Q Okay. Although you may not have hard numbers from an intercept survey, you have qualitative information on the relative level of use?

A Yes. And a number of the different uses such as canoeing and kayaking and hiking and so forth that take place in this area, yes.

MS. BROWNE: Thanks. Joy, are you up there? EXAMINATION OF JOY PRESCOTT

BY MS. BROWNE:
Q At the risk of revisiting a question that has created a lot of confusion, could you please explain for the Commission the issue of Pug Lake and whether there is somehow a ninth resource that hasn't been identified that's within the study area?

A So in the Maine Wildlands Assessment, which is a table that is primarily available in hard copy, there is a listing for Pug Lake, there is not a listing for significant or
outstanding scenic quality for that lake. So the question that we need to look at, that Palmer explained and that Fred explained, is that we need to identify whether that Pug Lake is the Pug Lake that was referenced in the testimony yesterday or whether that Pug Lake is part of Junior Bay or if it's on its own lake. So that's the --.

Q So as I understand it, if you look at a DeLorme map there is a separately identified Pug Lake that is within the outer edge of the study area?

A That's correct. And if you look at a DeLorme there is a channel that connects Pug Lake to Junior Bay which then connects to West Grand Lake.

Q And if Pug Lake is its own lake, the classification for that is not either significant or outstanding for scenic quality?

A That's correct. And I'm looking at the table as we look in the Maine Wildlands Assessment.

> EXAMINATION OF ADAM GRAVEL

BY MS. BROWNE:
Q Adam, there was some discussion about lynx habitat. And I guess I'd like to ask you, are you aware of any difference in threats presented to lynx from trapping activities which are the subject of the emergency rule referenced by David Corrigan and the risk presented by an operating wind farm? And could you comment if there's any difference in those
risks?
A Yes, there's a -- there's a huge difference between the two. What we're talking about is direct mortality as a result of vehicle collision or trapping, which trapping has been shown to be the biggest threat in Maine to lynx populations, versus habitat loss which is an indirect impact. And as -- as we have -- now that we've completed the habitat assessment on site, we're not showing -- the project area doesn't contain that high value snowshoe hare habitat that lynx prefer. We do have -- there are some small patches of moderate value lynx habitat, but these patches are so small that they wouldn't support a single lynx because of the size of their home range. The home range requirements for lynx are up to 18 square miles. We're talking about, you know, tenths of a mile here. And are you aware of U.S. Fish \& Wildlife having evaluated the threat to lynx associated with other wind power projects that might be located in higher value lynx habitat?

A Yes. Certainly the -- the Kibby wind project, as located in core habitat -- critical lynx habitat in Maine, it also has very high value snowshoe hare habitat, a lot of softwood cover. And the determination was that the habitat loss and -- to vehicle traffic was insignificant, basically, not presenting adverse impacts to lynx.

Again it is true for the Oakfield project. It's not within designated critical lynx habitat, but it is -- it does abut lynx habitat. The same determination was made there. And we're talking more roads and better -- at least in terms of the Kibby project, better habitat.

MS. BROWNE: Thank you. Nothing further. Thank you.
MS. HILTON: We're going to adjourn for lunch and be back here -- we'll be back here at 1 o'clock sharp.
(Whereupon a recess was held at 12:22 p.m., and the hearing was resumed at 1:08 p.m. this date.)

MS. HILTON: Okay. So first up is the Conservation Law Foundation, Shawn.

MR. MAHONEY: Good afternoon, Chair Hilton and members the commission. My name is Shawn Mahoney and I'm the director of the Conservation Law Foundation in Maine.

Almost four years ago to the day $I$ was in the same position $I$ am right now addressing this commission and providing testimony in support of another wind project, Stetson 1. And since then a number of things have happened. And the first is I have to wear these cheaters in order to see what I wrote.

Second is the Commission has approved and denied a number of subsequent applications for wind power developments, two separate inclusive task forces have addressed the development of onshore and offshore wind
developments, and legislation has been passed to try and address the issues that the Commission, its counterpart, the DEP, and agency staff have wrestled with raising new issues in its wake.

Some things have not changed over the course of the last four years; Maine remains the state most dependent on oil for its energy needs, Maine remains the New England state with the greatest amount of wind power capacity, and the threat to Maine's natural resources and economy from climate changes is as great, if not greater, than it was four years ago outlined in the testimony of Dr. Wake. And the Commission's charge to balance the benefits of wind power verses their impacts on the scenic resources of the surrounding area remains a Gordian Knot.

In the application that's before you today for the Bowers wind project that knot is the issue. This is a low elevation project situated in a working forest with few impacts on the natural resources of the project itself. This project is essentially clustered with the Stetson 1 and 2 projects and the soon to be operational Rollins project and is able to tie into the existing transmission line reducing its impacts -- further reducing its impacts. Whether this project has an unreasonable adverse effect on scenic character requires you to balance the benefits and costs of the project and determine if on balance the
effect is reasonable or not. The Wind Energy Act sets forth specific criteria for you to apply to this application, as you well know.

The testimony that we're providing today speaks to the balance that you must strike. What are the tangible benefits of the project beyond those assumed by the Act itself or the required community benefits? And what is the proposed development's purpose and context? That's why we've submitted testimony and why we're here.

Specifically, Dr. Cameron Wake, who also appeared before you four years ago, provided testimony on the adverse impacts of climate change on Maine's forests, on its winter recreation industry and on Maine's freshwater and marine resources. Dr. Wake has been excused from testifying here today so his testimony is part of the record. His testimony provides facts that we believe are important for you to keep in mind as you wrestle with the difficult task of balancing the costs and benefits of this development.

Similarly, Ms. Krich's testimony provides you with the facts in which to place this project in the context of Maine and New England's energy needs. As you heard last night and no doubt will hear later today and again tonight, there are many heartfelt and genuine concerns about this project's potential impacts on existing uses associated
with the scenic resource. There's also an increasingly vocal minority who generate misleading, downright false claims concerning wind power and its role and impact in providing electricity to Maine and New England. We heard some of that last night. As you will hear, Ms. Krich's testimony is provided so that you all understand the facts and the context about how the energy from this wind power project will impact Maine and New England.

In preparing for this hearing $I$ was struck by the testimony of Roger Milliken and share his appreciation for your thoughtfulness, dedication and hard work. You do not have an easy task and we recognize that.

However, when the purpose and impacts of this project are viewed in the proper context, we strongly believe that the benefits of this project outweigh its costs. And we urge you to approve the application before you. I now turn it over to Ms. Krich.

MS. KRICH: My name is Abigail Krich, I'm president of Boreas Renewables, a consulting firm that works with the wind developers in the northeast on advising them during the development phase of their project as well as doing industry advocacy work in the electricity markets on behalf of renewable energy.

I know I don't have the gray hair that many witnesses would have, but I've been working in the wind industry
since 2004, including some time working at the Department of Energy's national renewable energy lab, National Wind Technology Center, on specifically wind integration issues and how the power system handles variable electricity from wind. I also have a master's degree in electrical engineering from Cornell University focused on power systems. And additional background and qualifications are in the direct filed testimony that we submitted.

I've been retained by CLF to provide independent assessment for the Commission.

MS. HILTON: Could you speak up a little bit? I -we're having a hard time hearing.

MS. KRICH: Sorry. I was worried about feedback. Is this better?

Okay. So the purpose of my testimony is the Bowers wind project, like other wind projects in Maine, would have a positive economic and environmental impact in Maine. And as Shawn was saying, I want to provide you some context for how the electricity produced from the Bowers wind project and from wind projects in Maine interacts with the system, what economic impact it has and sort of address some of the urban legends regarding wind energy and the variability of wind energy that have been put forth recently and especially what was mentioned last night in the public testimony.

So all generators -- electricity generators and all customers of electricity, consider load, they're tied together by the electrical transmission and distribution wires. And the system as a whole is operated by the independent system operator of New England. And one of the -- their primary task is to ensure the reliability of our electrical system in New England.

One of the key pieces of that is making sure that the generation, the electricity being put into the system, and the -- the load, the electricity being pulled out of the system, are in balance at all times. There's not significant storage on the system, we have very minimal ability to store electrical energy. So it's a constant balancing act trying to make sure that the generation being put into the system and the load being pulled off of the system are in balance.

And the reason that that's important is that when wind energy produces electricity, by definition it must displace other electricity that would have been fed into the system, it must replace electricity that would have been produced by other generators. And ISO New England runs the electricity markets, they have a number of markets in New England, that determine which generators are going to produce electricity when and which -- which generators would be displaced by wind energy. So primarily they do
that on an economic basis while ensuring reliability for the system.

So wind energy has an extremely low variable operating cost. Their costs are primarily capital expenses. So from the day that they start operation and producing electricity, most of their costs have already been sunk into the ground. They don't have very much cost for operating, you know, the next day. They have some operational maintenance costs, but not -- not much of it is related to how much electricity they produce in any given day.

So what that means is every quantity, every unit of electricity that the wind farm can produce, they'll take any price that they can get in the market because they have very small variable costs per producing the next kilowatt of electricity. So they operate in the market as what we call price takers. They will offer their electricity when it is available and take any price that the market can offer them for that electricity. So price takers in the market have the effect of suppressing the price for electricity.

So in my testimony I discussed some of the variable costs of energy for different types of generation in New England. So wind and hydro that don't pay for their fuel have an extremely low variable cost of energy. And
their electricity generally will be taken any time it's available. Nuclear has a slightly higher cost to produce, but generally produces all the time. It's about 1 cent per kilowatt hour is their variable cost of energy. Coal, a little bit higher than that, maybe 3 to 6 cents per kilowatt hour.

And then you start getting into more expensive units. So combined cycle, natural gas units might be 5 to 7 cents per kilowatt hour. Gas turbines -- natural gas turbines would be 7 to 15 cents per kilowatt hour. Oil or steam -oil or gas steam turbines are typically 15 to 23 cents per kilowatt hour. And then typically the most expensive peaking units, the oil combustion turbines, range from about 23 to 37 cents per kilowatt hour.

So I wanted to give you that context to explain that when ISO New England operates the markets, they take all of the bids from all of the generators who are offering to supply electricity in a given hour and they line them up in what's called a bid stack. So they line them up in economic order. And then they determine what load they need to meet, how much electricity needs to be produced by those generators. And they pick the lowest cost generators to meet the load and they select those and pay them all a marginal price. So the most expensive bid that was selected to produce electricity to meet a load sets the
price that's paid to all generators that produce during that time period.

So wind energy, because it operates as a price taker, its effect is actually -- generally it's considered net load that you would have once you include wind in that system. So ISO New England would look at what load needs to be met in a given hour and then they would subtract from that the amount of wind energy that would be expected to be produced and only purchase that amount of electricity from the other conventional generators. So because you're reducing the amount of electricity that needs to be purchased from those other conventional generators, you're lowering where in the bid stack the marginal unit is and you're actually lowering the price that all generators in the entire region get paid.

So in some parts of the bid stack it's fairly flat and a small change left or right in the bid stack doesn't have a huge effect, but it always does -- price taking energy always will reduce the price being paid to all generators. But there are parts of the bid stack, especially when you get up to peaking units and high demand days or days when some of the larger base load generators are offline for maintenance or an unexpected outage, at those times the economic bid stack can get very steep. And a very small change in how much electricity ISO New England needs to
clear in the market to meet load can have a significant impact on reducing the market clearing price for electricity.

So natural gas in New England is the most common fuel type that would set the clearing price in our market. So our electricity prices in New England are very closely correlated with natural gas prices. And if you look at fluctuations in natural gas and electricity prices over the last -- well, any period of time, it's extremely volatile. So there are huge spikes, there are huge troughs and there's very little ability to predict what the price of natural gas or electricity will be a few years into the future.

Wind, on the other hand, from the day it starts construction, it knows exactly how much it will cost and it knows how much electricity it will produce over its lifetime, approximately. So it can offer a fixed cost or a known cost for electricity over the lifetime of the project. And the Bowers wind project, like any other wind project that would be proposed in Maine, typically has a 20 -years operating lifetime. There is no other type of electricity where fuel needs to be purchased in order to produce electricity that can guarantee prices even ten years in the future let alone 20 years in the future. So it allows stability in the market, which we can't get from
natural gas or other fossil fuels.
So as an example that was in my testimony, as recently as June 2008 natural gas prices were roughly three times what they are now. So they're now around $\$ 5$ per million BTU; they were around $\$ 15$ per million BTU only two years ago. And electricity prices in Maine at that time were averaging 10.3 cents per kilowatt hour and they actually peaked at 40 cents per kilowatt hour. And those are wholesale electricity prices, not retail price. Retail prices, if they were counted before that, would be higher.

So the -- the types of long-term contracts that many wind farms have signed up for -- generally onshore wind projects have contracted for long-term price agreements that are much below those levels that we saw in the wholesale markets just two years ago. So they allow some cushioning from market fluctuation.

So in that way -- any price taking electricity, and wind in particular, will always reduce the clearing price and reduce the electricity rate for the entire region. Now, even -- it's hard to know ahead of time whether a long-term contract for electricity will end up being above or below market rates, it really depends on what fuel prices do over the length of the contract. But the electricity that is signed up for in long-term contracts still gets entered into the electricity markets that I was
describing earlier that were run by ISO New England and they're entered in by price takers.

So independent of what price is paid in a long-term contract outside of the market for electricity, it still reduces the overall market price for electricity. So I wanted to make sure that was clear in terms of the economic benefit that price taking stable energy like wind from the Bowers project would have.

In terms of -- shifting gears a little bit to talk about operational impacts of wind energy. There have been a lot of questions about how the system deals with the variables of wind power. Wind is not constant, we can't schedule it and tell it when to blow, so we have to take the electricity as it comes. And ISO New England recognized that this was an important issue to address and in December of last year they released the final report of a two-year study called the New England Wind Integration Study, NEWIS, that looked into how operationally we could handle up to 12,000 megawatts of wind in New England. So that would be sufficient to produce about 24 percent of the electricity used in the region.

And they found in their study that New England could integrate up to 12,000 megawatts of wind without the need for any additional generators, any additional resources -generators or storage to balance the variability of the
system. Our current fleet of generation has immense flexibility in its ability to ramp its output up and down and deal with the variability inherent in wind the same -same way that they deal with the variability that's inherent in the load.

So we have about 280 megawatts of wind today. So the ISO New England study was saying that more than 40 times the amount of wind that we have today, there is no need to build any more natural gas-fired power plants to balance the variability from the wind, there's no need to install any additional storage on the system.

MS. HILTON: Could you repeat that, what you just said?
MS. KRICH: Sure. So the New England Wind Integration Study found that -- the most it studied was 12,000 megawatts, it didn't speak to more than that. But even with 12,000 megawatts of wind on our system, even with the variability of, you know, the wind blowing sometimes and not blowing at other times, the ability of our current fleet of generators, natural gas power plants, coal, nuclear, hydro, in particular, that's sufficient to deal with balancing the variability that's inherent in the wind project. There's already significant variability in the load patterns and how much electricity is being used by customers at any given time. And wind is very similar in the type of variables it exhibits as compared with the type
of variability that the load exhibits.
And so the current existing generation is able to deal with any fluctuations that would be expected in 12,000 megawatts of wind on the system. So I know there's oftentimes concerns that because of the variability of wind, if you build a new wind plant, you might need to also build a new natural gas-fired power plant that could balance it out, and that's not the case. And this was -this was a two-year study that ISO New England worked on that specifically was looking at our power system here. So I thought that was a very important conclusion that they came to.

There may need to be some market changes to incent to buy the existing generators to offer the flexibility that they have, but we have more than enough flexibility in the generators that we have right now.

MS. HILTON: Okay. I thought you said something about the -- that there was enough -- it had to do with the future and the capacity to serve -- or to add additional wind power. We could have considerable more wind power and the system would continue to be balanced. Is that what you -- and I didn't quite --

MS. KRICH: Right. So they studied a number of different future scenarios with up to 12,000 megawatts of wind. 12,000 megawatts of wind would produce about 24
percent of the electricity needed in New England, which -of new wind on the system. And that's 40 times the amount of wind that we have on the system now -- it's more than 40 times the amount that we have now. So any concerns about needing new power plants specifically to balance wind are -- have been shown to be unfunded in this region.

MR. LAVERTY: What makes NEPOOL different than the issues that arose in Texas?

MS. KRICH: Texas has been at the forefront of a lot of these issues because they have installed more wind more quickly than a lot of other regions. So they have sort of been the first ones to figure out a lot of issues.

So there are two recent big events related to wind power variability in Texas that a lot of people point to. I think it was 2007, it might have been a year before or after that, there was an event where there were blackouts in Texas because they had many thousands of megawatts of wind that were producing at very high levels and then a storm front passed through the area, the wind dropped off and -- the wind dropped off and was producing less power than the operators had been expecting, so there were blackouts.

However, ERCOT, Electric Reliability Corporation of Texas, I'm not sure, they're the system operator in Texas, ERCOT. They had a wind forecast, they were paying a firm
to do wind forecasting to let them know how much wind to expect. That was not available to the operators. It was in the next room. If they had looked at the forecast in the next room, they would have seen, we have a front coming through, the wind is going to be decreasing over the next few hours, we need to ramp our other generators up. So it was a lack of -- it was a lack of knowledge and it was a lack of pairing the information that they already had with what the operators were doing.

There's also an issue that that decrease in wind power output happened over a period of approximately four hours, which is plenty of time -- if they had looked at the forecast, that is more than enough time for them to be able to increase the amount of generation from other sources on the system. So they solved that, it's now standard operating practice to have forecasts available to operators.

MR. LAVERTY: I guess my point is -- by the way, I have to say that your explanation of NEPOOL and pricing is one of the more lucid I've heard in a long time because it's a very complicated subject matter and you've done a really good job.

But having said that, you sort of left the impression that this was all a magical, mystical hand of the market, you know, Adam Smith was out here balancing, you know.

When, in fact, we had major issues in Texas, some of them technological, informational issues, you know, operational issues. We also now, according to the -- the Economist -I read the Economist -- and there have been a number of articles about what's going on --

MS. HILTON: Ed, can you talk up a little bit?
MR. LAVERTY: There's another set of issues here that seem to be presented in the west and that has to do with the way in which that pool is managed and that there has been a determination on the part of the pool managers, who are, essentially, public managers, to forgo the use of wind power in order to accept additional power from hydro electric facilities, okay, not irrespective of immediate price, because of the long-term -- some costs invested in hydro electric projects and also the tremendous head that was available this spring from water power.

And, again, all I'm -- that's my understanding. I'm a layperson, so please correct me. But I guess the point I'm trying to get at here is this is not necessarily this magical, it just happens thing or it's based purely on price.

MS. KRICH: Right. So I was -- given time constraints, I was trying to simplify a bit. The primary concern of ISO New England is system reliability. So they will not do anything that could compromise the reliability of the
system. Within that constraint, they try to operate the system in the most economically efficient manner that they can. So at times there are constraints that would change how they dispatch the system to ensure reliability. Now, what you're referring to is the Bonneville Power Authority. They have -- I don't know what percentage -- a much higher percentage of the electricity in that region comes from hydro than what we have in New England. These operational wind studies are very system specific, it really depends on what resources you have in your local area for balancing. So the conclusions that I pointed out from the New England Wind Integration Study are really specific to this region. Now, in BPA, BPA recently started curtailing a significant amount of wind projects because they have quite a bit of water behind their dams and they have -- their environmental regulations that say how much water they have to let pass through and there are limits right now on how much water they're allowed to let spill over the dam as opposed to passing it through the wind turbines. And that's to deal with dissolved oxygen content in the water for managing the fish populations in the rivers. Now, BPA has started curtailing wind so that they can, even -- even when there's excess wind, excess hydro and the electricity is not needed, they have to back something
down. So they have started producing electricity through their turbines and they've told the wind generators in the area to stop producing. And that's being contested at the Federal Energy Regulatory Commission right now.

