State of Maine
Department of Conservation
Maine Land Use Regulation Commission

Tuesday, May 17, 2011

Volume II of III

First Wind - Blue Sky East LLC/Bull Hill
Development Permit for Wind Energy

In the Matter of

Pending Development Permit Application DP 4886

Held at Ramada Inn

251 High Street, Ellsworth, Maine

Don Thompson & Associates
Court Reporters
(This hearing was taken before Angella D. Clukey, Notary Public, at the Ramada Inn, 251 High Street, Ellsworth, Maine, on Tuesday, May 17, 2011, beginning at 8:34 a.m.)

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MS. HILTON: Good morning, everyone. I'd like to call this meeting to order. This is a public hearing of Land Use Regulation Commission on the matter of DP 4886, which is a wind power project, the Bull Hill wind energy development in T16 MD, Hancock County and the applicant is Blue Sky East, LLC.

My first order of business here is to read an opening statement. And, first of all, I'd -- we'd like to do some introduction. I am Gwen Hilton and I am the commission chairman, I'm also the presiding officer for this hearing. And if I could have everyone around this table introduce themselves starting with Rebecca on the right.

MS. KURTZ: Rebecca Kurtz, Phillips.
MR. FARRAND: Sally Farrand, Beaver Cove.
MR. SCHAEFER: Steve Schaefer, Grand Lake Stream.
MS. MILLS: Amy Mills from the AG's office.
MS. HILTON: Gwen Hilton from Starks.
MS. CARROLL: Good morning. Catherine Carroll, commission staff director.
MR. LAVERTY: Ed Laverty, Medford, Maine.
MR. NADEAU: Jim Nadeau, Winterville Plantation.

MR. MURPHY: Donald Murphy, LURC project planner.

MR. PALMER: Jim Palmer, scenic expert.

MS. HILTON: And we also have Samantha Horn-Olsen, manager of the planning division right here, and on sound is Scott Perrow, who's recording today's session. And we have Warren Brown who is our sound consultant over in the left corner here. And Karen Bolstridge is -- hopefully you've all signed in with her, we're taking attendance. She's at the table. And we have Angella Clukey who is our court reporter.

And given that we do have a court reporter here, it helps a lot if you speak very clearly and not too quickly and if you have a name or -- I guess it's mostly names that spelling can help if it's an unusual name.

Today's hearing is being held pursuant to the provisions of 12 MRSA of the -- which is the Commission statute. The hearing will be conducted in accordance with the Administrative Procedures Act and Chapter 5 of the Commission's rules for the conduct of public hearings.

Today's hearing is being held to receive testimony on the matter of Development Permit DP 4886 submitted by Blue Sky East, LLC to construct a 34-megawatt wind energy development in T16 MD, Hancock County. The proposed wind energy development would consist of 19 1.8 megawatt wind
turbines, up to three meteorological towers, an underground
electrical collection system, access roads, a substation
and an operations and maintenance building.

The purpose of today's hearing is to allow the
applicant, intervenor and government agency to present
testimony and evidence as to whether the development
proposal meets the criteria for approval as specified in
12 MRSA of the Commission statutes and the Commission's
land use districts and standards.

Representatives of the intervenor and the government
agency will provide a short opening statement.
Representatives of the applicant will then provide a
summary of the proposal and their pre-filed testimony.
Following the applicant, witnesses for the intervenor --
following the applicant, witnesses for the intervener,
Concerned Citizens of Rural Hancock County, will present
summaries of their pre-filed testimony.

At the conclusion of the testimony from each of the
witness -- witnesses, cross-examination may be conducted
first by the Commission, then by the staff, next by the
applicant and next by the intervenor and then by the
government agency. However, commission members, staff and
counsel for the Commission may ask questions at any time.

The state's soil scientist, representatives of the
Department of Inland Fisheries & Wildlife, the Department
of Environmental Protection and the Public Utilities Commission, Warren Brown, LURC's sound consultant, and James Palmer, LURC's scenic third-party peer reviewer, will be available to answer questions about their review comments.

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 all speak clearly.

All questions and testimony must be relevant to the Commission's criteria for approval for this process. Irrelevant and unduly repetitious material or questions will be excluded.

The record of this hearing will remain open for a period of 14 days, until Tuesday, May 31st to receive written statements from the interested public and for an additional seven days until Tuesday, June 7th 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 addresses with our staff.