MR. LAVERTY: Right. But, essentially, they shut down a number of producing wind power projects that were left stranded, at least according to the Economist. And it raises some questions about the stability and the --

MS. KRICH: Well, the issue is they have said that they are not -- they're shutting down the wind because there's no market for the electricity and because they have no ability to export it to other areas. However, at the times that they have -- they have curtailed the wind, at all of those times they have had excess capacity on their transmission lines to export that electricity to neighboring regions, like, California. And at the majority of those times, the price that the California market would have paid for that electricity was positive.

So this is happening, it's an issue. I think wind integration is an evolving --

MR. LAVERTY: We're learning.
MS. KRICH: -- process, we are learning. You know, it's only in the last few years that we've had more than one percent of our electricity being provided by wind. So there are -- there is a process to learn how to deal with
it and how to manage it. I wouldn't take the BPA example as an indication that it's not possible to -- to manage the wind. And I think it's very contested righted now what they're doing and whether it's actually required for them to be curtailing wind.

MR. LAVERTY: Please don't misunderstand, I was not suggesting that these problems won't be overcome or that that would be a reason, you know, to raise substantial concerns. It's just that the way you were presenting it was sort of that, you know, this all worked based on, you know, the cheapest power available. There are other extraneous variables that in many instances have come into play and we're beginning to realize that, we're beginning to address that, but this not a simple and easy process.

MS. KRICH: Right. So one of the assumptions used in the New England Wind Integration study, the NEWIS study, took into account hydro and the fact that we can't just hold back all of the water behind the dams in New England. So they assumed that hydro on a weekly basis had to produce the same amount of power that it would have without the wind. So it might be shifted forward or backwards a day or by a few hours, but, you know, not indefinitely.

Also, with nuclear they recognize that the nuclear units that we have in this region were not designed to ramp up and down, so they did not allow wind energy to displace
nuclear energy because they recognize those operating limits that we have in the system. So I don't mean to imply that it's magic and completely easy, but it is possible is really what the report --

MR. LAVERTY: And perhaps preferable. I mean, I'm not even going so far as to say it's not, but I just --

MS. KRICH: Right. So ISO is independent, they -- they would not state a preference for one type of energy over the other, but they have said that they would be able to maintain reliability.

Now, also related, I know there's a lot of concern -well, there's a lot of talk about oil and whether wind displaces oil and a lot of folks say we don't produce electricity from oil. New England is actually fairly unique in that we actually do have a significant amount of oil-fired electrical generators in this region. So in terms of our capacity to produce electricity in this region, over 20 percent of that is from units that can only produce electricity based on oil as their fuel. So more than 20 percent of our electrical generating capacity is oil-fired in New England. That's very unique.

Another 18 percent of our electricity capacity comes from duel fuel units that can run on either natural gas or oil. And really it's based on the economics and which fuel is more or less expensive which one they use. So recently
oil has been significantly more expensive than natural gas because natural gas prices have come down in the last few years. That's been an anomaly historically that natural gas is so much less expensive than wind.

So currently a lot of that generating capacity that would burn oil is not producing power very frequently. Less than 1 percent of our electricity in 2009 was produced by those oil-fired units. But if you go back as recently as 2005, close to 5 percent of our electricity came from those oil-fired units and more came from the duel fuel units. We're not sure exactly how much came from oil versus natural gas.

So as I mentioned before, fossil fuel prices are very volatile. We're in a period now where natural gas is significantly less expensive than oil, but we don't know what the future holds. It's very possible that that situation could -- could flip again as it has very recently. And in that case, oil-fired generation would become more common in New England given that, you know, about 40 percent of our capacity in New England could be producing electricity with oil.

So wind, as I said, operationally it can't really displace hydro really much, it can't really displace nuclear. It's really going to be displacing fossil fuel generation, which was one of the main conclusions of the

NEWIS study. They looked at what the emissions reductions would be from the various levels of wind and they found that 20 percent of our electricity if provided from wind power would actually reduce our NOx emissions from electrical generation by 26 percent. So 20 percent wind would have a 26 percent reduction in NOx.

And that's because it's disproportionately displacing the fossil fuel generators. SOx emissions would be reduced by about 6 percent. And that's direct wind displacing coal resources. And then carbon dioxide emissions would be reduced by 25 percent. So the wind is disproportionately displacing the fossil fuel generators in the region when it produces power.

And I just wanted to close with one comment. I know that another concern related to the electricity being produced by wind energy is that it takes far more electricity -- far more energy to produce a wind farm, to build a wind farm than the electricity than the wind farm actually produces over its lifetime. And there are a number of life cycle energy assessments that have been done for wind farms.

But a recent one in 2009 that looked at a 2-megawatt turbine, very similar to the ones that would be installed in the Bowers wind project, looked at the entire life cycle from manufacturing, transportation, installation,
operation, decommissioning, disposal, the entire life cycle, looked at the embedded energy in that entire life cycle and found that even a very low wind speed site, much lower than the Bowers project, the energy embedded in that project would be paid back over approximately four to five months of the operation of the project.

So these projects have a 20-year lifetime and that's 2 percent of the project lifetime that would be needed to sort of pay back the energy debt. So they produce a significant amount of clean, emissions-free electricity even after accounting for all the energy that's been embedded in the system.

MR. LAVERTY: Let me ask you a question that may -- be seem more mundane, but actually is probably, for me more, significant. I mean, I live in a really small town not very far from here and I go to breakfast at a restaurant, the 95er in Howland, Soucy's, and people know that I'm on this Commission. And I'll tell you something I've been getting a lot lately and that is, here you guys go, you're permitting all these additional kilowatts and wind power that's supposed to be cheap, you know, it's supposed to be green. Why is it my electric bill keeps going up?

Now, below that, although maybe not voiced or not fully appreciated, is the fact that we talk a lot about natural gas. We have a major pipeline going through the state of

Maine, $I$ can't access that. Natural gas is not available to me as an energy alternative. As you point out, fossil fuel power generation in New England, particularly from coal, is not a tremendously significant factor.

So I'm just wondering, why -- two things. What real benefits are we deriving here in the state of Maine and why is it we're not seeing a reduction in our utility rates? There is a request right now before the PUC for additional increases in utility rates in the state of Maine and we export more power than we consume.

MS. KRICH: Right. I'll get to your main question, but you made a comment that I had said that fossil fuel is not entirely significant.

MR. LAVERTY: Coal.
MS. KRICH: Coal. I don't think I had mentioned that coal was insignificant.

MR. LAVERTY: In New England?
MS. KRICH: Right.
MR. LAVERTY: Okay, I stand corrected.
MS. KRICH: I said in terms of emissions reductions
NEWIS showed that 20 percent of our energy from wind would reduce Sox emissions by about 6 percent. So that -- and the SOx is produced by coal. So wind energy would likely displace less coal than it would natural gas, but it would be displacing coal.

And, actually, some later evaluation and critique of the NEWIS study found that they were assuming that every coal generator in the region pays the same price for coal and so -- when they're doing their economics. There are actually a lot of units in New England that are paying much higher than average prices. So that's actually how --

MR. LAVERTY: To be more specific, what do I tell Junior Bubar? What do I tell him?

MS. KRICH: It's a difficult question. MR. LAVERTY: I mean, because I would like to give him an answer. You know, I'm not --

MS. KRICH: So there a lot of pieces that go into retail electrical rates. And $I$ know on my bill -- I'm in a different service territory, but $I$ know on my bill there's a line item for generation and then there's a different line item for transmission. And at least, I think, recently the transmission piece of that retail electric bill has been rising significantly lately. A lot of that is due to reliability standards that have become mandatory across the country.

So reliability standards used to be voluntary to follow and now they're actually mandatory at the federal level. MR. LAVERTY: If it weren't for that, though, okay, let's assume that weren't occurring, wouldn't my utility bill go down as a result of the generation of wind power?

MS. KRICH: Right. So the wholesale clearing price for electricity will go down when wind power is introduced to the system, but that's only one small piece of what goes into the retail --

MR. LAVERTY: So we in Maine can't expect any real cost savings from the generation of wind power?

MS. KRICH: I wouldn't say that. So the retail bill, the piece for transmission, what $I$ was trying to say, is that piece may be rising even as the generation piece might be going down. So overall, you know, it would look like the retail bill was going up --

MR. LAVERTY: It doesn't look like.
MS. KRICH: Overall retail bills are going up, but there are different pieces of it. And the actual generation is actually a small part of that. There's actually an issue of a time lag. But there are different contracting time periods for the utilities to contract with suppliers of electricity for last resort service. So if people are buying their electricity straight from the utility, they actually contract out with someone else to provide that electricity. And they typically do that in one to three year contracting periods with set prices. So there's some time lag between market signals and then when you actually might see the next contract come through. And as market prices for electricity go down, those
prices for the generation would also go down.
MR. LAVERTY: All right. Thank you for your explanation, but I really -- I think it would be really helpful to all of us if we could somehow respond to that concern. And I know it's very difficult, it's very complicated and you've done a good job explaining it. But, again, you have just given me a lot of information. Now I'm going to go home, tomorrow morning when I got to breakfast, Junior Bubar is going to say, you know --. I'm going to say, well, it's complicated, you know. And I don't mean to -- I don't mean to belittle what you're saying, it's an absolutely great explanation. It's just how do we -- it seems to me we need to convey this -- we need to explain this better.

MS. KRICH: Right. So there -- which I was pointing out. So there may be -- so they may see a reduction in the electricity portion of their bill, but if the transmission part of their bill goes up, they're going to be seeing the whole picture and the wind is just a small piece of that.

MR. LAVERTY: Okay. I can explain that better. I'm sorry, Shawn.

MR. MAHONEY: Could I ask a question just to --? So what you're saying is that the cost of the actual electricity is going down, but the cost of transmitting the electricity is going up. So there are cost savings that
are being recognized as more wind gets on the system, as more renewable -- zero fuel costs get on the system, but the cost savings will not necessarily result in a lower electricity bill and, in fact, you may get a higher electricity bill because of the transmission costs, and the perfect example is the cost of the MPRP, that even though Maine has a 7 percent share of that, that's an increased cost; is that right? That was a leading question.

MS. KRICH: Yes, that's correct. And, also, it's going to depend on the price of the other units. So it really depends on the price of natural gas, oil and coal.

MR. LAVERTY: Which we don't have access to unless you live right along that corridor or you live in Portland.

MS. KRICH: Right. And we don't have control over those prices. So the wind energy price taking electricity on the system would reduce the electricity price from what it would have been without the wind, but if fuel prices are going up for the other resources, we may still see electricity prices rising, but rising less quickly than they would have without the price taking electricity market.

MR. LAVERTY: One final mundane but important question, which I get all the time, too, how come we're exporting power? Why don't we just take this power, dump it into Maine markets and reduce the unit price of power in Maine?

MS. KRICH: So -- it's a good question.
MR. LAVERTY: And there's a good answer to it, I know. MS. KRICH: Supply and demand have to be equal at all times because we don't storage in -- we don't have much storage in the system. So we can't keep any electricity in Maine that's not being used in Maine. So we can't -- we can't produce extra and put it on the shelf and then use it later. However, Maine electricity prices are lower than the rest of New England because Maine is an exporter of electricity, because there is some transmission congestion and costs to export that power to other regions. Southern New England is paying much higher prices for electricity than Maine. And the more -

MR. LAVERTY: That's good to know. It's not good to know, but it's important to know.

MS. KRICH: The more generators that are -- especially price taking generators like wind in the Bowers project that are built in Maine, the lower the Maine prices should be. So there's a difference between New England pricing and Maine pricing, Maine pricing is lower. And the more generation in Maine, the more exporting, the more that's the case.

MR. LAVERTY: Thank you.
MS. HILTON: Are you finished with your direct?
MS. KRICH: Okay.

MS. HILTON: Any other questions, commissioners, staff? Do you want to do a redirect or was that --

MR. MAHONEY: I'd love to. No. No. Thank you very much.

MS. HILTON: All right. So The Partnership is up next for their opening statement and summary of testimony.

MR. LAVERTY: Mr. Gurall, $I$ have to leave at 2 o'clock, I have a class I have to teach. And so I just wanted to let you know in advance, I didn't want you to think I was being discourteous or in any way reflecting on you.

MR. GURALL: Before you leave -- it's appropriate you mention that to me, I guess, because before I start my testimony, I would like to make a little sidebar remark. Last night there was a woman here who testified against this project, but was not a member of our organization nor had any of us ever seen her before or heard of her. And I wanted to congratulate you, Commissioner Laverty, for shutting her down very quickly. Her verbiage was way out of line, her potential accusations of graft and corruption or whatever and I just think you did a great job of that and you did us all a service because nobody deserves that. So I just wanted to say that.

My name is Kevin Gurall, my family and I reside year-round in Lakeville, Maine. I'm here representing the Partnership for the Preservation of the Downeast Lakes

Watershed. The Partnership is a nonprofit group comprised more than 200 concerned property owners, residents and traditional small businesses in the Downeast lakes watershed who are committed to protecting this scenic resources of statewide or national significance. We have very limited resource, we don't have access to federal tax dollars, we don't have a cadre of lawyers. In fact, if you look down the line here, we don't have a single lawyer. But we're hard working people, we've volunteered our nights and weekends for almost two years trying desperately to protect this increasingly rare resource.

Our argument for denial is straightforward. First, the project will have an unreasonable adverse effect on the scenic character of the scenic resource of state or national significance anticipated in the expedited wind law. This project, if constructed, would significantly compromise views from a scenic resource of state or national significance. Statutes of development -- the statute after development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the scenic resource of state or national significance. This negative scenic impact cannot be mitigated and, therefore, the project must be denied.

According to the State of Maine Wildlands Lake Assessment, there are 13 lakes within the 8-mile limit that
fall under the outstanding or significant resource for scenic value based upon the Maine Wind Act, nine of which will have turbine visibility. To take the most conservative approach possible, we ignored the Maine Wind Act criteria in terms of the number of lakes and used a much more stringent overall LURC -- much more stringent overall LURC lake ratings.

There are six lakes with Class 1A and 1B ratings with five of those having project visibility. They are Pleasant Lake, Scraggly Lake, Junior Lake, Lower Sysladobsis and West Grand Lake. The scenic views from these lakes will be significantly compromised by the proposed turbines and their flashing red lights at night. The impact of the views will greatly alter the traditional recreational uses of these lakes and the viewer expectations of tourists who come to the area for wilderness camping, hunting, fishing and remote padding experiences.

In addition, due to the existing industrial wind power projects in the area -- and what I'm referring to is Rollins Mountain, Rocky Dune Dean, Stetson 1 and 2 -- the scenic impact on those who use the Downeast lakes to fish, hunt and paddle would be cumulatively more damaging if the Bowers project were constructed. Visitors traveling to the area up Route 95 leave Bangor behind and enter forested lands.

When they exit near Lincoln, they encounter the turbines of Rollins Mountain and Rocky Dune Dean. Then they travel east on Route 6 and encounter more turbines from Rollins Mountain. If in fact they are going to turn north to go to the East Grand Lake portion of the overall watershed, they're going to encounter Stetson 1 and 2. Tourists who then arrive at the Downeast lakes will experience a very negative cumulative effect and the impact if they find another 27 turbines moving on the mountains above the scenic lakes of these watersheds.

Second, the project will severely harm the traditional recreational activities of the region, which are the lifeblood of the watersheds' tourism economy that for more than a century has coexisted with the local forestry industry. Any adverse change to the wilderness character of the region will cause severe damage to many small businesses and hundreds of tourism-related jobs. While the expedited wind law restricts consideration of scenic impact to the area within 8 miles of the proposed wind turbines, the economic impact of this project is much further reaching and must be considered.

The Downeast lakes region is home to more than a dozen sporting camps and similar hospitality businesses as well as the largest per capita concentration of Maine guides in the state. This is due to the topography of the watershed
that gives fishermen, hunters, snowmobilers, paddlers and campers access to more than a dozen lakes. The fact that it has had -- the fact that it has distinct wilderness character is one of its main attractions. Defacing the watershed's scenic beauty on one end will impact the entire watershed and the tourism economy that is its largest employer. Tourists who spend their hard-earned vacation dollars have been documented to be less likely to return when wind turbines dominate the skyline.

LURC's Comprehensive Land Use Plan has as one of its broad goals to conserve, protect and the enhance the natural resources of the jurisdiction primarily for fiber and wood production, outdoor recreation and plant and animal habitat and to maintain the natural character of certain areas within the jurisdiction having significant natural values and primitive recreational opportunities. We submit that this project will directly violate those goals and will alter and cause irreparable and permanent damage to the character of these assets and the economic activity that depends on it.

Locals here have been depending on sporting tourism to earn a living for almost 200 years. Passamquoddy guides were catering to sports as far back as 1830. And that's been documented. These businesses include, but are not limited to, lodges, sporting camps, guides, several stores
and all the employees and ancillary businesses needed to support them. As one of only four watersheds that was an original home to the land-locked salmon, its value was acknowledged very early on when the Maine Department of Inland Fish \& Wildife built the first salmon hatchery in Grand Lake Stream in 1877, a hatchery that is still of extreme value today since 75 percent of the salmon stocked in all of Maine's other lakes come from there.

The region's beauty takes a backseat to no other in Maine or in all of New England. Its history and unique setting are far too valuable to be destroyed by the proposed wind project. If approved, this project will irreparably and permanently change the entire character of the watershed and bring an eventual end to the many small businesses that are home there. Clearly this is one of the special places that helps define Maine's international reputation for quality of place. I turn this over to Mike Lawrence.

MR. LAWRENCE: I'm go to run the projector down here. My name is Mike Lawrence, I live in Essex Junction, Vermont, I'm a landscape architect. I wanted to add my thanks to people who have expressed their thanks to you who are volunteering your time on this. I volunteer in the criminal justice system and I really truly believe that the time we take to volunteer for things does make a huge
difference in our society. So I -- I do thank you.
The visual impact assessment that $I$ did led me to a visual impact statement. And that statement is: The Bowers wind project will cause permanent, irreparable damage to the scenic beauty of these lakes. And I base that on seven important facts. And these are the facts.

Fact number one, the three lakes closest to the Bowers project are classified as significant and outstanding. The second fact, our focus needs to be directed to the lakes and the shoreline, not the woods surrounding the lakes. Fact number three, lakeshore integrity is maintained by 250-foot logging setbacks. Forest regeneration quickly heels logged-over areas. And this fact needs to be expressed because logging has been raised as an illustration that the area is semi-developed.

Fact number four, these lakes are surrounded by lands that have been conserved and put in trust because of their intrinsic quality. Fact number five, any objective analysis of scenic beauty must acknowledge the enormous importance of ridge lines. Fact number six, these lakes are scenically important because they have been designated by law and they meet the criteria that define scenic. And the last fact, except for logging, people who come to these lakes expect quiet, a sense of wilderness, and a minimal presence of urbanization.

And now I'd like to illustrate these facts. And the first section is in the photo simulations. I'll just run through these, these are places you were yesterday. And these first two have the towers in white. And I must say this morning I came from Bottle Lake Road down Route 6 over here and last night I could see the towers that are in Lincoln at about -- from 12 miles sounding out crystal clear. This morning they were -- they were fuzzier. And so there is this change in the weather, change in visibility that goes on. But there are certainly some times when these towers stand out -- completely stand out. When I was here in late April, I took a series of photographs from the same place and then I moved around. This is over in the bay of Junior Lake west of what's called -- or east of what's called Long Point as you're heading over towards Scraggly. So there are certainly places in the landscape on these lakes where you won't see the towers, but there are other places where the topography frames the towers.

And this was taken, you know, on a day where you can see clouds -- cloud shadows on the mountains, which would indicate the towers would be dark against a bright background on those days. And this is on Pleasant Lake. And comparing LandWorks' simulations and the simulations that I prepared, I think you'll find they're very similar.

In this case, all 27 towers are visible. And I think that's an important fact to consider, that Pleasant Lake is the outstanding lake and it will be impacted the greatest by these towers, that all 27 towers are visible over almost the entire lake. And, again, this same photograph that you saw under different lighting conditions where, of course, the towers are going to be in silhouette and they -- they are going to completely change the character of the ridge line.

The second illustration is in visitor's expectations. I stayed next to Mr. Gurall's house last night in a little cabin because he had a house full of people and arranged with his next door neighbor to let me stay there. So I was by myself.

And I walked in and I looked up on the wall and there was a sign on the wall in the cabin and it said: The world's most beautiful place. And I looked at the doorway and at the doorway heading out to the lake there were three life jackets and kayak paddles leaned up against the wall, which indicated to me that whoever lives there who thinks this is the most beautiful place in the world does a lot of -- does a lot of paddling. And the last thing I saw on the refrigerator was a child's watercolor painting. And on that watercolor painting it was a blue lake and it was a great big sun. And it looked like it could be sunrise or
sunset, I wasn't quite sure.
I know a child therapist that does -- works with children and analyzes their art, kind of looks at their art and helps him to understand children through looking at their art. And I learned from this person that when a child draws the sunshine on a drawing, it means they have a sense of belonging. And so when I looked at that, I said, the child that lives in this place has a very powerful sense of belonging. And I think those things all work together. So it's hard to put your finger on viewer expectations, but I think it's really not difficult to know what our viewer expectations are in a place like this.

These are some comments, it's how I balance my world. Memories of good times; natural beauty and splendor; remoteness; lunch cooked over an open fire on special coves; beaches and shorelines; relax, sit back, unwind without the television; the contentment of wooded hills; escape from my everyday life; the wilderness experience; the mountains and lakes here are an important part of my renewal. These are the kinds of things that I heard when I talked to and I looked on these various websites about this part of the world.

Ridge lines have to be considered in this landscape context, they are very important. I won't read through all six of these, but this is from a standard -- kind of a
standard list. I have the book -- I have the book that it's in here with me if you want to know more about it. Scenic landscapes considered most fragile and sensitive to change, number five, ridge lines or areas seen from public advantage points against the sky.

Conserved lands, we know that Pleasant Lake, Scraggly Lake are surrounded and that Junior Lake has native American and conserved land along its complete -- almost its complete eastern shore.

The visual impact, this is the computer-generated impact of where the towers will be visible, green being 1, 27 being red, you know, middle of the -- middle of the gauge, if you will, yellow to orange. And this was put together by a fellow who utilized this principle. He went from the first -- if you can see the little green dot over on the left, that's Tower No. 1. So as I go through the -these, you see the percentage of visibility on each lake.

So I'm just going to go 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27. That's how we came up with that total and that's how that map came about. So you can see Pleasant Lake, the outstanding lake, all of them significantly impacted, but Pleasant Lake is the outstanding lake with 27 turbines visible over almost the entire surface.

So the facts, the lakes closest to the Bowers project
are significant and outstanding, we need to focus on the lakes and the shoreline. These lakes are protected by 250-foot logging setbacks, they're surrounded by conserved lands, ridge lines must be considered. The lakes are scenic by law and by aesthetic criteria and visitors desire quiet and a sense of wilderness.

Conclusion, the Bowers wind project will cause permanent, irreparable damage to the scenic beauty of these lakes. Thank you.

MR. BUCKMAN: Good afternoon. I'm Andy Buckman, I've logged many thousands of miles as a professional leader of recreational canoe trips in Maine and Canada, I am a registered Maine guide and since 2005 I've served as executive director of Darrow Camp, a wilderness canoe trip camp for youth based on West Grand Lake. The views expressed in this testimony are solely my own and do not reflect the positions or policies of Darrow Foundation.

Regarding the impact of the proposed Bowers Mountain wind development project on the natural and historic character of the area under consideration, Pleasant Lake, Scraggly Lake, Junior Lake, The north end of Sysladobsis Lake and Junior Stream are the hub of a distinctive ancient system of Aboriginal canoe routes. These canoe routes were subsequently followed by the early timber cruisers, lumbermen, wardens and Maine guides and their sports. The
existence of these historic canoe routes and their continued use into the present makes this area a living museum of the cultural heritage of the region and of the state of Maine.

The construction of wind turbines on Bowers Mountain would have an undue adverse effect on these natural and historic resources. It would no longer be possible to travel by canoe through these areas and have anything like the experience of undeveloped wilderness that characterize the historic past and that still characterizes the present.

Regarding impact on existing uses, the attraction of this area for recreational canoe trippers and kayakers is the network of water routes interconnecting multiple lakes of outstanding natural character. Within this area it is still possible to go on multi-day and longer paddling and camping trips and see very little visual evidence of human activity. The most popular paddling trip routes are located within or pass through the area that would be affected by the Bowers Mountain wind project.

Along these canoe routes are a number of traditional primitive campsites that have been in regular use for many years. Campsite maintenance is periodically undertaken by the Forest Service, but most maintenance is done on an ongoing basis by canoeists and kayakers that --

MS. HILTON: Excuse me. Can you just slow down just a
little bit?
MR. BUCKMAN: Okay. I'm sorry. The canoe trip camps and shoreline users are the courtesy to the next visitor. Views of Bowers Mountain is a prominent feature of many of these sites. Present day paddling trip users include organized youth camps, scout groups, organized guided trips for adults, small groups of adults and families and solo paddlers from all over the U.S. and the world. Darrow wilderness trip camp is the most frequent and extensive paddling trip user sending eight to ten multi-day canoe camping trip groups per summer into and through the impacted area. The presence of wind turbines towering over the lakes and landscape would substantially degrade the high quality wilderness paddling and camping experiences available in the area. In a paddle craft it would be impossible to avoid viewing the proposed human alterations of the environment on top of Bowers Mountain.

Regarding impact on scenic character, the absence of manmade intrusions on natural scenic vistas is central to the appeal of a given area for a wilderness paddling or camping experience. When seen from a canoe, the natural character of most of the impacted lakes show minimal evidence of human intervention. When you are paddling the lakes, the landscape and the unbroken horizon are the focus of your attention for hours on end. They are unrolled in
front of a paddled canoe as a slowly ever changing scenic vista filled with constant surprise and discoveries. The impacted lakes and campsites are pristine examples of the very finest canoe country that the United States has to offer.

The most radical visual impact would occur at night. The absence of artifical illumination in undeveloped wilderness serves to intensify the scenic value of the inky blue blackness of the clear night sky and the clarity and brilliance of the moon and stars. The presence of aircraft warning lights on wind turbines stretched across the northern horizon would significantly degrade the expected scenic value and the highly valued sense of remoteness for recreational paddlers and campers throughout the impacted area.

For these reasons, if wind turbines were constructed on Bowers Mountain, the visual degradation of the impacted canoe routes, lakes and campsites would significantly reduce the attraction and marketability of the region for high quality wilderness paddling experiences.

Whether or not Darrow Camp could continue to operate if turbines were installed on Bowers Mountain is open to question. The wilderness character and high scenic value of the surrounding lakes are the centerpiece of Darrow's marketing of canoe trips for youth. Darrow Camp employs
approximately 20 full-time and seasonal employees and for over half a century its operations have made a substantial contribution to the youth camp industry in Maine and to numerous Maine businesses and vendors.

In conclusion, the economic loss to the recreation and youth camp industries that could be reasonably projected to follow the installation of turbines on Bowers Mountain would be considerable and the damage that would be done to the existing uses, scenic character and natural and historic resources in the area that would be affected by the proposed project would be irreparable. For these reasons, the proposed project does not meet the statutory criteria set forth in current Maine law for wind power development.

MR. DRIZA: Hello. My name is Charles Driza and my sister and myself are the owners of Leen's Lodge in Grand Lake Stream, Maine. We purchased the lodge in May of 2001. Leen's is a traditional sporting camp that has been in existence since 1940. I'm a mechanical engineer by trade and after many years in the corporate world I decided to follow my dreams of owning a sporting camp in the wilderness of Maine.

After shopping for ten years all over the state, I chose to purchase in Downast Maine for the pristine wilderness that defines this area. The area boasts many
lakes and streams as well as large tracks of wilderness that can be enjoyed by all of my guests. We offer fishing and bird hunting as the primary activities at the lodge.

When we purchased the lodge in 2001, the land was leased land, it was leased to us by the Webber family. Two years ago the land came up for sale, we took advantage of the situation and we purchased the 23 acres that the lodge is located on. The purchase was a very large investment for our family and put a tremendous burden on the lodge cash flow, but we were happy to own this land that we love so much. Soon after purchasing the land we became aware of the potential for industrial wind turbines to be placed on Bowers, therefore, impacting the views that grace the lodge each day.

The potential impact of the turbines is huge to the guests at Leen's Lodge both from the views from the lodge as well as the views while fishing or hunting in the surrounding area. We fish all the lakes that connect to West Grand including Junior Bay, Junior Lake, Pocumcus Lake Junior Stream and Scraggly. All of these areas will be impacted by the eyesore of the industrial turbines. Our bird hunters also hunt in the area of Bowers Mountain and are impacted both visually and by the fact that the land will no longer be accessible to hunters and we do not wish to hunt so close to turbines.

The turbine project will have a detrimental impact on our land value as well and affect the business and hamper our ability to meet our financial requirements. If I was aware of the turbine project when I purchased the land, I would not have purchased the land, but rather stayed on that eight-year lease that I had.

One of the aspects of our area that makes it challenging from a business point of view is the distance that our guests have to travel. The closest metropolitan area that we draw from is Boston, a seven-hour drive. Our guests come from all over the country and from abroad, but primarily from the east coast. Some of the guests that have visited our lodge that are famous would be Ted Williams, Curt Gowdy, Bud Leavitt, John Havlicek and many of the Red Sox and Boston Celtics. They drive 10 to 20 hours to get to the lodge and usually take one or more days to get there. They do that to enjoy the wilderness environment once they arrive.

The pristine characteristics of our area allow our guests to get away from it all and recharge their batteries. Many of our guests have shown great disappointment at the prospect of seeing industrial wind turbines dotting the landscape of their wilderness haven. One of our recent guests, Karen and Richard Daskell, commented that if they wanted to see industrial growth,
they would have stayed in New Jersey. The unspoiled landscape and natural character of the land surrounding Grand Lake Stream are what make this area a destination for our guests and the industrial wind turbines will forever destroy the wilderness nature of the area.

Grand Lake Stream is the home, as you've heard, of the largest concentration of registered guides in the state. All of the local guides work at the lodge. One of the events we have is 50 economists from all over the world meeting there, and again this year, the first week in August. And all of these economists go out with local guides to enjoy our lakes and the wonderful fishing. And the event is by Bloomberg or CNBC Financial. This group alone requires us to hire 30 guides and many locals to cook and attend the needs of this large contingency. Many of the economists have commented on the potential of the wind turbines and noted what a negative effect that they will have on our environment.

The pristine nature of the area will forever be altered by the wind turbine installation on Bowers Mountain. Our economy is highly dependent on the natural resources in our area. Our guides utilize it for fishing, hunting, canoeing, et cetera. Our guests are here to see the eagles, moose, bears, loons and other wildlife while enjoying the lakes and streams in our watershed. A loss of
revenue to the lodge will result in a loss to all of the guides that work there as well as the employees that presently work for Leen's Lodge.

Washington County is presently one of the poorest counties in Maine. And to further lose revenue due to the negative impact of these turbines will have a disastrous effect on the people who are already struggling to make a living in our county.

Our dining room faces west on Leen's Lodge and looks right down toward Bowers Mountain. There are two frequently asked questions. The most frequently asked questions at the lodge are, what is the weather like going to be like for tomorrow? And every single evening, what is that red light I see in the distance? That red light happens to be a tower on the top of Almanac Mountain. The event of the wind turbines on Bowers Mountain will result in many, many red beacons on the towers for our guests to see at Leen's Lodge from the dining room in the evening.

The northern lights might be welcome by our guests, but the lights that mark the top of these wind turbines will forever be a reminder to the guests at Leen's that a true wilderness does not exist any more in Downeast Maine. Thank you very much.

MR. NORRIS: Good afternoon, commissioners. My name is Steve Norris, my wife, Nancy, and I own and operate the

Pines Sporting Lodge which is located on Sysladobsis Lake, beautiful T5-ND. And this lake is presently classified as 1A for its high scenic and resource value. We have owned this sporting camp for going on 20 years now. During these years we have raised two children who have acquired our passion for the outdoor life, I've served multiple terms on boards of the Maine Sporting Camp Association and the Maine Professional Guides Association, and currently I'm a proud member of the Grand Lake Stream Guides Association.

Operating a sporting camp and guiding have been the only profession that I've ever known. My parents, siblings and I have run seven different sporting camps accumulating 107 years of operation in this one family generation here in the state of Maine. I don't know if there's many others that can claim that title, but --. So I feel qualified to determine what affects a sporting camp and guiding in Maine. This project's viewshed, if you will, stands to strip the Downeast lakes of its most coveted attribute, Maine wilderness.

Our guests travel here from all over the country just like many that you've already heard. And many have the means to go anywhere they want to find a true wilderness experience. So why do they and so many others return year after year to my lodge and these other lodges? They return because we still have natural wilderness beauty around us.

Will we have it in the future? You commissioners sitting right over there will be entrusted to answer that question. An older couple from Virginia that have cherished coming to our lodge for many years summed up the feelings of most all of our guests, quote, this is the essence of Maine, pristine landscape, blanketed with silence, crisp, clean air, definitely one the last treasures on our planet. To me that's pretty powerful. The adverse effects of this project, whether you choose to label them unreasonable or undue, would cast a large shadow over our watershed. Should this project be approved, my business is going to suffer.

Some of my guests may be polite and discretely choose another distant lodge for their wilderness experience, but others have already told me they can stay home to be graced by industrial energy sites across the horizon. Whether the commissioners choose to exercise a harmonious fit test or not, I have. And this project fails that test. I haven't seen too much harmonious fit at all today. I can only hope for my sake and my family's sake and everyone in the Downeast lakes watershed that the Land Use Regulation Commission fulfills its duty and its responsibility to the people of Maine. Please remember these three words as you decide the fate of this project, unreasonable, adverse effects, three simple words.

Listen to those of us who live and work in the region because we truly treasurer this priceless piece of Maine. Thank you.

MS. WHEATON: Thank you for your -- thank you for your time. I'm Lindsay Wheaton. My husband and I own and run Grand Lake Lodge on West Grand Lake. Thankfully, most of our guests return year after year to enjoy the outdoor recreational opportunities that the Downeast lakes region has to offer. Some guests have been coming over 54 years. They come to fish for land-locked salmon, togue and smallmouth bass; they explore the many interconnected lakes of the watershed including West Grand, Junior and Scraggly Lakes enjoying the quiet and the many, many miles of undeveloped shoreline; they swim and paddle in the crystal clear water; they hunt birds, bear and deer; they also come to appreciate the rich cultural history of the traditional Maine sporting camps and the guides. In today's fast-paced ever changing world, they value that life here always stays the same.

We feel so privileged to own our own business on West Grand Lake and provide our guests with such unobstructed access to pristine wilderness. In the midsts of a recession and the era of the internet when people can easily find a new vacation spot, we're trying hard to make a living. It's this lifestyle we have chosen to raise our
daughter in and this is how we feed our family. The natural resources are everything to us. We're trying hard to maintain our way of life and the culture here.

Like everyone else in Washington County, we piece together a living. My husband Chris is a guide and canoe builder, his father was a guide and so was his grandfather. Guides provide people with an experience that fishing or hunting is only a part of. Our guests and sports get to experience Maine's increasingly rare, undeveloped wilderness. It's truly unique to travel around the lakes in a handmade canoe and only be able to see the water, trees, sky and wildlife. We're trying hard to keep our small family businesses afloat in very hard economic times. The Bowers wind project is going to make that difficult.

Please do not allow First Wind to go forward with this project that will damage our community and the rich traditions we value and on which we rely. Wind power may be alternative energy, but we have no alternatives. We have one town, one community, one culture, one landscape and one economy. We in Grand Lake Stream have spent a tremendous amount of time, effort and money to protect our natural resources and to preserve our community in the area. We've done so to support our economy and way of life. Please do not let First Wind take it away from us. MR. CATALDO: My name is Louis Cataldo, I'm a
fourth-generation Downeast lakes guide, my family settled in the Grand Lake Stream area in the mid to late 1800s. I'm also currently serving my fourth term as the first selectman of the Village of Grand Lake Stream. The reason I am testifying here today is $I$ feel it is my job as first selectman to protect the economy of Grand Lake Stream, and as a professional guide, it's my job to protect my own livelihood.

What I would like to address is the potential impact this industrial wind power project will have on the economy of Grand Lake Stream area an, in fact, the entire watershed. It's no secret the entire economy of the whole area is driven by tourism, either by people coming to recreate at one of the many lodges in the area, or by people who own second homes on our beautiful lake shores who come for extended visits throughout the year.

Over the last century we have hosted many famous people, Ted Williams, Buffalo Bob Smith, General Doolittle, Kurt Gowdy, George Cowan, just to name a few. What makes our area so attractive to people who come here from literally all over the world is miles and miles of unspoiled wilderness and shoreline. Countless hours of hard work and many millions of dollars have been raised to keep this area natural and beautiful.

We started this process protecting the area back 20
years ago when the east shore of Grand Lake Stream was slated for development. Fly fishermen from all over the world have been traveling to Grand Lake Stream for over 120 years to catch land-locked salmon in a natural setting. We knew that we had something then and we had to save it. Back then we appealed to the LURC commissioners not to allow the beautiful stretch of stream to be developed. And I'm proud to say today that the stream looks the same now as it did 20 years ago and it will -- and it will be that way forever.

The next threat to our existence was 10 years ago when a large piece of land west of Grand Lake Stream was sold and there was talk of forest liquidation, shoreline development and gated access. That land that was used for recreation and the backbone of our sporting camp and guiding business was very much in question. The residents of this area along with an expanded group of citizens and friends of the area made a huge commitment.

And I am damn proud to say that the Downeast Lakes Land Trust now owns two and a half townships west of Grand Lake Stream and west of Grand Lake. And along with that deal we've helped to put conservation easements on about 350,000 acres around the Downeast lakes watershed. This means that this land will never be developed and the public will forever have access on it. In a world where gates and no
trespassing signs dot more of the landscape each day, this means a lot to the natural setting and the wilderness character of the whole watershed.

Another benefit to the area is that the land will be providing wood fiber for area businesses to keep working. Places this large where the general public has access are very rare now, but think of the future, 50 to 100 years down the road, how important will this be to the outdoor sporting public then. What worries me most about the industrial wind power project being visible from all the lakes north of Grand Lake Stream is whether or not we will be able to keep our valued clients coming back to our area. Certainly there will be a loss of business for all of us making a living on the recreation-based tourism business. The only question is how much. But equally important is how would we be able to attract new clients to come to this area in the future.