At this time I would like to swear in any witnesses who plan to testify today. So I would ask you to stand up and raise your right hand. And do you solemnly swear to tell the whole truth and nothing but the truth?

AUDIENCE MEMBERS: I do.

MS. HILTON: Okay. Thank you. And I guess Amy -- Amy Mills is going to tell us a little about a couple of adjustments that we’ve had to make to the schedule.

MS. MILLS: Yeah, we just have one quick housekeeping matter that arises out of some comments that were filed by IF & W on May 12th. And staff -- LURC staff and I consulted briefly last night with counsel to the applicant and counsel to the Concerned Citizens Group about some adjustments to the time allocations that we would make today to try to provide some additional time to address these vernal pool issues that IF & W raised in their May 12th comments.

So what we’ve done, again, in consultation with counsel, is we’re going to increase the time from 10 minutes to 15 minutes for the Concerned Citizens Group for
their opening statement. With respect to the applicant, we're going to add an additional 15 minutes to the their time allocation for summary of testimony. And the applicant has agreed to give up 10 minutes at the 2:15-2:45 time slot for cross-examination to keep this hearing on track.

So the hearing agenda that was distributed, those times are going to be a little bit off. Catherine Carroll has graciously agreed to keep track of the time. And so I guess I would just suggest to counsel and to the parties who are going to be summarizing their testimony that you keep an eye on Catherine Carroll to make sure that we're not going over time and we can all wrap up efficiently today.

MS. CARROLL: I will intentionally interrupt when parties have five minutes left. So I'll just give a five-minute warning.

MS. HILTON: Okay. Don Murphy, project staff on this, is going to provide us an overview, I guess, or a summary of the project.

MR. MURPHY: I have a brief administrative history. We -- on February 4th, 2011 the applicant, Blue Sky East, LLC, submitted a grid scale wind energy development project which is located in T16 MD, Hancock County and it was accepted for processing by LURC staff. This proposed wind
energy development is wholly -- proposed is located within the expedited permitting area for wind energy development. And the project proposed would be located on Bull Hill and Heifer Hill and would consist of the description that Chair Hilton described of the 19 wind turbines, access roads, underground collector lines, a substation, and the operations and maintenance building with up to three permanent met -- meteorological towers.

The project would connect to the New England power grid using existing transmission line that passes through the project parcel. And the proposal will be more fully described by the applicant.

On March 2nd, 2011 the Commission approved holding this public hearing and granted intervenor status to three parties, the Concerned Citizens of Rural Hancock County, the Natural Resources Council of Maine and the Hancock County Commissioners. That was later -- NRCM, Natural Resources Counsel of Maine, has since withdrawn as an intervenor and will not be participating in that -- at that status. And the Hancock County Commissioners are participating as a governmental agency. Thank you.

MS. HILTON: Thank you, Don. I guess first up is opening statements. And Concerned Citizens of Rural Hancock County with Lynn Williams.

MS. WILLIAMS: Thank you, madam chair. I have a brief
PowerPoint, but I want to say a few things before it. I created this PowerPoint over the weekend after reviewing all the submissions by the applicant. And, essentially, what it consists of is the information we don't have. Yesterday at 4 o'clock we got some very substantive submittals. The applicant claims that these were made in response to Inland Fisheries May 12th comments. In fact, they made almost identical comments in March. So the applicant had two months to submit this very substantive information about vernal pools and about bat mortality studies post-construction.

Essentially, they played a game of who blinks first. And the agency did not blink. So at the last minute they agreed to do the things that the agency in March asked them to do. At this time I'd like to request, Chair Hilton, that you either exclude this testimony that was submitted at the very, very last minute or, in the alternative, keep the hearing open for a month so that these -- my experts were not even able to review these documents prior to today. It really is a violation of my client's due process rights.

And if you're not inclined to exclude the information, I would ask that you keep -- as I said, keep the hearing open for a month or possibly even until the next LURC meeting so that testimony can be taken on these last-minute
submissions. Thank you.

MS. HILTON: What is your advice?

MS. MILLS: Yeah, I probably should have -- in fact, I intended to make a reference to that possibility, not with respect to excluding the comments, I wouldn't recommend that the Commission exclude substantive information that's coming in from IF & W with respect to a substantive review criteria.