All the conservation work we've accomplished over the last 20 years was done with a view for a long-term -- for the long-term to ensure that additional generations would be able to make a living in the traditional fashion that my family has for four generations. I think this is where we really suffer is the project will -- I think this is where we will really suffer if this project is allowed to go forward. Having these huge wind turbines on our horizon
will definitely have a negative impact on our ability to attract and retain our current and future customer base. An example of this is when $I$ was guiding one of my longtime clients on Baskahegan Lake several years ago when the wind turbines were being built on Stetson ridge. You could see those huge towers going up and it was -- it had changed the whole feel of fishing there. We fished for a few hours and my client spoke to me and said, Lou, these windmills are so ugly, can you turn the canoe another direction so $I$ don't have to look at them? Well, I did the best I could for the rest of the day and we had very good fishing that day. But when we got to the boat landing and we were loading up our gear, my client came over to me and said, Lou, we have fished here for many years and always done well, but those windmills have ruined it for me, let's not fish here anymore. And we've never gone back there again with that client.

My client came here to escape the large cities and the industrial environments where many of them are forced to live because of their careers. People come here to experience nature at its finest. Long before viewing the photo simulations of what the area would look like after the turbines are installed I reached the conclusion, with the help of the comments made by my best clients, that the extreme size and visibility of this project will change the
natural character of this entire watershed forever.
This project will not fit harmoniously within its environment and will definitely have a very substantial negative impact not only on the character of the whole watershed, but on our future ability to retain the lifestyle and livelihoods we all enjoy today. I hope this testimony helps you make your decision. If you vote to approve this project, make no mistake, that you will be voting to change the viewshed of one of the most beautiful, natural watersheds in the world forever. And if you vote no on this project, I thank you from the bottom of my heart. I only wish that Mother Nature could be here to testify for herself. I think we all know where she would stand. Thank you very much.

MR. GURALL: Thank you, Lou. I have just another probably three minutes here to conclude our total presentation. When viewing the map of the expedited wind permitting law expedited zoning -- I am sorry. Go ahead, Gary.

MR. CAMPBELL: I thought I had been replaced.
MR. GURALL: I'm sorry.
MR. CAMPBELL: When I first read through my testimony a few days ago it took about 30 minutes and $I$ was forced to cut it down so it might be a little bit choppy. I'll keep it brief. My name is Gary Campbell and I live in Lakeville
from May through October and the rest of the year I live in Hingham, Massachusetts. The applicant would like us to believe that this industrial project will be welcomed and even sought out by some tourists. They cite studies and surveys to support this opinion, but none of them are relevant here because the visitor to this region does not fit the profile of the participants in those studies. He's not like the day hikers interviewed at a single scenic viewpoint on Bull Hill, he's not like the locals who ride snowmobiles on weekends or visit Baskahegan Lake. He doesn't drive the Vermont countryside visiting Artisan cheese makers, he isn't like the tourists surveyed in Quebec, Scotland or Prince Edward Island.

The visitor to the Downeast lakes region is generally more effluent and specifically looking to experience a traditional Maine sporting camp and guide service in a remote setting. He's well informed and very particular about where he spends his valuable time off. He often travels a great distance to recreate here and won't hesitate to spend 400 to $\$ 500$ a day for lodging and a guide and meals.

66 percent of the guests at Grand Lake Stream's housekeeping cabins stay five nights or longer and a remarkable 83 percent of them are repeat guests. But because he's so particular, his loyalty does have limits.

The moment the Downeast lakes region fails to deliver the remote natural experience he's looking for, he'll vacation somewhere else. With a click of a mouse he can book a vacation in Alaska.

This region hosts a traditional way of life where people and the natural environment are interdependent. Every small business and every individual depends on the remote wild character of the region. Local residents realize this and work hard to protect that symbiotic relationship. Erecting turbines on the mountains of Carroll and Kossuth will seriously hurt the area's character, which will in turn hurt tourism.

You might say, so what if they lose a few tourists, it's not the end of the world. But the impact is much more painful than you'd think. You see, not only is the Downeast lakes region's visitors unique, but the local economy is as well. It's almost entirely dependent on the tourism and forest products industries. As Mr. Milliken testified this morning, the forest products industry is currently struggling and that makes tourism that much more important. The tourism segment is made up of many businesses, including traditional sporting camps, lodges and housekeeping cabins, hunting and fishing guides.

Here's what the 2010 CLUP had to say about sporting camps on Page 266. Sporting camp owners benefit
significantly from the natural resources and remoteness values in their immediate vicinity. Maintenance of relatively pristine surroundings and the feeling of remoteness are essential to most of these camps in attracting and maintaining clientele. The number of operating sporting camps within the jurisdiction has dwindled over the past 50 years to the point where today fewer than 40 traditional camps operate. Considering their cultural value and compatibility with remote recreational settings, a basic question is whether the Commission's policies and regulations are adequately supportive and protective of these facilities, end of quote.

It's easy to see how this project, if built, will have economic and social impacts well beyond the arbitrary 8-mile radius. Some of Maine's last remaining traditional sporting camps will undoubtedly close, jobs will be lost, some guides will be forced to move away to find work and Maine will be that much closer to losing a traditional way of life.

Maine has what business strategists call a sustainable and defensible competitive advantage. Any state can put up a water slide, build a hotel or erect wind turbines, but no state can build a mature forest around a natural lake full of salmon with loons calling and eagles soaring overhead. Fortunately, Maine has such a place in the Downeast lakes.

Let's not pollute it with wind turbines.
MS. HILTON: Can I just jump in here? You're actually over your time allotment here. Do you want to wrap things up, summarize?

MR. CAMPBELL: Yes. One -- one last paragraph. If you decide to approve this project, then I ask, what would it take for a project to be denied? If ever a wind project failed to meet the criteria for approval, it's this one. It will have a serious impact on nine resources of statewide significance. If ever a developer failed to demonstrate by substantial evidence that the criteria for approval are satisfied, it's this one. Please, let's draw the line here. I urge the Commission to deny this permit. Thank you.

MS. HILTON: Okay. Thanks. So you're over your time, you've actually got a couple of -- a little extra time.

MR. GURALL: I guess learning from the expert this morning, I'd just -- I'd like to do the same thing Ms. Browne did this morning, I had originally intended to cross-examine two of their witnesses and that wasn't necessary because of the questions asked by the Commission. I'd like to get those three or four minutes back now just to read this conclusion.

MS. BROWNE: They've already gone over their time allotment, it's probably more appropriate for closing
arguments.
MS. HILTON: And your response to that would be? Would you prefer --?

MS. GURALL: I guess my response would be, I'd like the same treatment Ms. Browne got this morning when she agreed to not cross-examine Mr. Gordon Mott and use the time for somebody else and I'm asking to do that same thing now. We've given up time for cross-examining two of the people we had identified as people we wanted to cross.

MS. HILTON: Okay. So three minutes?
MR. GURALL: That will be fine.
MS. HILTON: All right.
MR. GURALL: When viewing the map of the expedited wind permitting law expedited zoning for this area of Maine, it's clear the governor's task force that crafted the zones made the conscious decision to leave the area around this watershed nonexpedited. I spoke directly to R. Alec Giffen who formally headed the Maine Forest Service and was chairman of Governor Baldacci's expedited wind law task force. Giffen said that while he couldn't remember all of the specifics about the conversations concerning this area, he said it was the task force's direct intent to protect this important resource from development.

Further, the Natural Resources Council of Maine stated the following regarding this matter during the proceedings
in which the applicant successfully petitioned to expand the expedited territory into Kossuth as part of the proposed project: As members of the governor's task force during wind power development, we were intimately involved with the drafting of the proposed expedited permitting area boundaries. The proposed area lies at the very northern edge of a large area around the Downeast lakes that were intentionally excluded from the expedited area because it represents a broadly treasured landscape with significant conservation value where wind development was not appropriate for any expedited review. It's clear what the task force's intent was and that was to preserve this area from industrial development that could alter its very character.

I'd like to just read a couple of quotes from the applicant's visual impact assessment. This region of Maine has a very low population, vast woodlands and plentiful lakes. It is not recognized as a tourism center and there are primitive recreational opportunities. Second quote: As compared with other recreational areas in Maine, these lakes in general do not see a lot of use and the area is not considered a tourism center.

I then refer to LURC's own Comprehensive Land Use Plan that says: As exceptional as the jurisdiction's natural resources are, it is the jurisdiction's distance from
population centers, its sense of remoteness and the relative lack of development that sets it apart. There is something special about hunting, snowmobiling, fishing, hiking or camping surrounded by 10 million acres of largely undeveloped forest. For many years these remote, undeveloped quantities not only enhance -- excuse me, I said for many years. For many users these remote, undeveloped qualities not only enhance, but essentially define the recreational experience, distinguish it from excursions in more populous areas. As recreational lands elsewhere are increasingly developed, opportunities for back country experiences will become scarcer and the remote values of this jurisdiction will become more highly prised. Thank you very much.

MS. HILTON: So do commissioners have any questions? MR. HAMMOND: I don't have a question, but just a comment. I appreciate the thoughtfulness and time and the preparation and realize you have limited resource and appreciate it. MR. GURALL: Thank you, sir. MS. HILTON: Any other commissioners? I have a question and I -- I'm going to try to word this clearly. What percent -- and I'm not even sure who to ask this, so whoever wants to -- thinks they have a good answer, jump in, I guess.

With respect to guiding activity in the region, if you will, what percentage of guiding activities take place in those lakes that are within the 8 -mile radius of the wind power project versus percentage of all guiding activities that are taking place within the Grand Lake Stream area combined with the -- the Pleasant Lake, the Scraggly Lake, the other lakes within the project area? Is that clear? Do you understand what I'm asking? I'm trying to get an idea of what percentage of your activity in guiding is taking place within this 8 -mile radius of the project.

MR. DRIZA: I'm going to offer an answer -- again, Charles Driza, Leen's Lodge.

MS. HILTON: Yeah, can you just say your name and -into the microphone and --.

MR. DRIZA: Yes, Charles Driza is my name and I'm the owner of Leen's Lodge, which is outside of the 8-mile zone, but on West Grand Lake. And as a function of what percentage of the guides use that area, I would say 50 percent of our guiding is done on West Grand and on all the lakes connected to it. And most of our fishing, actually, is not done on West Grand, but done up in the Junior area, which is some of the world's best smallmouth bass fishing. The other 50 percent would be taking place on Big Lake. So for myself who's on West Grand, 50 percent in the affected area, 50 percent outside of that.

MS. HILTON: Anybody else want to comment on that?
MR. BUCKMAN: I can make one -- Andy Buckman again from Darrow Camp. Although we outfit wilderness canoe trips that go all over northeastern North America in Maine and Canada, all of our trips originate with a training trip that runs through the impacted area. They all go on a trip of several days locally in order to prepare for their larger ventures. So every child who comes through Darrow Camp has an experience within the impacted area. MS. HILTON: When you say a training trip, are you talking about -- so you go from lake to lake within the -MR. BUCKMAN: Yeah, an overnight two or three days long usually. Yeah, we usually do what we call the north loop up through Junior, Bottle, Dobsi and back. Yeah. MS. HILTON: Okay. Anyone else want to comment on that? Okay. Thank you.

MR. FARRAND: Can I ask a question.
MS. HILTON: Sure.
MS. FARRAND: And I guess there are three of you that have sporting camps there? So just down the line, what percentage of your clientele are repeat customers. MR. DRIZA: I would say that my repeat clientele -Charles Driza again, Leen's Lodge -- is approximately 65 percent.

MS. WHEATON: Lindsay Wheaton, Grand Lake Lodge. I
would say 65, 75 percent.
MR. NORRIS: Yeah, Steve Norris, The Pines. Probably 75 percent or better.

MR. FARRAND: Thank you.
MS HILTON: Staff? Fred?
MR. TODD: Yeah, I'm along those same lines trying to give some parameters to the -- to the extent to which the guides in the Grand Lake Stream area utilize the -- the area in question here. There was a number of something like 12 lodges in Grand Lake Stream; is that right? And about -- the number of 30 guides. Now, is that 30 guides that service the guests in all 12 lodges or is that 30 guides for one lodge?

MR. DRIZA: Charles Driza again from Leen's Lodge. I mentioned the number 30 as guides that are hired -- for one specific job I hire 30 local guides. I would say that there's significantly more than 30 guides available in the Grand Lake area, though. I was just wondering if anybody else --. Yeah, my associates are saying there's probably 50 guides in the Grand Lake area. MR. TODD: 50 guides. Thank you. MS. HILTON: Okay. Anybody else? Okay. Go ahead. MR. PALMER: Mike, so you're aware that the Wind Energy Act has a specific set of criteria to evaluate which LURC has to follow.

MR. LAWRENCE: Yes, those are the six steps.
MR. PALMER: And the fact that they're limited to evaluating areas within 8 miles of a generation facility? MR. LAWRENCE: Yes.

MR. PALMER: So why did you spend so much time looking at stuff outside of that 8 -mile radius and not make it possible for us to tell when you were talking about something outside and something inside?

MR. LAWRENCE: If you look at the visual impact assessment that I prepared, the diagram, that shows the 8 miles. That's -- that's specifically the exhibit I prepared.

MR. PALMER: But we couldn't tell -- for instance, you have all these descriptions from different camps and stuff. We have no way to tell when those descriptions are pertinent and when they're not pertinent.

MR. LAWRENCE: Well, I think what's pertinent is what you're hearing from the guides and, that is, that even though they live outside the 8 miles, they -- they depend on the wilderness or the -- certainly the experience of wilderness that they find within the area that will be impacted. So, no, I didn't draw a specific line and say, you know, that they're outside of that, but I think it's -it's clear. I mean, I think that's clear.

MR. PALMER: I think what it is is it's not clear. One
of the examples is the Baskahegan story, which we heard again, which is an interesting story. How do you weigh that against something like the Baskahegan study that randomly sampled -- had a random sample of 48 people, none of whom mentioned the wind turbines at all? How do we weigh a probability sample where it doesn't even show up versus one selected maybe very -- it could have been Ted Williams, a very important person. How do we balance that? MR. LAWRENCE: Well, $I$ think the way that I'd do it is -- and this came about at a hearing in Vermont that I was part of -- and that is the lawyer that I was working with said, you are the typical visitor, I am the typical visitor. And I believe that what that infers is that as -as a typical -- as someone who says, I am a typical visitor, $I$ happen to work with aesthetic criteria as I -so that I can explain myself, but I believe that the demonstration of being out on the lake was profound for me and I wrote -- you know, kind of described that in this. I tried to -- I tried to in my -- in my pre-filed, if you will, tried to take you through a sequence of time for me where I didn't know really anything about this area and I came and I experienced it. And I tried to give you as clear of a picture of what I experienced. And I hoped that that would inform you. And I think that we are all the typical viewer, if you will and that's a -- and we're all
trying to balance that.
I don't -- I'm not against all wind power, but I think this is not the right place for a wind power project.

MR. PALMER: I hear that part, I'm just having trouble figuring out how to -- how to balance that. I also have trouble figuring out how you can be a scenic expert and think of yourself as typical. If that's really true, then any of the people in this room could be scenic experts. I think you're special.

MR. GURALL: Jim, could I get a word in here?
MR. PALMER: Sure.
MR. GURALL: It's only the applicant that's required to provide a VIA. We did this as an additional piece of equipment that we hoped would provide you with some additional information to help make a good decision. I don't think that our VIA, so to speak, should be held to the exact same standards as the VIA provided by the applicant. I mean, this was for an informational piece.

You were critical of Mike's performance initially -- or his VIA initially because it was a little -- I may be sorry, it may be -- maybe it was David Raphael, but one of the two of you made the comment that it was a little too emotional, not enough hard facts. It wasn't for us to provide the hard facts, we're just setting background to the whole --

MR. PALMER: I mean, I was critical, but I was also in awe. I think it's a great piece of work. But it is a qualitative example and the question still stands -- I don't think there's a good answer -- about how you balance something that's sort of qualitative, broad -- well, I've already stated it. I appreciate the problem and I think I've also said that I agree you don't necessarily have to be held to the same standards, but you do have to understand that the Commission has to be held to those. And so when they can't tell, they have to be conservative and ignore. And it's just not -- it's not helpful for them or for me in trying to point out and advise them. It makes it very difficult for us. And that's not to say the work isn't well done, it's just that it makes it very difficult because we can't make up rules, we don't make up rules.

MR. LAWRENCE: May I say something?
MR. PALMER: Sure.
MR. LAWRENCE: What I tried to do was to take the six criteria and divide this books up into those six and go through them one by one. The criticism that this was emotional I tried to answer today with the facts. To me, those seem like those seven facts are the essential facts of this -- of this proposal and that anything and everything should be held up to those -- to those facts.

And if there are more facts that are beyond what I put out, I would -- I would be -- I'm very open to helping -- you know, to try and understand what those are.

MS. HILTON: Okay. Go ahead, Fred.
MR. TODD: Just quickly. Again, I'm trying to
understand more of the nature of your boating or your canoe trips from Grand Lake Stream up into the lakes in this area. When you go up, is it normally you go up and back in the same day, do you go up, do you camp on -- and utilize the campsites on the lakes up there? What's the nature of the trip?

MR. BUCKMAN: Are you addressing me, sir, for the canoe trips?

MR. TODD: Anybody who wants to respond.
MR. BUCKMAN: Well, I'll speak for myself. Our base camp is located in Junior Bay, which is just south of the impacted area. So our trips initiate there and we make any number of loops through the impacted area and come back to our base camp. So they're great big loops. For others -for lodge owners, they are beginning their daily activities in the village of Grand Lake Stream and coming up the lake into the impacted area. MR. GURALL: He asked for the duration of the trips. MR. BUCKMAN: I'm sorry. The duration of our trips ranges -- we have some trips who spend up to a week and a
half traveling through Scraggly and Junior -- the little children in particular will move a couple miles a day and that's a big deal for them moving from one campsite to the next, to the next and all within that -- that area, from our base camp up into the area and back.

MR. CATALDO: Speaking for the Grand Lake Stream guides, some of our best bass fishing water is up in the northern reaches of that watershed. West Grand is predominantly salmon water, cold water, but the bass are up in that northern part. So we spend a lot of time up there taking our clients.

MR. TODD: So you -- you go up and back and --?
MR. CATALDO: Yes, we go up and back in one day, sir.
MR. TODD: Okay. Question for Gary, I think. In your testimony you mention -- you reference a number of public boat launches and I think public campsites. I'm just trying to get a handle on -- I think the word -- well, I guess my question is how loosely we're using the word public. Are these publicly owned or they publicly -they're just simply available to the public.

MR. CAMPBELL: I guess I'd have to say they're available to the public. Because the numbers I quoted and the map that I included in my testimony were based on the DeLorme Gazetteer map. They're all shown on that map. MR. TODD: Okay. Thank you.

MS. HILTON: Are we all done with our questions? Okay.
I guess the applicant, Juliet.
MS. BROWNE: All right. Just another time check here.
I understand I have 30 minutes for cross. What I would like to do is take some additional time for the number of PPDLW witnesses and subtract that from the time that's been allocated for David Corrigan and his witnesses.

MS. HILTON: Okay. Do you follow that?
MS. CARROLL: Yep. How much time do you want?
MS. HILTON: How much time do you want?
MS. BROWNE: 40 minutes.
MS. HILTON: 45 minutes, okay.
MS. BROWNE: Okay. I'm going to -- just bear with me since I can't see everybody that well. I was going to begin with you, Mr. Buckman.

EXAMINATION OF ANDREW BUCKMAN
BY MS. BROWNE:
Q And I have on a poster board here a map that's from the AMC guide that you quote from in your testimony. Can you see that okay?

A Yes, I can.
Q And it just has to do with providing some context for the commission to understand the number of canoe trips in the Downeast lakes region. And I think you had originally testified that there were, you know, 25 trips and 23 of the

25 go through the study area. So I just wanted to make sure you understood that at least in the 2005 guide of this book, in fact, there are only two of the 25 canoe trips that go within the study area. And this is the map that shows the Downeast lakes region from the AMC guide and it's only 43 and 42 that go through the -- the study area. Are you aware of that now?

A I'm aware of that. I'm not sure that I said that 23 of the -- I'm not sure that I used the -- the trips for the entire Downeast lakes region. There are many trips within the entire Downeast lakes region and to a certain extent the number extends on how you intercombine them. But of the trips within this particular area, the Downeast lakes, yes, there are two significant routes that are --.

On the other hand, I would say that the publication of a new addition of the AMC guide does not mean that there has been a change in recreational use patterns or in the scenic or recreational value of the impacted area.

Q But you would agree there are a number of high value recreational canoe trips in the Downeast lakes region that go nowhere within the study area?

A That is true, but these are not the ones that, to my knowledge, are used the most extensively. The ones that are used the most extensively are the ones that go through the impacted area, yes.

Q But that's not necessarily what the AMC guide says, that's just your personal view probably colored by the fact that that just happens to be what you located and that's what you see firsthand?

A That's my experience in speaking with people with whom I have contact or use the region, yes.

Q And you also suggested both in your testimony and then also -- your written testimony and then here today that this project might jeopardize the continued viability of Darrow Camps and sort of suggested it was open to question whether it would remain in this location if the project went forward, correct?

A Yes.
Q And then I was -- just for -- Darrow Camps is, what, 10 to 12 miles from the closest turbine?

A $\quad 11.75$.
Pretty good. So outside the study area. And as I understand your camp, it caters to a number of youths, young children, right?

A That's correct.
Q And there is one category of sort of the more junior campers that does the canoe trip that you've described that goes through the lakes within the study area, right?

A Yes.
Q And then as they become more advanced, they go, as you
acknowledged, into Canada, into parts of Maine and New Brunswick and Labrador, far away from the study area, right?

A Yes.
Q And the majority of your campers, in fact, go to areas well beyond the Downeast lakes region and the study area, right?

A That's correct.
Q Okay. And then there was a picture in Mr. Lawrence's presentation of children standing on a dock. You, obviously -- your principal clientele are children as well. And we've heard a lot of comments from and testimony and very eloquent testimony about concerns that traditional fishermen, the -- you know, Ted Williams and Dwight Eisenhower and Calvin Coolidge and people like that don't want to see turbines in the viewshed.

You agree that the children ages 11 to 12 are a very different demographic than the gentlemen fishermen that we've heard discussed today?

A Certainly they're a different demographic.
Q And you're aware that children as a demographic are much more accepting of renewable energy and in particular wind turbines than probably the gentlemen fishermen that we've heard about today?

A That may be. Nevertheless, our marketing focuses on the undeveloped wilderness character of the region in which our
base camp is located. That's been the focus of our marketing for over 50 years. And to me, it would be very, very difficult when we're sitting around the campfire at night and the red lights are throbbing to explain to children why, if they thought they were coming to the wilderness, they're seeing evidence of human intervention.

Q But as we've heard from other witnesses, there is already evidence that they see a beacon, a red light on the top of Almanac Mountain and other communications towers, correct?

A From some places -- some specific places, that's visible. It's not visible from our base camp and it's not visible from many of the campsites that we use in the area.

Q But you're certainly not suggesting that an 11-year-old paddling through Scraggly is going to look at turbines and say, I'm not coming back here because of those turbines in the viewshed?

A I don't know. The children themselves are not the only component of making a decision to send a child to camp, it's largely the child's experience as they relate it to their parents and they take home their pictures and they talk about what they've seen. So it's -- I don't think that we can look at just the children as the decision-makers in the process of whether or not to attend Darrow Camp.

Q
right?
A
They are the -- they are the user group, yes.
And you would agree they have a different expectation than the gentlemen fishermen that we've talked about, correct?

A I -- I don't know. I'm not sure that I could say that. Children come to us because they want to -- they believe that they are coming to see the natural world in its undeveloped state.

Q Okay. Are you aware of -- of sort of one of the principle educational efforts that's going on with middle school children right now in Maine and some of the topics they study?

A No, I am not. I'm a teacher in Virginia, not in Maine, but --.

MS. BROWNE: Okay. Thank you. I think I will turn now, Mr. Gurall, to you. And forgive me if I jump around a little bit. I will do my best to be logical. EXAMINATION OF KEVIN GURALL

BY MS. BROWNE:
Q You had a picture up there that $I$ think is on Exhibit 4, Page 11 of your testimony that -- can you put that back up? And I don't know if you all have testimony available to you. I didn't make copies of everything on the assumption that you could pull it up on your computer if you wanted to and I think we'll put it up there on the screen.

But it identifies the sort of heart of the Downeast lakes region that was not included in the expedited permitting area. And as I understand your testimony, that was a very intentional decision to exclude that area from the expedited permitting area, correct?

A According to Mr. Giffen it was.
Q And according to NRCM and the letter that you quoted from NRCM, that was also --

## Correct.

Okay. So your understanding is that the wind power task force and the Legislature intentionally excluded a large area from the expedited wind permitting area because they felt it was inappropriate for wind power development, correct?

A Yes.
Q Now, that same group intentionally included Carroll Plantation within the expedited permitting area, correct?

A Probably, yes.
Q Okay. And then the Commission through rule making included the area within Kossuth also within the expedited permitting area, correct?

A They did, but on a lot of -- that decision -- and I would ask the commissioners for -- that were around then for maybe a little backup here -- that a lot of those decisions made on Kossuth were made only because they expected all of
it to be handled at this -- Wind Power Act -- I'm reading from -- it's 35-A MRSA Section 3402. And in it it states: The Legislature finds that it is in the public interest to reduce the controversy regarding sighting of a grid scale wind energy development by expediting development in places where it is most compatible with patterns of development and resource values when considered broadly at a landscape level. The Legislature finds that certain aspects of the regulatory process for determining the environmental acceptability of wind energy development should be modified to encourage the siting of wind energy department in these areas.

So are you aware that that was the purpose of the -the identification of the expedited wind power permitting area? facts, that's true. Okay. And I think in your testimony on Page 12 you state that: First Wind is trying to take advantage of a mistake that was made. Now, you would agree that's a little bit
misleading to say that First Wind is trying to take advantage of a mistake, right?

A That's why I left it out of today's oral testimony, but I was actually quoting -- I shouldn't say $I$ was quoting, I was paraphrasing from what -- the conversation I had with R. Alec Giffen who said that, you know, they chose the boundary of Carroll as -- they chose the Carroll property town line as the boundary rather than Route 6 . And he said, you know, in retrospect that may not have been the best decision, but that's where that came from.

Q Well, I move to strike that as being completely without foundation. You're certainly not suggesting that Alec Giffen said, oops, we drew the line in the wrong place, are you?

A I am exactly saying that.
Okay. Well, there is no foundation for that and I move to strike.

And certainly NRCM's letter that you quoted from didn't say, oops, there was a mistake?

A No, they did not.
Q Okay. So your understanding then is -- and we've heard a lot of discussion about this conserved area. But your understanding is that the project is not located within any of these conserved lands, correct?

A Yes, that's correct.

Q It's located outside of them in the expedited wind permitting area, an area that is where wind power is an allowed use, correct?

A

Q Okay. You've also talked -- I think you also talked about the quoted provisions from the Commission's Comprehensive Land Use Plan.

A Correct.
And there are some provisions that were noticeably absent from your testimony or your comments including, perhaps most importantly, the requirement and a recognition that the commission has to balance goals or policies that sometimes conflict with one another so as to best achieve its vision for the jurisdiction, correct?

A I would say it was not my responsibility to include any arguments that would work against me. You know. That's your responsibility.

Q But you would agree that -- you're not trying to be misleading, it wouldn't be appropriate for you to try to be misleading?

A I was not trying to be misleading, I was just using certain portions of the CLUP that I thought applied to this situation.

Q And you agree there are other portions of the CLUP that specifically and expressly support this project?

A I don't think I can agree with that.
Q Okay. Well, you agree that other provisions of the CLUP are specifically geared toward encouraging economic development, correct?

A Correct.
Q And you agree that there are provisions in the CLUP on energy resources that specifically support indigenous renewable energy resources as part of the state's efforts to promote energy independence, diversity and long-term sustainability, correct?

A Again, I would say that if you assume a limited set of facts, that would be true.

Q Okay. And -- and you're aware that the CLUP has specific provisions on wind power, and a provision in the CLUP on Page 187 that says: Wind power increasingly is recognized as the most significant renewable source of electricity that is economically viable at the utility scale, correct?

A That's fine, that's a given.
Okay. There is also -- Joy, can we put up 1A, 1B and then the outstanding significant --? A number of your witnesses have talked about lakes that are classified as 1A, 1B and there was discussion about this area having the greatest concentration of 1 A and 1 B lakes within the state?

A That was my understanding, but upon further review it appears that may have been an incorrect statement. It has
one of the highest concentration, but not necessarily the highest.

Q Okay. And just as a visual, this was an exhibit attached to the Stantec rebuttal testimony. And this exhibit shows the Class 1A and 1B lakes. And for the benefit of the Commission, the Class 1A means there are two or more outstanding values, Class 1B means one, and it's only for lakes within LURC jurisdiction.

So you agree there are other lakes within DEP jurisdiction that share similar values, but they're not reflected on this map, correct?

A Mr. Lawrence. You understand -- either one of you I think could answer it -- that the Wind Energy Act directs the Commission and the applicant to look at visibility on resources of state or national significance. And the determination of state or national significance is whether they are ranked as outstanding or significant for scenic quality, correct?

A Correct. That was the number 13, I believe, was the correct number of lakes that were ranked that way.

Q So the Class 1A-1B doesn't have anything to do with that?
A It absolutely does because every one of these Class 1A and 1B lakes that we've referred to here have been rated as an
$S$ or $O$ when it comes to the scenic quality.
Q Okay. But --
A We were using the tougher standard, quite frankly. I mean, under the wind law you only have to have the scenic criteria -- the scenic portion meet the criteria; whereas, under the $1 A$ and $1 B$ rules you have to have two outstanding, I believe it is, or two S's. We felt like we were using a -- a little bit stronger yardstick, quick frankly.

Q Well, I appreciate that, but just so there's no confusion, you could have a 1A or 1B ranked as outstanding for something other than scenic quality?

A Absolutely. Okay. And then here this next poster board -- and this, again, is an exhibit to the Stantec rebuttal testimony -identifies all the out -- the lakes that are resources of state or national significance and that are, therefore, ranked as significant or outstanding from scenic quality. The map shows the lakes within the DEP jurisdiction as well as lakes within LURC jurisdiction.

A $\mathrm{Hm}-\mathrm{hmm}$.
Q And you would agree that there are many and, in fact, probably the greatest concentration of such lakes occurs in the -- what's sometimes referred to as the remote core of LURC's jurisdiction in an area where wind power is not an allowed use, correct?

A I guess I do not agree because what we said was that we had one of the highest concentrations of Class 1A and 1B based on the LURC rating, not on the Wind Expediting Law criteria which is based on one criteria, just the scenic.

Unless I misunderstood your question, I don't agree. If you'd like to pose it again, I would be more than happy to revisit it.

Q Okay. You appreciate that what the commission needs to look at are lakes that are ranked as outstanding for scenic quality or significance for scenic quality, correct?

A That's one of the criteria.
Q And this is the exhibit -- this exhibit that was also an exhibit to the Stantec rebuttal testimony shows all such lakes in the state of Maine?

A Okay.
Q And you would agree that there is a significant concentration of lakes in the remote core of the jurisdiction in an area where wind power is not an allowed use?

A I'm sorry, let's go through that again. You've lost me somewhere.

Q That's all right. The exhibit speaks for itself.
A Okay. That's fine.
Q I just wanted to make sure since there had been a lot of conclusions about 1A, 1B that we were all working on the
same --
A As long as you understand that we felt we were using the strongest criteria, the most stringent criteria, that's why we talked about only the LURC-rated Class 1 and 1B, which require more than one criteria as $S$ and $O$ to reach that, but all of the lakes we quoted did have the scenic as one of the criteria that was $S$ or $O$, so --.

Q I think I'm going to have to agree with Dr. Palmer that I'm going to try to stick with the review criteria that the Commission is looking at.

A That would be your privilege.
Q That remains to be seen.
EXAMINATION OF GARY CAMPBELL
BY MS. BROWNE:
Q Mr. Campbell, there you are. You in your testimony talked about the tourism dollars spent in Maine, I think you quoted 13 billion in goods and services, employing 140,000 people. That's for the entire state of Maine, correct?

A That's correct. That was from the Maine State Tourism office.

Q And you weren't suggesting that that somehow is reflective of the spending in this region, right?

A Certainly not.
Q Okay. You also -- do you have the Borden report? Do you have a copy of the Borden study that you quoted from?

A No, I don't.
Q Okay. I'm going to give you a copy of it, if you don't mind. I'm sorry, I don't have copies for everybody. Okay. Now I've lost my copy.

A Do you want mine?
Q No, no. Actually, it's more important for you to have it. Your testimony and the testimony of a number of other lodge owners speaks quite eloquently to what I would refer to as the traditional guiding industry. We've heard Ted Williams' name invoked probably more times than in a baseball hall of fame get-together. And --

A Can I correct you? I'm not a lodge owner.
Q You're not a what?
A I'm not a lodge owner.
No, no, I know. Okay. But you have talked about the impact of this project that you -- that will have on lodge owners and the guiding industry, correct?

A Yes.
Q Okay. And you agree that in the Borden report that you rely on, that was a report that looked at economic opportunities in connection with the Downeast lakes project to conserve land in this area, correct?

A Correct, with the Forestry Partnership.
Q And they talk about this specific user group that just as a shorthand I'm going to refer to as the gentlemen fishermen
or gentleman fishing industry. And they talk about the repeat customers who we've heard some testimony about today. And one of the things that report concludes is that the repeat customers, those who come for traditionally fishing and traditional guiding experience were dying off, correct? It's a conclusion on Page 21?

A Does it actually say dying off?
Q I believe that's a quote.
A And I believe I've read this twice.
Q And if I could only find my copy, I could give you an exact quote. Oh, I've got mine. I think a number of conclusions are on Page 20 and 21 of that report.

A
That might be a better question for a guide. I'm neither a lodge owner nor a guide.

Q No, but you relied on that report, correct?
A I reported some of the statistics from the report, I did. Okay. So you agree that the report -- that that's what the report concluded? I'm not asking you to agree with the conclusion, but just that that's what this report concluded?

A Well, I don't see it at a glance here. Can you be more specific? I mean, if you want me to say that fishermen do die, I will admit that. But I'd also say there's a whole generation of younger fishermen coming to fish the area as well. I can't say which outweighs the other, if it's a net
increase, net decrease.
Q Okay. Well, let me make it easy for you. On Page 21 in the middle of the page when they interviewed lodge owners, quote, most lodge owners commented that business in the summer of 2004 had been down. Many agreed that repeat customers, those who often come for the traditional sport fishing and guiding experience, were dying off. One respondent claims she was planning on selling her business because her neighbors were purchasing nearby lots and developing them into lakeshore homes. This, she argued, made it impossible for her to provide the type of outdoor experience she had built up over her tenure there. Similarly, local guides acknowledge that their traditional customers are ageing and guiding days for the sport are dropping.

Do you see that language in there in this report?
A I see that.
Okay. And then -- and the reason I -- the reason I'm asking you about this is because you've talked about sort of the economic impact of this user group. And this report shows that this user -- that this sort of clientele and this particular industry sector is one that is declining, not increasing; would you agree?

A All the more reason not to put turbines there and destroy it completely.

Okay. If that's your assumption about what would occur. One of the other -- other things that this report also says, if you turn to Page 22, is that the tourism based on traditional sporting activities is subject to change as are all markets. That's the first bullet point on Page 22. Continue, like all business, it cannot continue to exist unless it finds ways to adapt and innovate. Do you see that language there?

A I do see that.
So that was also a conclusion of this report. And then if you continue on on that same page: Guides who wish to serve more markets than the traditional ones will need to do some retooling, but a natural outcome of this should be a more varied and rewarding job. Do you see that?

A I see that.
Okay. And you didn't do any other -- and I'm not criticizing you for not doing it, but $I$ just want to make sure I understand what your testimony is based on. You haven't done any other kind of economic analysis or projections about the impact on this industry of building this project, correct?

A I don't have to.
Q Okay. But you haven't done any, right?
A I've read reports from the State planning office and the State Department of Tourism and I've interviewed people at
the Department of Tourism and I've read Pete Borden's report. That, I believe, is the extent of the research I did.

MS. BROWNE: Okay. I think now I'm going to turn to Mr. Lawrence. I think -- the Borden report is referenced in Mr. Campbell's testimony and I -- I don't have a clean copy on me, but I would like to move that into the record so that there's a full copy in the record and we'll provide the full paper copy as follow up. But I assume there's no objection to it coming into the record. None being heard? MS. MILLS: Was that a no from The Partnership?

MR. CAMPBELL: No objection. Is that for me to object to?

MS. BROWNE: The beauty of not having a lawyer, it can be any of you.

MR. CAMPBELL: Mr. Borden may be here tonight to testify.

## EXAMINATION OF MICHAEL LAWRENCE:

BY MS. BROWNE:
Q Mr. Lawrence, I appreciate your -- your comments and your pictures.

A Thank you.
Q You probably mentioned Pleasant Lake no less than three times and the fact that Pleasant Lake is the closest lake to the project, it is an outstanding lake for scenic
quality. Are you aware that the owner of Maine Wilderness Camps, which is located on Pleasant Lake, testified that in her view her clients would not be adversely impacted by the presence of the project?

A I am aware that -- I heard her speak to that, yes.
Q Okay. And are you aware that Kathy Whitney, who pre-filed testimony and who manages the campground that is at the boat launch where we were on our site visit, testified similarly?

A I didn't -- I didn't realize that -- I didn't put two and two together with that.

MR. GURALL: Maybe you can clarify this for us. I believe in her testimony she's no longer the manager of that campground. You just called her the manager. I don't believe she is any longer.

MS. BROWNE: She's managed it in the past and I guess is supervising the management of it now. But $I$ will let her testimony speak for itself.

BY MS. BROWNE:
Q You also talked about that you're a typical user and, therefore, your view and your expectations form what a typical viewer's expectations would be, correct?

A Correct.
Q You would agree that if that's the case, that David Raphael's expectations and his -- he would also be a
typical user?
A Of course.
Q Okay. So we would all be typical users?
A Yes, on some level. But $I$ think the -- the point that $I$ was trying to make was as aesthetic experts, so called, we are counted on by boards such as this to offer our opinion and we could be called a typical user.

Q And I -- I appreciate Mr. Gurall's comment that the burden was not on you to do a full-blown VIA. So to the extent that I'm asking a question that appears to be critical, please don't take it as overly critical. But I think it's important for us to understand the basis for your testimony.

You would agree that --
A I'm not sure $I$ understood what you just said.
Okay. Well, it's -- I was just saying, please don't take offense if I ask questions that appear critical.

A But you put it -- you said something about Mr. Gurall before that and I didn't -- I didn't quite get the connection.

Q He objected to a line of questioning by Dr. Palmer suggesting --

A Oh, okay.
Q Okay. You would agree that it would be important for the Commission to consider all types of users of these
resources when it evaluates whether there's an unreasonable impact, correct?

A
Q And your efforts were directed really at one kind of user, this -- the traditional gentlemen fishermen, the Ted Williams, you know, George Carlin, Dwight Eisenhower, Calvin Coolidges of the world who have historically come and used guiding services, correct?