However, indeed, I think it's important for all of us to keep in mind that depending on, you know, how the hearing goes today, that this might be a situation where either the Commission itself sitting here today or Gwen Hilton sitting as the chair following the hearing in consultation with LURC staff finds that there are additional pieces of information and evidence that would be helpful to you.

And if -- if that occurs, then certainly you as the chair and the Commission sitting as a body have discretion to make sure that you get the information in an effective and fair way to make the decision that you're charged with making.

MS. HILTON: Thank you, Amy.

MS. WILLIAMS: I'll proceed with the PowerPoint now. Some of it is sort of out-of-date because some of the information was submitted, but I wasn't going to stay up
half the night to revise it.

So what we don't know about the Bull Hill project.

Let's start with the true visual impact of the turbines, turbine pads, roads and other associated facilities. In a memorandum prior to beginning his project review, James Palmer requested that Terry De Wan provide him with, quote, digital drawings, for example, CAD, of the proposed road locations and profiles showing the extent of cut and fill. That was February 10th.

On February 22nd James Palmer made multiple comments about missing information in the application. Quote, the viewshed maps only appear to show the visibility of the turbines, not the access roads. From where will the presence of the access roads, transmission line or other associated facilities be visible?

On March 21st in his report Mr. -- Dr. Palmer stated: There are no scale drawings of the turbines or other project elements such as the extent of cut and fill associated with the roads. Finally, also in that report, Dr. Palmer stated: Assumptions made about vegetation height significantly affect a visibility analysis. The VIA choose to assign heights to certain wetlands and harvested areas that could have few canopy trees to screen views. As a result, the visibility analysis may indicate that areas are screened when they are not.
On May 5th I contacted staff and asked if the material requested by Dr. Palmer had been received. The next day staff responded as follows, quote, Jim Palmer's scenic report speaks for itself.

The project's impacts on vernal pools in the project area. This is what I -- what I referred to in my statement before about March Inland Fisheries' comments. Quote, we still have not received all of the information we need to fully assess the potential impacts to vernal pools from this project.

For example, on March 8, I requested a breakdown of pre- and post-construction impacts to the vernal pool buffers on all potentially significant vernal pools. On April 22 I repeated that request. On May 4th we received a table that was incomplete. This from Richard Bard. Quote, the applicant states no vernal pools are impacted by this project. A minimum of 55 vernal pools were identified within the project area, the percent proposed impact for each SVP-PVP was not calculated to take into account the change in land use from strictly forestry to development use. Again, Richard Bard.

The project's impact on raptors, migratory birds and bats. First Wind prefers to finalize the plan for post-construction monitoring after permits are issued. MDI FW would prefer to have an acceptable plan in place before
any permits are issued. Richard Bard. Estimates of post-construction mortality for bats provide estimates of mortality that are likely lower than actual mortality. Therefore, drawing conclusions regarding impact of mortality is difficult, if not inappropriate. Richard Bard.

Detailed plans for erosion and sediment control. Volume 1 of the application includes a single paragraph discussing erosion and sediment control. The erosion and sediment control narrative should be expanded to discuss the drawings and plans where erosion and sediment control measures can be found. Dave Rocque.

Whether there are unusual natural features at the site that may be harmed by the project. The Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site. You may want to have the site inventoried by a qualified field biologist to ensure that no un -- that no undocumented rare features are inadvertently harmed. Don Cameron.

The burden is -- and this is what we do know about the Bull Hill wind project -- the burden is upon the applicant to demonstrate by substantial evidence that the criteria for approval are satisfied and that the public's health, safety and general welfare will be adequately protected.
Now, the other -- the other issue and the other theme of our critique today will be cumulative impact. And I was -- I was pleased to hear Dylan Voorhees last night raise this issue. Basically, saying in his comments before you, it's about time we start looking at cumulative impact.

Your 2010 CLUP, Goal No. 2, is, quote, to prevent the degradation of natural and cultural values resulting from cumulative impacts of incremental development. And the '97 CLUP included an identical goal. Yet, First Wind seeks to achieve incrementally what they could never achieve in one project. If we take the counties of Hancock, Washington and Penobscot and for the purposes of this hearing call that Down East, here's what we have. We have Stetson 1 and 2 operating and Rawlings Ridge almost completed. That's 95 turbines total. Bull Hill, if permitted, would add another 19 for a total of 114. Bowers Mountain, if permitted, would add another 27 for a total of 141.