A Incorrect.
Q

A a chat with Mr. Buckman, I took a pretty good look at his website. And so I tried to -- I tried to present the experience of a young person and the experience of the -the sort of many years of the young people coming into this area and the benefit for those people.

And I also quoted a series of websites that talk about canoeing, kayaking on Scraggly Lake and in the Junior Lake area. And I certainly communicated with Lindsay Wheaton and that is -- I don't believe that's a gentlemen's camp, I believe that's a much more -- you know, people that drive up and some people fish -- some people fish, but I think a
lot of these people don't use the guide service. From what
I gathered from what she said, there were just really average people that just came up and like to -- liked to vacation here.

But you didn't try to -- you didn't do any quantitative analysis of intercept surveys or analysis of intercept surveys that have been done, correct?

A That is correct.
Q You didn't try to determine, you know, other users, ice fishermen, snowmobile users, ATV users, those types of recreational users; you didn't try to evaluate their expectations as to scenic quality, correct?

A
Q Okay. And you agree they are another user group, correct?
A Yes.
Okay. Are you familiar with something that is colloquially known as the SCORP --

A I am not.
Q -- the State Comprehensive Outdoor Recreation Plan, it's a state publication?

A I'm sorry, I'm not familiar with it.
I'm going to just give you some pages from the SCORP. And if you look at that -- this is Table 10 from the SCORP. And you can see it looks at snowmobile and ATV registration from the years 1993 to 2008. And as you can see, would you
agree that based on this publication at least, that snowmobile use and ATV use is an increasing outdoor recreational activity, at least based on the period of '93 to 2008?

A Yes. It looks like it goes up and down a little bit, but yes, it's -- it's bigger in 2008 than it was in '93.

Q So for the ATV use 21,447 to 67,013 , correct?
A $\mathrm{Hm}-\mathrm{hmm}$.
Q Snowmobile registration 64,985 to 102,449, correct?
A Peaking in -- it looks like it peaked in 2003 and then dropped -- you know, and then dropped back down, but, yes.

Q Again, this is just an excerpt from the SCORP that $I$ would like to move into the record.

MS. MILLS: Any objection?
MR. GURALL: No objection.
BY MS. BROWNE:
Q One other thing that came up in your direct presentation was, I think you said, that there was no cutting that could occur within 250 feet of these lakes?

A That's my understanding, there's a 250 -foot setback for logging operations.

Q Okay. So you're not aware that, in fact, you can cut trees within 250 feet as long as you do it in accordance with LURC standards?

A That -- is that logging operations you're talking about?

Q Cutting of trees, yes.
MR. GURALL: Well, there's commercial and residential.
BY MS. BROWNE:
Q Yeah, but you were assuming there was a 250-foot undisturbed buffer around these lakes, correct?

A I was -- again, I think I'm looking at the big picture that there's a sense -- I thought there was a sense in the First Wind's description of the project that there was evidence of large scale logging operations. And it -- it seemed important to me to put the fact on the table that there's a 250-foot area, I guess I would have to say, is generally sacrosanct in the cutting of trees. I don't know what the details are for getting in there and cutting trees. There may be some -- some fine print that says you can do that with some special considerations. Is that what -- is that helpful?

Q Well, putting that aside, I think the Commission knows what's allowed and what's not allowed. You would certainly agree that there is evidence of commercial logging activity as you are on these lakes, correct?

A The only place that $I$ noticed any is when we were at Pleasant Lake and someone pointed out the three or four vertical strips. But other than that, I am not aware of seeing any evidence of logging from -- from the perspective of the -- the trip that the commissioners went on in Junior
or Scraggly, on those lakes.
Q So have you ever kayaked on any of these lakes?
A I've never kayaked on these lakes.
Q So you -- but you would agree that most -- that there is commercial timber harvesting occurring in these areas, correct?

A Well, the --
Q And if you don't know, that's okay, you can just say you don't know.

A Well, no, I think I do know.
Q Okay.
A I think I can answer the question. When I came for the initial site visit and I traveled on the lakes, it didn't occur to me that there was commercial logging. And so when I read some of First Wind's testimony that these areas are used heavily, I was certainly aware of seeing the evidence from -- from some of the roads. But I said to myself, I don't recall seeing any commercial logging; when we go back, I'm going to look very carefully. And so on our trip yesterday, I looked very carefully and I did not see any evidence of it. I am very aware that there's logging operations in the hills. I'm just saying from a visual impact analysis, I think they're remarkably free of a sense of being scarred, if you will.

Q You would agree there would be auditory evidence of
commercial timber harvesting if it were occurring in the area, correct?

A I would think so.
MS. BROWNE: Okay. I'm going to take one minute to look at my notes. And I know it goes toward my time allocation, but $I$ think it would be more efficient. So bear with me for a minute. MR. LAWRENCE: Okay. MS. BROWNE: Okay. Thank you for your patience. EXAMINATION OF LOUIS CATALDO

BY MS. BROWNE:
Q Mr. Cataldo, I just had a quick question for you. You mentioned that you are a first selectman for Grand Lake Stream; is that right?

A Yes, ma'am.
Q But you're not testifying today in your capacity as first selectman, are you?

A Yeah, I think I am.
Q So have the selectmen taken a position on the project and asked you to testify on behalf the selectmen or are you here in --

A No, not officially, but we all feel the same way.
Q Okay. But -- so I understood from your written testimony that you were testifying in your own personal capacity?

A I don't think I -- I don't think I stated that.

Q Okay. But it's fair to say you're not testifying in a formal official capacity here today, correct?

A Well, I am the first selectman of Grand Lake Stream.
Q But you understand, don't you --
A The second selectman is sitting right behind me here, too, if you would like to ask him some questions.

Q But you understand the difference between testifying in that capacity and testifying in your personal capacity?

A Yeah, I think I realize what the difference is. But, you know, I'm -- I have a pretty free reign on what $I$ do and the -- and the town is behind me on this, believe me. Thank you.

MS. BROWNE: Thank you.
EXAMINATION OF KEVIN GURALL
BY MS. BROWNE:
Q Mr. Gurall, your testimony also focuses on harm -- there's obviously a consistent theme here, a concern on the harm to sporting camps and hospitality businesses that you fear will result from the project.

A $\mathrm{Hm}-\mathrm{hmm}$.
Q One of the businesses is Wild Fox Run Commercial Camp on Junior Horseshoe Lake, right?

A Yes, it is.
Q And you opposed the permit issued by LURC for that commercial camp, right?

A I don't remember that, no.
Q Okay. Well, sorry, it may have been Tracy Allen, the vice-president of PPDLW, correct?

A Could be. I mean, she moved away a year ago, so I can't speak for her.

Q Okay. But she's the vice-president of PPDLW, right?
A Yes, she is.
Q Okay. I'm going to show you a letter, an appeal filed with LURC on that camp. And if you'll turn to the second page, there's some highlighted language. Now, this was a proposal for a commercial camp on Junior Horseshoe Lake. And can you read the highlighted language?

A If this project is allowed to go forward, it will be the turning point when the degradation of the wild and scenic nature of Junior Lake began, the commercial campground special permitting process will not have prevented the elimination of another rare wild and scenic resource in Maine. The precedence will be set this time for Junior Lake.

Q In your view has that camp resulted in this turning point for the degradation of the wild and scenic value of this lake?

A Quite frankly, since this is not my testimony, I don't believe I should respond to that.

Q I appreciate it's not your testimony. I'm asking what your
opinion is today as somebody who lives on this lake and is testifying about the importance of these camps.

A Since the Wild Fox Resort was only open for approximately nine or ten months, no, it didn't end up being the degradation that we thought it might be.

Q So you agree that you thought it might be the degradation of this lake, correct?

A Excuse me, I didn't say me, she. I'm reading her testimony, I'm trying to respond for you.

Q Yeah. I'm actually interested in your opinion, though.
A Okay.
Q In your opinion has that camp resulted in degradation and really represented the turning point in degradation of this lake?

A No, I would say it has not, but I also would want on the record that that lodge just never got off the ground. I mean, it was never -- I don't believe they ever had a full house, it went out of business within -- you know, I guess I'm not an expert on that -- I would say within a year of when it started.

Q And it's back in business now, correct?
A I'm a little unsure of that.
Q Okay.
A It was bought as a family -- it was bought as a family compound, according to the owner -- the man who bought it,
but I do understand that his wife wants to run it as a resort also. And I'm not -- I actually wrote to them, I e-mailed them based on a website e-mail address, and got no response at all. So I don't know if they're operating or not.

Q Okay. But you would agree that at least the fear expressed in this letter -- and I'm not saying it's your fear, but the fear expressed in this letter has not come to pass, correct?

A Correct, it has not.
Q Okay. And we've heard a lot of testimony about the lodges and the guides. But do you remember when you first met with Mr. Kiely on this project?

A I certainly do.
Q And do you remember when you met with him, you told him -and I quote: I do not care about anything other than the impact of the project on my personal property, closed quote?

A No, I -- no, I did not.
MS. BROWNE: Okay. Nothing further.
A I do remember Mr. Kiely promising myself and the select board of Lakeville that there would be a minimum of two, if not three, informational public hearings held in Lakeville. To this date none of those have been heard. I do remember that. BY MS. BROWNE:

Q And who was present at that meeting?
A Who was present at that meeting?
Q Jeff West was also present, wasn't he?
A Yes, he was. And Debra Jacobs and Kurt Turner and Kathy Whitney was absent at that meeting, I believe.

Q And you understand that there -- First Wind has hosted a number of public meetings on this project, correct?

A My response to you was that they committed to hold a minimum of two, if not three, in the town of Lakeville and to date not one of those has been held. MS. BROWNE: I'll let Mr. Kiely respond to that if we need to. Nothing further.

MS. HILTON: Conservation Law Foundation?
MR. MAHONEY: We don't have any questions. Thank you.
MS. HILTON: We're ready for a break.
MS. MILLS: Hold on just a second. Does The
Partnership want to use their five minutes for redirect? MR. GURALL: No, we have no further questions at this time.

MS. HILTON: So we'll take a five minute break -- how about a ten-minute break.
(Whereupon a recess was held at 3:49 p.m., and the hearing was resumed at 4:01 p.m. this date.)

MS. HILTON: Okay. I guess Dave Corrigan.

MR. CORRIGAN: Come on up guys. Are you ready to go? MS. HILTON: Yeah, whenever you're ready.

MR. CORRIGAN: Commissioners, I am David Corrigan from Fletcher Mountain Outfitters in Concord Township, a full-time guide, I also run the RealWindInfoForMe.com website. I would like to thank you for the opportunity to address you today and to provide this testimony for the record.

My testimony and that of my witnesses will concentrate on three primary areas: The potential effects of this project on wildlife, the potential effects of this project on traditional uses in the local economy and the burden of proof. These are all interrelated as I do not believe that the applicant has met the burden of proof for either effects on wildlife or effects on traditional uses of the area and the resource as required under the applicable laws and rules.

I was at the commission's March 2011 meeting when Department of Conservation commissioner Bill Beardsley spoke to you. He said, and I quote: And I think that the classic example is the expedited wind process; there was a subject, there was a stimuli, there's a crisis in the middle east, there's all of those, you know, you need to get off carbon. There are all of those factors crept in there and if one goes through another six years to modify
the CLUP to accommodate wind and all of that kind of stuff, it would take a long time. The important factor to me is that your board, you all, can say no. There's nothing about the expedited process that says it is easier to get a yes. It's clearer, it's faster, you know where you will have some legitimacy, but you still have got to meet the LURC standard. And that's a direct quote taken from the official recording of the March 2nd, 2011 meeting in Bangor.

That really says it all, you can say no. You must say no if all of the LURC standards are not met. In this case I do not believe that they have been met. It's important to remember that it's not up to me or to any intervenor to prove that, it's up to the applicant to prove that all standards have been met. If they can't do that, if there's even one thing that isn't up to par, the Commission is required to deny this permit, which I, of course, am requesting that you do.

I've got a lot of testimony that's been pre-filed and we may get back to some of it in a bit, but since time is a constraint, I'd like to turn it over to Dave Tobey right now.

MR. TOBEY: Good afternoon, commissioners. Thank you for this opportunity to come and visit with you today. Originally I was recruited in -- as a witness for NRCM and
-- but at the last minute they changed their mind and -and I at the right time was able to be included in Dave Corrigan's. The other --

MS. HILTON: Your name and where you're from?
MR. TOBEY: David Tobey, Grand Lake Stream.
MS. HILTON: Okay. Thank you.
MR. TOBEY: The other thing, I've been here last night and all of today. I find it very interesting with all of the questions and all of the studies that come from away from the project area and very little, until just a few minutes ago here, did you hear some true stories and testimony from the area itself. And so I guess I'd like to start with that.

I do think that, you know, we have sustained the test of time; the folks in the communities around the lake and where I'm from, our trade and our traditions and cultures have remained the same. I'm a resident of Grand Lake Stream where virtually all of my adult life I have stitched together a living from the area's rich natural resources. As for many of my neighbors, that meant being a master Maine guide, a professional trapper, a commercial fisherman and a logger.

During this time I've served as assessor for the town of Grand Lake Stream, president of the Maine Professional Guides Association, president of Grand Lake Stream Guides

Association, member of the I F \& W Guides Advisory Board and founding board member of the Downeast Lakes Land Trust. I've accumulated a vast knowledge of the region and its natural resources in part by being involved in the organizations I've mentioned, but primarily by being in the local woods and on the local waters every day of the year. There's more written and oral history of this place among the lakes and woods of northern Washington County than $I$ or anyone could speak of in a short address, so I'll try to provide a few snapshots in the time of events important to us all. In the early times the chain of lakes and view of the Bowers project were used for transportation as native people made a living from the abundant and diverse natural resources. The native people were the first guides for visitors who came to the region for their extraordinary fishing these lakes provided.

Over time very little has changed in certain respects. Thanks to proper stewardship and conservation measures, this region of Maine still boasts the highest concentration of guide and sporting camps in our state. This is a clear indication that the health of the resource remains intact. This did not happen by accident, though. Our mentors, including tribal guides, carefully taught us how to manage and conserve our treasured woods and waters. This stewardship has left the wilderness qualities and scenic
resources intact. This would not be the case if the Bowers project were to move forward.

Bowers Mountain lies at the headwaters of the west branch of the St. Croix watershed. The lakes in that watershed are among the very few to hold the original land-locked salmon. Downstream we find one of the first land-locked salmon hatcheries in our state. Today this hatchery provides about 80 percent of the purest strain of land-locked salmon in all of Maine. The land and protected shores around these lakes are all part of an unparalleled Maine conservation effort, one that started in Grand Lake Stream in a village whose existence depends on the chain of lakes that reach north to the Bowers project.

Grand Lake Stream is a town that chose to design its own destiny, recruiting partners to assist in its efforts to protect the natural resources crucial to its present existence and future dreams. The locally conserved land, over 350,000 acres worth, is part of a contiguous 1.3 million acre block in our region. Right now friends and neighbors are working to conserve yet another 22,000 acres on the east shore of West Grand Lake, all in the viewshed of Bowers Mountain. This effort, because of its, number one, economic, environmental and recreational values, has been ranked by the U.S. Forest Service Forest Legacy Program as the number one conservation project in the
entire nation.
Of special concern here, too, is another project in the making, a landscape-sized, riparian-based contiguous white-tail deer wintering area. Crucial to its establishment are connecting wildlife corridors. The northern end of this far reaching deer management area is firmly rooted in the 8 -mile zone around Bowers Mountain. It encompasses land along both the St. Croix and Machias watersheds and upon completion will probably be the largest contiguous deer wintering area in all of Maine, which will provide immense benefits to all wildlife and fish in the area, another important segment of our resource-based economy.

An important concern in any effort to restore white-tail deer population is predation, particularly by the coyote, universally acknowledged as the worst predator to the state's herd. The Commission of I F \& W is planning action to reduce coyote numbers to help the deer. It is a known fact that coyotes are most effective when they hunt by line of sight, especially in areas that have been deforested. The strong, straight transmission lines on Bowers Mountain along with access roads and sites cleared for turbines will only aid the predators and further contribute to the decreasing Downeast deer herd. Newly created open areas located so close to a huge cooperative
regional effort to create a contiguous corridor of habitat would negatively impact the effectiveness of such work.

Grand Lake Stream, a small village at the south end of the chain of lakes in the view of Bowers Mountain, has been a destination for many generations, you've heard a lot here lately. There are 12 lodges with approximately 30 working guides on a daily basis. Just the fishing season alone runs from ice out to mid-October. It is known worldwide for its recreational fishing mostly in the chain of lakes south of Bowers Mountain, lakes nationally and internationally known not only for their fantastic fishing, but for the beautiful undeveloped landscape within which fishing takes place. The scenic character of the area within 8 miles of the Bowers project has degraded the area available for this high quality fishing and a beautiful setting is decreased and the economic draw to the region will suffer.

On a typical day many fishermen leave Grand Lake Stream in a northerly direction, spending most of that day in Junior Bay, Junior Lake, Norway Lake, Scraggly Lake within the 8 miles affected by the Bowers project. The most sought after and popular fish is the smallmouth bass. The most productive spots for our bass fishing are the southern shores of all these lakes and coves. Should the Bowers Mountain wind project go through, guides will be completely
unable to keep the industrial windmills to the north out of their clients' sights.

Needless to say, most of our clients and visitors come to our area in order to get away from the industrial commercial world they live in. They are looking for a place where local culture, tradition and the natural resources have remained unspoiled and unchanged. In short, they are not just looking for a fish on the line, but rather a total experience. As guides paddle them along the shore, they gain a wealth of knowledge about the region, its fish and wildlife and whatever else an intact and healthy natural resource contains. They may look ahead to see a mink working the shoreline or a moose or a deer drinking or feeding at the edge of the lake, a pair of loons guarding their nest, an eagle teaching her young to fend for themselves or an osprey diving to get a fish.

The natural resources of the Bowers Mountain area are currently positioned in a remote region free from significant impacts. Such an industrial intrusion would spoil the remote brand of the area upon which our economy relies. Clients come to this area because of the undeveloped character and scenery. Several have told me stories about going to other places but have stopped because of the intrusion of development and manmade structures. Many clients expect and love the dark night
sky because of the size of the watershed, some leave in predawn light or return after sunset. Flashing lights from the wind project would totally destroy that experience.

All these precious values, and not merely the fish rising to an insect hatch, are threatened by industrial wind towers in the viewshed. Many of our visitors first beheld the wonders of this watershed when their ancestors brought them here for the first time. They have created a bond with the region's unique character, a relationship so special that they feel part of the region's culture, traditions and natural environment. Most have also, in one way or another, been part of the nationally recognized conservation effort to protect this part of Maine and its way of life. It is their appreciation for the region as it is now that continues to draw them here. They are the folks who support Washington County's tourism trade which is the most stable component to the overall Downeast economy. Without their continued support, the future of the economic foundation of the region would be in jeopardy.

It is no doubt hard to explain to those unfamiliar with our wild surroundings what a difference a project of the sort proposed for Bowers Mountain will make to visitors. A difference profound enough, as in my opinion, to discourage many from returning the way they have for years and in some cases generations. To look at a pristine cove with a deep
green mountain behind it is sort of a thrill that is more and more rare in our urbanized industrial world. To put so much as a single cell tower or even a utility pole at the height of land is to taint that experience significantly.

Even if there are a moose or a deer or a loon in the frame, to position mammoth wind turbines in that scenery simply will destroy the aesthetic and emotional responses I have so often witnessed as a guide. The sense of refreshment that has attracted our clients for decades will be unavailable. In Downeast Maine we have already done our share to support clean energy. To the north of 6 we have sacrificed several mountaintops to the development of 55 wind turbines, largest effort in New England, along with many miles of transmission lines.

We already lost resource-based jobs because of permanent loss of habitat, notably as a result of the large utility corridor to our south and central Washington County. We see clearly the negative effects to wildlife when large tracks of woodlands are fragmented by gas transmission lines and electric lines. I personally have lost valuable habitat in these two areas that I traditionally use for trapping, hunting and guiding. For every thousand acres of well-managed forest in Maine, it represents 2.9 jobs in the forest products industry. For every thousand acres we permanently take out of growth,
therefore, means taking jobs away from 2.9 people who work in this significant industry.

The lakes around Grand Lake Stream are the focus of successful conservation projects designed to support our economy. The positive things that have lately happened in Washington County far outweigh any assumed benefits from improperly placed wind apparatus on Bowers Mountain.

I feel very lucky to be one of the -- of many in this region to make a living being a responsible steward of these lakes, streams and woods. I'm committed to leaving it a better place, if anything, than it was when I began my adult career as a guide, hunter, trapper and fisherman. My efforts towards leaving so great a legacy as the one I received may be the most important thing I can do as a member of this scenic wilderness area, this state and even this planet. So, commissioners, I strongly urge you to not allow the improperly placed Bowers Mountain wind project.

The president of the Grand Lake Stream Guides Association has asked me -- and this is in my name -- to give you their statement on the Bowers Mountain project. The Grand Lake Stream Guides Association originally started as a conservation association and was registered with the state that way. It was formed around 1968 to be involved with local conservation particularly water quality and habitat protection. That was back in 1968 before LURC was
even established.
We have gained much recognition by working cooperatively with the Maine Department of Inland Fisheries \& Wildlife on many important issues to assure the health of the resources that most folks in this region rely on to earn a living. Along with everyday conservation measures we've practiced, we have been instrumental in defeating first the planned nuclear waste dump at the headwaters of lakes in Lakeville. Some of you are old enough to remember that. And then a few years later we helped defeat the Township 30 MD ash dump. We are very proud of our work supporting local conservation efforts, including the one that has gained statewide and national recognition, including as current number one national priority Forest Conservation Project. It lies directly in the shadows of Bowers Mountain project.

We are stewards of the land and we greet and guide the many clients from around the world that have made our conservation accomplishments possible through their support over the past years and through many generations. They are the fabric that has helped make our conservation efforts reality. These people choose to return to Grand Lake Stream because of the experience we can offer them and the fact that our local culture, traditions and health of the resource is the very economic engine that supports our
existence.

It is for these very reasons that we, the Maine Guides, are adamantly opposed to the Bowers Mountain project. Very hard work and financial commitment at the local, state and national and, indeed, international level over decades have resulted in the preservation of hundreds of thousands of acres and miles upon miles of shoreline and waters upon which our way of life depends. The Bowers Mountain project is completely inconsistent with and destructive to all that has been achieved and to similar goals that we continue to pursue. Grand Lake Stream Guides Association.

MR. CORRIGAN: All right. And next we have Dale Tobey with the MPGA statement.

MR. TOBEY: My name is Dale Tobey, I'm from Grand Lake Stream. And I'm here as -- I'm vice-president of the Maine Professional Guides Association and I'm here with a statement from the Maine Professional Guides.

The Maine Professional Guides Association represents 800 working registered Maine guides. First formed in 1979, the association is comprised of guides who strive to enhance the standard of the guiding industry. These are professional guides dedicated to promoting a quality, ethical and legal outdoor experience for all.

The Grand Lakes region is especially significant to our members as the location of a number of historical
significant lodges and one of the largest concentrations of working guides in the state. A large number of significant waters and fisheries makes this region one of the state's, if not national, significance. This significance is enhanced by the efforts to conserve as working forests a large part of the land and the region in an effort to ensure that the remote character of the region is preserved. The impact of the wind power project on Bowers Mountain will significantly impact the success of guides in this region by simply being visible at almost every turn. The project will be clearly visible from many of the lunch spots and boat launches regularly used by guides. The resulting loss of the feeling of remoteness will significantly reduce the marketability of guides -- guided trips in the region and impact our members significantly and directly.

The Maine Professional Guides Association urges the state of Maine to recognize and address the adverse economic impact that industrial scaled wind farms can cause to Maine guides. The unspoiled lands, waters and natural character of inland Maine's landscape are what attract clientele to our association's doorsteps. Without these elements, the livelihood of the Maine guide and the quality of outdoor recreation in Maine will irreplaceably be lost. Unfortunately, industrial scale wind power projects
have far reaching impacts well beyond the actual project site. Their visual and audible impacts both day and night can extend far and are in direct conflict with the very characteristics that bring our clients to Maine. Our current knowledge of the impacts that these wind farms may have on wildlife large and small is insignificant to provide comfort to those of us who depend upon that resource for our economic survival.

The Maine Professional Guides Association is not philosophically opposed to all wind energy. The rates that our businesses pay for electricity are a heavy burden. However, the current government-supported model is not economically viable, improperly placed industrial scale wind farms threaten the traditional sporting economy, employment, incomes and small businesses that make up our association.

We request that the state revisit its current goals for wind power projects and put into place measures to both recognize and protect the guiding profession in Maine. MR. CORRIGAN: All right. I've got -- like I said, I've got quite a lot of pre-filed, I'm not going to read it all, but I do have a few more minutes, I would like to get a little bit more of it read into the record.

As commissioners know, wildlife is one of my primary concerns with this project. On June 2nd, 2011 I had a
telephone conversation with Mark McCollough at U.S. Fish \& Wildlife Service. Mr. McCollough had previously sent me information about lynx in Washington County and we discussed the issue at some length. On May 27 -- on May 27, 2011 Mr. McCollough had sent me an e-mail in which he provided a document entitled: Bowers Initial Wind Project Letter 2009 dated November 17, 2009. This document has been included in the record. The document was addressed to Sean Casto at Normandeau Associates as the applicant's consultant. This May 27 e-mail with the attached document was copied to several people including Fred Todd of LURC, Sean Casto, Jennifer Vashon and Steve Timpano at the State of Maine as well as Shawn B. Mahaney whom I believe was Army Corps of Engineers and later on Fred Todd forwarded all this information to all the parties.

Among other things, the document asked that the applicant consult with Maine $I F \& W$ and/or conduct their own surveys to determine if lynx were in the area and that they report this information back to U.S. Fish \& Wildlife. I find nothing about lynx or even bobcat in either the application or the $I F \& W$ agency comments, even though we have ample evidence that lynx exist in the area.

As of my June 2 nd phone conversation with Mr. McCullough, he tells me that he has nothing in his records indicating that the applicant or their consultants
ever provided the information to his office. It makes me wonder why information on a federally listed threatened species that's known to use the area is totally lacking from both the applicant and Maine Department of Inland Fisheries \& Wildlife.

According to Mr. McCollough, who is the agency specialist for lynx in the area, lack of funding and manpower have kept his department from doing the field research, but there's evidence to suggest that this project area might possibly qualify as critical habitat if the proper studies were conducted. I believe it's incumbent on this Commission to ask why those studies, or at least preliminary studies, were not completed by the applicant or commented on by I F \& W.

I've also spoken with many local people, Paul
Farrington, the local game warden. Warden Farrington concurred with Mr. McCullough that at least one lynx was accidently caught by a trapper in WMD 19 last season. There are also rumors that up to five lynx have been caught in the surrounding area in the last year, but no one has done the research to track them down. I've confirmed that with the warden that he's heard similar rumors, but no one has tracked them down.

I want to know why not. Isn't it important for this Commission to know if there are likely to be adverse
impacts on a federally threatened species? The Maine Department of Inland Fisheries \& Wildlife was concerned enough about these accidental catches that in December of 2010 they issued an emergency rule change to the trapping regulations for this area in an attempt to limit the accidental catches. They are obviously aware that this area has a population of lynx living in it, yet the lynx is not mentioned anywhere that $I$ saw in this application or the $I \mathrm{~F} \& \mathrm{~W}$ agency comments. Seems rather strange. The burden of proof is on the applicant to show that this project will not adversely effect the local wildife including the threatened Canada lynx. If they have made no effort to do so, we must ask why not? And if they have made an effort, we must ask, was it enough and what were the results?

I'll move on a little bit here. We only have a few minutes, I'll skip to the end. One other thing that I'd like for you to keep in mind is that most of the resources that we are encountering concern with in this particular case are great ponds. Maine has a long history of guaranteed public access to great ponds. This tradition and law goes back to the first English settlements in what is now Maine. Access to and enjoyment of great ponds has been guaranteed by various government bodies going back to the 1600s. It doesn't get much more traditional than that.

On the visual assessment, first and foremost is the fact that adverse scenic impact has absolutely nothing to do with how many people use a resource. Impacts to wild, little used areas can be even more devastating than impacts to heavily used tourist areas. The very charm of these remote areas is, frankly, their remoteness. And it doesn't take much intrusion before the impact becomes extreme to those who do use the area. For me and my paying clients, some of the most valuable scenic resources in Maine are the ones that are hard to get to and don't receive heavy traffic. For anyone to suggest that scenic impacts to these places cannot be considered unreasonably adverse simply because they see fewer users is to overlook the entire reason why people come to Maine in the first place.

There are, in my view, many reasons to deny this permit. And I believe that the many impacts to wildlife, traditional uses, the local economy -- local economy, the view, the fact that the applicant has provided no solid data showing that the project is even viable are all legitimate legal reasons for the commissioners to deny this permit.

As Department of Conservation Commissioner Bill Beardsley said to you on March 2nd of this year -- and I'm quoting -- the important factor to me is that your board, you all, can say no. There is nothing in the expedited
process that says it's easier to get to a yes. It's clearer, it's faster, you know you will have some legitimacy, but you've still got to meet LURC's standards, end quote.

The burden of proof is on the applicant. I don't believe they've met the burden of proof and unless it has been met, fully and unconditionally, then there are no grounds for issuing a permit for this project and I ask you not to. Thank you.

MS. HILTON: Okay. Commissioners, any questions? Fred.

MR. TODD: David, I'm -- I'm sure you're aware we rely on Inland Fisheries \& Wildlife for advice on wildlife impacts. We also rely upon the Department of Environmental Protection for their concerns about water quality impacts. You've raised concerns about both of those. So I'm interested in the basis for your concerns.

I mean, you've touched on it somewhat in your testimony, but just to get to some of the specific points. For example, $I F \& W$ is concerned about the about the curtailment of start-up operations at different wind speeds to avoid -- or to minimize bat fatalities. They're suggesting that under certain -- at certain times of the year or certain times of the day that they curtail start-up from 3 meters per second at wind speeds up to 5. You said
in your statement that bats routinely fly at higher wind speeds. So what -- how do you --

MR. CORRIGAN: I don't have a document in the record. Although, I believe if you go back to Bull Hill, some of the I F \& W agency commenters referenced reports that said that 5 meters per hour was the standard they were using because it seemed to be a standard that was being used, but there was evidence of bats flying and hunting at even 8 meters per hour -- or meters per second. So that is the basis. We have them on record saying that we know bats fly at higher speeds, but they have chosen 5 as a cutoff for these curtailments.

So I'm not saying that's wrong, I'm just saying there is evidence that bats do fly at higher speeds and maybe we need more studies, which it appears I F \& W is looking into right now. I just think there may -- perhaps we should be looking at some wider parameters.

MR. TODD: Okay. As to water quality, have you shared your concerns with any of the DEP staff?

MR. CORRIGAN: I have not spoken with DEP. Like I said, I have had no real concerns over the surface water and surface runoff. I don't personally agree with the standards that are being used, but I believe they fit the legal criteria. I still believe they'll have an adverse impact.

My questions on water quality were not about surface water, as was contended in some rebuttal testimony, it was about groundwater aquifers, bedrock aquifers on which we've had no studies at all from anybody. And I'm just really concerned that before we start blasting and drilling 40 plus feet down into bedrock at the headwaters of sensitive cold water watersheds, we should have some studies of some information in the record. That's -- that was my contention on that.

MR. TODD: Okay. My other questions are to Dave Tobey, similar to the questions that we asked The Partnership witnesses regarding the extent to which guides in the Grand Lake Stream area utilize this -- the 8-mile distance south of Bowers Mountain. You say in your testimony that there are roughly 12 sporting camps there. And I think you used the number 30 -- 30 guides. They used -- just recently used the number 50. So I'm assuming it's somewhere between 30 and 50?

MR. TOBEY: I used the number 30 as active guides that may be utilizing that watershed or the area. There are 30 active guides that are out guiding every day. I find the estimates that were given to you earlier to be quite accurate for that area. Of course, for us traveling up that way, we have vehicle boat launching ability at Scraggly and Pleasant Lake by road in the 8-mile circle,
but most often we launch at Pocumcus Lake and travel that distance by canoe, which really, to me, brings to question the accumulative scenic impact, just like the people in the double-end canoe or the kayak, our clients, are in the canoe and getting different perspectives, you know, every 10 feet of the way as they make that long journey. And, also, like I mentioned in my testimony, because of the distance, often we leave before daylight and come home after dark. So we're not restricted to daytime use only. You know, that -- that needs to be included.

On water quality, I'd like to add to what David said. Unlucky for us, in the Bowers Mountain project that falls under Region $F$ jurisdiction, but the bulk of that watershed, West Grand Lake -- from Junior Stream south is in Region C. And it is those folks that oversee the pure strain of salmon in our hatchery. And they're having difficulty now with water temperatures in August -- too high water temperatures. So, you know, any fragmentation of any of the aquifers or springs that feed these lakes would directly result in a change in the bulk of the watershed, which in Region $C$ our biologists have told us that they have not been questioned on this, obviously, because the project area is outside of their jurisdiction. And that's one of our concerns if these regions are working together or if they've even been questioned yet on
the possible impacts.
MR. TODD: Okay. Back to the number of guides. How many -- how large is the membership of the Grand Lake Stream Guides Association?

MR. TOBEY: I would say they average around, right around 50 paid members.

MR. TODD: 50 paid?
MR. TOBEY: Yeah.
MR. TODD: Can you put a number -- and I'm sure there's going to be a range -- put a number on the number of clients a guide from Grand Lake Stream might take up into this 8-mile area we're talking about on an -- on an annual basis?

MR. TOBEY: Well, if you use the original figures given to you, probably the average guide guides 75 days and he can -- you'd only take two clients per canoe. So if you took -- that would be 150 clients. And then you use the original figures given to you would give you the end result.

MR. TODD: The original figures being the 50 guides, roughly?

MR. TOBEY: No. Earlier Charles Driza and others, Louie, gave you an answer to the day use in that area.

MR. TODD: Yeah. Okay. To what extent -- I asked this question of The Partnership witnesses -- to what extent do
you use public access points that are in fact on private land? The term public access and public campsites has been, I think, fairly loosely used. I'm assuming most of these are in fact on private land; is that correct?

MR. TOBEY: They all are. Yeah, we don't have any state launches up in that region that we use. They are all on ownership of Wagner within the easement area. But one of the specific things when drawing up the easement we was sure to include, undeniable access to all current access points on all these lakes, so forever these access points are open to the public.

And a lot of the campsites -- I'll take that question a little further, I heard you ask it earlier. Many of the campsites are on Wagner land also. They were created originally by guides, inspected by the Maine Forest Service, they're eligible for fire permits. And it was quite a few years ago, but the landowner, Georgia Pacific at that time, gave a fee-abated lease to the Grand Lake Stream Guides Association for these sites to be used for us and the public. So there is a fee-abated lease on those within that ownership anyways.

MR. TODD: And in terms of the clients who use the area under question, are most of them taken up into this area by guide or are there some that are adventuresome and wander off on their own up in there for a matter of days?

MR. TOBEY: There is a -- there are a lot of clients that go on their own also. I was, for quite a few years, manager of the campsite at Pleasant Lake under Georgia Pacific, I also managed, at the same time, the campsite at Elsemore Landing on Pocumcus Lake. And those campsites -I have all the old records -- were kept full all during the summer. The Elsemore site had 24 camper spots, 24 campers, and Pleasant Lake had, I would say, 20 at that time, which was allowable for the toilets that were there. And they got heavy use and it was by individuals without guides. MR. TODD: Okay. That's all I have. Thank you. MR. PALMER: Hi, David. I have a couple questions for you, obviously, about scenic. I agree with you that it came up in the Bull Hill hearing -- which I guess you were at, I think I remember you.

MR. CORRIGAN: Yeah, I was there.
MR. PALMER: I had been one of the people pushing for weighing heavy use as a -- a higher indication within the criteria. And it was brought up that there are sites that are purposefully managed for remoteness and low use and it handicaps those sites. So I understand that and accept that critique. You are aware of LURC's lake management classification system?

MR. CORRIGAN: I am aware of. I haven't studied it extensively, but I'm aware of it.

MR. PALMER: So they have two classes for protected remote lakes and none of these lakes are Classes 1 or 6, which are the two classes. So there is a management system in place, which you may disagree with. But there is a management system in place for managing remote lakes.

MR. CORRIGAN: My answer would be that I believe you're correct, but perhaps just because it doesn't qualify as remote doesn't mean that a low level of use on it should be used as criteria to say the visual doesn't matter. The low level of use may still be a draw even though it's not officially classified as a remote lake.

MR. PALMER: We're not saying that, we're just -- the criteria that are to be considered according to the Wind Act have to do with things like the extent and nature of use, which at one level doesn't have anything to do with scenic at all. And so you'd sort of divide the lakes up. There's some lakes that are supposed to be, by classification, remote and treated special because there aren't people there and then other lakes are different than that.

And so it seems reasonable to weigh the ones that have the heaviest use as being most important because there's more users there to be exposed.

MR. CORRIGAN: I know a lot of people who make their living on those lakes and that use those lakes
recreationally without making a living on it that would severely disagree with that. And I'd also say that it goes to more total resources of value, not necessarily just lakes. There are mountaintops, there are trails with low use that can still have a high visible --.

MR. PALMER: Yeah, but LURC can't consider those on a wind project.

MR. CORRIGAN: They can if they are -- if they are already so classified of state or national significance, the amount of use is not necessarily the criteria.

MR. PALMER: Right. But in this case there aren't these kinds of things. So the argument that we're talking about may be made for the Appalachian Trail, for instance, but we don't have that in this case. All we have is these lakes and none of these lakes are classified for remote management.

MR. CORRIGAN: But they are classified as scenic or -MR. PALMER: Yeah, they are scenic, that's right. MR. CORRIGAN: Scenic or outstanding. So simply -- so they're already scenic or outstanding, that classifies them as of state or national significance under the Wind Act or subject to this.

My -- my problem with the way you apply that is that you might say, well, if it gets 100 users a week, that doesn't -- the visual doesn't matter, but if it gets a
thousand visitors a week, the visual does matter. That kind of designation seems to be what you're splitting hairs over and it seems contrary to the uses we see in the area.

MR. PALMER: Then how do you interpret the criteria that has to do with the extent of use, what does that -what does that mean? I mean, obviously, if there's a thousand users and it's at the beach, say, at -- 45,000 users, it's the beach at Mount Blue State Park, I'm assuming that you're going to agree if you saw a whole bunch of turbines from that beach that might be a significant thing. It's a state park --

MR. CORRIGAN: DEP is still having a hard time with that one in that specific case. But that --

MR. PALMER: You would --
MR. CORRIGAN: -- would be a significant scenic impact.
MR. PALMER: -- agree with that?
MR. CORRIGAN: But could it not be a significant scenic impact to those hundred users as opposed to a thousand users if you're looking at the average user and their expectations when they come to Maine?

MR. PALMER: That's what I'm saying, but you're -- but you're saying that it's a severe use if it's a hundred or three or four or a thousand or -- any amount of use is severe.

MR. CORRIGAN: I'm saying that the undue adverse scenic
impact should not be based on simply how many people in a given time period see that impact.

MR. PALMER: But it has to be because extent and duration are a criteria, they must be considered.

MS. HILTON: Jim, do you have a specific -- it's becoming a debate.

MR. PALMER: Yeah. Sorry.
MS. HILTON: Anybody -- any other questions on our end here?

MR. CORRIGAN: Before we move on to cross-examination, I would just like to ask one point. I noticed Ms. Browne had about 50 minutes spread between me and PPDLW for cross-examination and you allowed her to go 45 on PPDLW. By my watch it was more like 47, so I'm thinking we've got about three minutes worth of cross-examination time here. You specifically allowed her to take time off my cross-examination to add to PPDLW. And by my watch, she went to 47 minutes out of the allotted 50 total for the two of us. Just a point of order.

MS. HILTON: Does that make sense to you? I'm not -MS. CARROLL: You totally lost me, David.

MR. CORRIGAN: She had 30 minutes allowed for The Partnership, she asked to have 45 and to take it off of my cross-examination time. Is that -- I've heard you agree to that. Does everybody agree that happened?

MS. CARROLL: Hm-hmm.
MR. CORRIGAN: Okay. By my watch she went to 47
minutes with them. But even if it's 45, I just want to say
-- just so -- I mean, I ran my testimony to the minute and didn't go over. I would just like to say we don't want to go forever with this.

MS. HILTON: What are you asking for?
MR. CORRIGAN: That you limit her cross to three to five minutes as you had said earlier.

MS. CARROLL: Yes.
MR. CORRIGAN: I just want to make sure that that's going to happen, we're not going to get into something long. But otherwise, no objection.

MR. MOTT: Madam Chair, let me just say that if it facilitates things, I'm perfectly content to put off my time until the July 16 th hearing.

MS. HILTON: We'll take that into consideration. So -and thank you. So you're going to do your cross? MS. BROWNE: Yes.

MS. HILTON: Yes. Go for it. EXAMINATION OF DAVID TOBEY

BY MS. BROWNE:
Q Thank you. Mr. Tobey -- Dave Tobey, I appreciate your testimony here today. And I have a few contextual things I'm just trying to clarify. You talked about the salmon

9 Q And you're not suggesting that this project, if it were
hatchery.
A Yes.
Q And that's -- as I understand it, that's about 17 miles from the project area, right?

A Yes, it is.
Q Okay. And then you also referenced 2.9 jobs per thousand acres of timber managed area, right? approved, would adversely impact the logging industry in that business, are you?

A I am.
Q Okay. Are you --
A Every time you take an acre out of forest production, you're reducing existing jobs in the forest products industry.

Q And do you realize the project would take out 66 acres and that's it?

A Yes.
Q Okay. And you're aware that commercial timber landowners have a different view of whether the project would harm or benefit their industry, right? Were you here for Mr. Milliken's testimony?

A I was here for Mr. Milliken's testimony.
Q Okay. Thank you. And you also talked about the West Grand

Lake Community Forest project, which, as we've heard is, you know, the number one forest legacy project. And you understand that that's more than 10 miles away from the project -- from the Bowers project site, right?

A I do.
Okay. And at the -- at the risk of creating some confusion with numbers, bear with me because I -- in response to Mr. Todd's questions you said you thought that the average number of days of guiding was 75 dates a year?

A Yes.
Q And what's the general -- what time period does that cover, what months of the year?

A That goes any time from ice out, now it goes until the end of fishing in Grand Lake, which is the 15 th of October and in the upper lakes, too.

Q So April to --
A Mid October.
Q Okay.
A First of May.
Q And then you said there were 30 active guides. And then are -- is it your belief that 50 percent of all the guiding activity out of West Grand Lakes goes into the lakes within the study area?

A During the course of the day, yes.
Q Okay.

A Depending on wind conditions, we have to move around to be safe and to make our way home. So even though our intentions may be Scraggly Lake, we may end up only in Junior Lake that day or Junior Stream.

Q So wouldn't that result in thousands of visits to Junior Lake, for example, over the course of the season?

A It would.
Q And we heard from somebody on the site visit yesterday that lives on the lake that says he sees on average maybe five guided people a year during the entire season coming onto Junior Lake?

A That's a good example of the remoteness of the watershed. I'm able to take my people some days and not even see another boat because some of the best fishing is in the remote coves, which are very large, they even get their own names in this watershed. And so as a guide, you're able to take folks outside of the main corridor of boat traffic and use and fish in these little coves and big coves and isolated areas out of their sight.

Q So you're saying there are like 6,000 -- I haven't done my math, but -- boat trips from the guiding industry from West Grand Lakes into Junior Lake each season?

A I would say.
MS. BROWNE: Okay. That's all I have. Thank you.
A I want to use an example. Our own game warden spent Sunday
of Memorial weekend on West Grand Lake and associated waters. He came back and told us that he only came across six boats that day. I knew personally of that many guides up there, right, and he didn't even mention seeing a guide. So that's how remote and big this watershed is and how easy it is to not see the user group. They're dispersed that much, you know, behind islands and in coves and --. But when you're a State's game warden that can only find six out of a possible 20 users, you know, that's a good explanation for the remoteness. BY MS. BROWNE:

Q Well -- and the largest lake is West Grand Lake, right?
A That's the largest one. MS. BROWNE: Yeah. Okay. MS. HILTON: So do you want to do redirect? MR. CORRIGAN: I think we're set. MS. HILTON: They've already -- okay. And so I guess -- where did he go? There you are. Why don't we go ahead and -- with you, Gordon. Will you have many questions for Gordon?

MS. BROWNE: Not likely. And I just want to reserve maybe two minutes. MS. HILTON: Okay. (A discussion was held off the record.) MR. GORDON: This is simply what I'm presenting here.

And please share the moment with the other intervenors, if you would. And I am on the mic? Chairman Hilton, Land Use --

MS. CARROLL: Hold on.
MS. MILLS: Any objections? No CLF does not have any objections.

MR. GORDON: If that's a problem, I'll take it back.
MS. MILLS: Does The Partnership have any objection to Mr. Mott's exhibit?

MR. GURALL: No.
MS. MILLS: So no party has an objection to this exhibit?

MR. GORDON: We just intended it to be helpful. Chairman Hilton, members of the Land Use Regulation Commission, my name is Gordon Mott.

MS. HILTON: For some reason we're not hearing you very well.

MR. MOTT: Okay.
MS. HILTON: Is your mic on?
MR. GORDON: Are we in the picture -- are we in the room? All right. Okay. Technology, you know, it gets ahead of me.

My name is Gordon Mott, I live in Lakeville, I'm a forester and have an active private practice in Maine. My career has involved modest forest biological and
silviculture science research, forest protection, forest conservation, natural resources policy and management in New England and eastern Canada since 1950. I've been in Maine for 35 years. My residence and work for 22 years has been in this region, including properties in Topsfield, Kossuth, Carroll Plantation, Lakeville, Springfield, Lee, Township 3, Range 1, MBPP and the Passamquoddy tribal lands. I participated in management planning for the public lands in the eastern interior region including the three Lakeville public lots.

As a local citizen I have concerns and interests in the economic cultural resources, natural resources and conservation futures of this distinguished part of Maine. Together with my wife Virginia we personally have ownership in seven different properties in Lakeville, five of these properties are located on the highest topography including 1,047 foot Almanac Mountain from which Bowers Mountain is presented at a distance of about 4 miles.

You've heard interest and observations concerning Almanac Mountain and the tower thereon. Just to begin with, this is Almanac. We have the privilege of owning most of it, but not the top. I would just mention that that blinking light on the top of Almanac Mountain is signaling that Maine Public Broadcasting television is being sent up to the county. That's what it was for. It
was there since 1963.
And I would also mention that you can't see our residence. Forest harvesting will never be visible. For those of you who enjoy the lakes and see Almanac as an icon in your view space, it's going to stay just exactly as you see it now. We have the front face of it under preservation. And our viewpoint is the reverse of what all -- everybody has been talking about, the lake here with the wings on it in the near foreground is Keg Lake. Behind that is Junior, which originally in 1844, by surveyor John Gardner, was designated on his map in his plan when he laid out the lots in Lakeville as Grand Lake Junior. That's how it got it's name. You see lower Sysladobsis off here on this side. You're looking at Grand Lake Stream that way.

I have no obligation to present visually correct material. And so what you're seeing here is relief, three-fold exaggerated at sunrise, Bowers Mountain and Katahdin in the far background. I speak in support of the natural resources conservation benefits proposal in the Bowers wind project.

As has -- many others have said and we have the records in our town records, since the early 1800s landowners have purchased private property here for year-round and seasonal residences because of the unique natural character and resources of the region. And while these natural vistas
are not explicitly owned by the public as are the great ponds and public waterways and instead appear to belong to the ridge landowners, they, nevertheless, lie in a domain where a public visual interest is generally acknowledged in many rules and statutes.

There are standards for shielding terrestrial night lighting, to restrict illumination no further than the boundaries of private property, for example. Shoreland vegetation management standards and setbacks serve to maintain natural shoreland character as well as water protection in both LURC and DEP jurisdiction. LURC Chapter 10 25-E specifically limits those of us who own ridge property, quote, if a site includes a ridge elevated above surrounding areas, the design of the development shall preserve the natural character of the ridge line.

Given these inequities, it's only fair and just that if wind power development will stand permanently on these natural ridges that in some fashion there should be compensation or mitigation to the affected public for the loss in visual values. The only action that can offer anything in any way for the loss of these treasured natural values by the affected communities, by those of us on the terrestrial residences. We've been speaking about views from lakes, but for the rest of us who are there year-round and see these things more than anybody else, the only way
that we can have any kind of compensation or balance for the loss of those visual values becomes conservation of natural resources that would not otherwise be conserved.

It's important to say that it's understood that you as a commission are limited when it comes to wind developments and you're prohibited by the actions of the Legislature from applying the same standards to the development that you will apply to those of us on land who will view the development. We trust it will be clear to the concerned public that you're bound and restricted in performing this difficult work. It's also fitting to say now that many of us are deeply grateful for what you contribute at your own personal cost to our communities and to the north woods of Maine.

The mechanism provided by statutes to compensate for the loss of public visual values is a provision in MRSA Title 35-A, Chapter 141 for tangible community benefits to be paid at a rate no less than 4,000 per turbine per year averaged over 20 years. Tangible community benefits are to be utilized for public purposes including, but not limited to, for property tax reductions, economic development projects, land and natural resources conservation, tourism promotion or reduction of energy costs.

It's particularly just that there is provision for natural resources values to be conserved in compensation
for loss of the natural character of our resources. The provisions in statute focus payment of benefits to the host communities, which in this case consists of Carroll

Plantation and Washington County. Champlain Wind, LLC has constructed and negotiated tangible benefit agreements which over a 20-year period will benefit Carroll Plantation to the extent of a 1,840,000 for all purposes, Washington County 200,000, Kossuth 305,000 for energy cost reduction, and Carroll Plantation, Lakeville and Kossuth 500,000 in a Bowers Mountain conservation fund for natural resources conservation. In total, the tangible benefit agreements aggregate to an average of $\$ 5,269$ per turbine per year exceeding $\$ 4,000$ per turbine per year.

I am not about to say that that's sufficient compensation for loss of those values, but I will say very clearly that the applicant has exceeded the minimum standards by the Legislature for these provisions. There is a pie chart of what $I$ just said. You can see that the Carroll Plantation agreement is the largest portion of the pie, but the second largest portion is, in fact, going to go for conservation benefits.

The positive aspects of the proposed natural resources conservation benefits are as follows. Firstly, the natural resources conservation benefits will come to the affected local region. By the terms in Title 35-A there's no
requirement that natural resources be conserved. Tangible benefits of other kinds could well have been chosen. It would also have been perfectly valid to contribute to conservation elsewhere in the state and still satisfy the requirements of statute if such an agreement had been reached with host communities.

To focus benefits in the local affected region in recognition that balances to be sought for impacts that will be made to local natural values is an excellent and appropriate principle. Precedences are being set in this particular case. I believe this is the first case of tangible benefits -- or an early one in any case -- and this particular precedent is really one of great merit, in our opinion. We're losing it locally, let us benefit locally.

Secondly, conservation benefits, they're only required by statute to be paid to the host communities. In this proposal conservation benefits are generously extended to include the town of Lakeville as an affected community in recognition of the magnitude of the interests to the elevated and lake properties here.

Thirdly, local governance is coupled with the Forest Society of Maine, a conservation organization of recognized standing, to identify opportunities, solicit proposals and pursue local conservation activities on an ongoing basis.

An initial funding at 120,000 will permit an early productive start and the applicant is bearing the costs of establishing the entity.

There's a provision in the proposal to conduct an initial comprehensive natural resources conservation planning process so that local conservation opportunities can be prioritized. And in a sense, at least one part of the kind of municipal and regional comprehensive planning, in my mind, that should precede massive industrial development at this scale in any community. There has been no comprehensive planning by any entity for this massive industrial expansion in Carroll Plantation, but at least there's the opportunity here after the fact for the natural resources conservation planning to be conducted. That's a positive thing in my judgment.

Thirdly, the proposal provides a mechanism whereby local land trusts and conservation organizations will be able to benefit, augment and participate in bringing natural resources conservation to the region. The initial inquiries that I made -- I was extended the privilege of giving input in the process of developing the proposal over the past year. And early on $I$ took pains to reach out to the local land trusts. And the -- those inquiries concerning their ability and willingness to participate in governance of the local tangible conservation benefits
entity indicated that because of the divisions in their membership concerning wind development, none could participate directly at the outset.

It was also clear that it will be desirable for the local trust to be eligible to participate in future conservation activities if the development is permitted and that they'd be in a conflict of interest position if they participated in any way in governance. The proposed local entity will provide a desirable arm's length third-party relationship that will permit positive future participation.

Finally, while it's fair to conclude that the level of natural resources conservation that will become possible under this proposal will not compensate for the value of the losses in the natural character of the landscape, it's important to recognize that although there are active successful land trusts in this general region, there are virtually no natural resources conservation activities in these three municipalities.

It is likely that little conservation would take place here now on our watch if these funds were not available. MS. HILTON: Gordon, you're getting close on time. Can you -- and it looks like you've got a few more here. Is it possible to speed up things a little bit or --? I realize this is important information you're presenting here.

MR. GORDON: I'd back off from my unpoetic articulation and speak instead to three candidates that I would just mention that exemplify the opportunities for natural resources conservation in the communities.

This first one, I was able to obtain a map of the farmland soils of statewide significance for Carroll Plantation, the principally impacted municipality. The blue areas are farmland soils of statewide significance, the yellow areas are prime farmland soils. There's an opportunity under this proposal to go forward and purchase development easements on these kinds of natural resources. That's an example. You went by those prime farmland soils on your tour yesterday, the field of buttercups is one such place.

There's an opportunity to purchase easements on the known deer yards in the region. Matt Dunlap spoke to you yesterday about the importance, he has also mentioned recently the other -- the importance of restoring the local deer herd, and the opportunity to maintain softwood cover, purchase easements to maintain that, the opportunity to support development of feed plots and, in general, work on behalf of the local economy that's dependent upon wildlife productivity that is present as well.

I would also mention the opportunity -- I happen -just to give complete disclosure here, I happen to know the
details of this property because I have gathered information about it on behalf of the owner for the past few years. And I know it's available, should it be something that is desired. It is a multiple-use parcel that offers the opportunity for water access at the beginning of the Baskahegan River trip, that's mapped on DeLorme, at Lindsey Brook access to dead water, there's timber revenue that's possible, there's campsites that could be developed and there is one of the most delightful distinguished peat bogs in the region that would support all kinds of tourists-visiting kinds of economy, calliope and flowers up there, picture plant in bloom, Rodela in bloom down here, all taken this year.

And finally I'd say that the future natural character of our communities will be formed in important ways, but what we do now with our natural resources in the time we're given here, these conservation funds are important to the vision of the future of this place. Every eight days and 20 hours there are as many people added to the world population as there are people in the state of Maine. That's the rate at which changes are ahead of us. What we do now on our watch with resources such as this are going to determine what we're going to have in our future. This particular matter is a very important matter. I close with a question. I did notice that Mr. Todd
indicated early on that he felt you needed to reach a determination that these -- that this proposal was significant. What level of offering would be significant?

MR. TODD: That's a decision the Commission will have to make.

MR. GORDON: Well, I have to keep trying, you understand that.

MS. HILTON: So do we want to make -- sort of move into questions by commissioners or staff? I don't know whether --.

MR. TODD: I can't let you off. On Page 1 of your -your -- the pre-filed testimony under No. 1 you talk about the imposition of this project on landowners including night lighting. And in the middle of the paragraph you state that there are -- for other types of projects there are standards for, quote, shielding and restricting terrestrial night lighting to illuminate no further than the boundaries of private property ownership.

Are you suggesting that be a standard for this project?
MR. MOTT: No, it's recognition that -- it would be desirable, of course. But it's recognition of the fact that you are -- you hold us to two different standards. In this particular case you can't hold the developer to the standards that the rest of us who own ridge lines, that ridge line that we own won't be developed, but should we
want to, we would be held to a standard such that the residences up there could not be seen or the lights. MR. TODD: Okay. Thank you. MR. GORDON: Let me also respond to an earlier concern, Fred. My calculations about how long it takes to generate these benefits are naive. I couldn't help myself but try and see what kind of calculation I could make. It's very clear from the presentation that we heard earlier from Conservation Law Foundation that calculation of the economies in this particular case is much more sophisticated than the approach that I had made. Nevertheless, $I$ think the point is a valid point in judging how significant the conservation proposal is. These would be standing up there all day, all night every day. Just exactly what is the -- the cost in relative terms for providing these conservation benefits relative to all the other economy in the situation? I think it's a very valid question.

MS. HILTON: Okay. Well, I think we're done for now. I have just a few things -- I'm sorry.

MS. BROWNE: Oh, I'm not going to stand in the way. MS. HILTON: I'm sorry. No. Really? MS. BROWNE: No.

MS. HILTON: Okay. Thank you. I just -- there were several issues that arose today that may require follow-up
by the Commission. And we will work with staff to address these issues as needed probably through procedural orders. The hearing on July 6th will be devoted, as planned, to agency and consultant cross-examination.

And this is my formal closing statement. I wish to remind everyone that the record of this hearing will remain open until Monday, July 18th to receive written statements from the interested public and for an additional seven days until Monday, July 25 th for the purpose of receiving rebuttal comments.

No additional evidence or testimony will be allowed into the record after the closing of the record. I wish to remind the parties and the -- that the third procedural order establishes the process for parties to request permission to submit additional comments into the record following the close of today's technical session.

There will now be a recess of the hearing for dinner and the second session to hear testimony from the public will begin at 6:00 p.m. tonight. Thank you. (Concluded this hearing at 5:23 p.m. this date.)

CERTIFICATE

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I, Angella D. Clukey, a Notary Public in and for the State of Maine, hereby certify that on June 28, 2011, a hearing was held regarding Bowers Mountain, Development Permit DP 4889; and that this hearing was stenographically reported by me to the best of my ability 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 22 nd day of July 2011.
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$\overline{\text { ANGELLA }} \begin{gathered}\text { D. CLUKEY, NOTARY PUBLIC } \\ \text { Court Reporter }\end{gathered}$

My commission expires: March 17, 2017

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