First Wind is also considering a project of unknown size in Eastbrook, which would essentially be Township 16-2. And the town of Clifton is reviewing a five-turbine project by other developers. However, this is nowhere near the end of this. There is talk of a 40-turbine proposal for Greenland Ridge in Danforth, which is in DEP jurisdiction.

And you have granted permits for met towers on
Passadumkeag Mountain, Codyville, Township 19, Stacyville and Trescott, the only part of the UT that extends to the coast. In addition, you've granted met tower permits for three areas that are not even in the expedited area. Township 28, Township 34 and Devereux Township. So clearly -- and these are all permits to First Wind.

Clearly, even though they have -- they participated in the creation of the expedited wind map -- and we know that for a fact -- it appears that they want to once more move beyond that area. I ask you, please look at Bull Hill not just as a standalone project, but as one more step towards the eventual creation and construction of 200, 300, maybe even 400, 470-foot tall or taller turbines right in the heart of Down East Maine.

And the creation of an industrial cluster in Down East Maine would devastate our tourism industry. And while tourism is the big industry for the state as a whole, it's doubly important for us here. In many ways it's really all we have. The majority of our people work somehow in the tourism, hospitality or outdoor recreational industry. This would devastate their businesses. This wouldn't create jobs, what, three or six, what this would do is take away peoples' jobs.

And I beg of you, please, look at it this way. If this project of let's even say the 140-some-odd turbines that
are -- would include Bowers and Bull Hill, if they were both permitted, along with the ones already up, if that had come to you as one project, would you ever have permitted it? I think I know the answer and I think you do, too. Thank you.

MS. HILTON: All right. Thank you, Lynn. All right.

(A discussion was held off the record.)

MS HILTON: So while they're fixing that, next on our addenda is to have Blue Sky East present their opening statement. Okay.

MS. BODEN: Is this working now? Sounds better. Good morning, Chair --

MS. CARROLL: You -- sorry. Kelly, you have until ten minutes after 10:00 and I'll give you a five-minute warning at 10:05.

MS. BODEN: Great. Thank you, Catherine.

Good morning, Chair Hilton, members of the commission. My name is Kelly Boden, I'm here today on behalf of the applicant, Blue Sky East, LLC. Before we hear from the witnesses, I thought it would be helpful to take a few minutes to layout for the Commission what we think are the key issues in this preceding.

The Bull Hill project is the seventh wind power project the Commission has reviewed and the third under the Wind Energy Act. With this experience comes perspective about
the types of concerns expressed by intervenors, members of the public and each of you with different projects depending on their specific location. What we think is special about the Bull Hill is that for such a strong wind resource area you are presented with a project that has no significant human or environmental impacts. This is unique.

Often projects located in more heavily developed areas do not have environmental issues, but have human considerations such as sound, shadow flicker. Other projects located in more remote parts of the state have higher elevations and avoid these human impacts, but may be located closer to sensitive environmental resources.

With Bull Hill we have proposed a project at the lowest elevation to date. It will provide significant renewable energy benefits while avoiding and minimizing human and environmental impacts. There are no sound issues with this project. The closest residence is close to 4,000 feet from the nearest turbine. As a result, there will be no shadow flicker issues with this project either. There are no wetland impacts, no army corps permit is required with this project.

There's a single resource of state or national significance located within 3 miles. And you'll hear from Mr. De Wan in a moment about other critical views located
within the Donnell Pond unit and how most of those views face towards the coast and away from the project.

Quite simply, we think this is a great project in an excellent location and do not think it is a close call at all.

Now, that's not to say that you won't have questions of our witnesses or concerns about what we've presented here. And in particular I know questions have come up about the two submissions yesterday. And I wanted to put those in perspective.

The first submission relates to vernal pools and consists really of four parts. The first was a data request by IF & W that was made several times, but it relates to nonjurisdictional wetlands and the data is not part of any criteria you need to review before you. Nonetheless, Blue Sky East decided to submit those data request forms. And you'll hear from Dale Knapp on that point. The bulk of the information submitted actually was to confirm information already in the record. And the majority -- the information you have to make your determination on that point is in there.

The only new information relates to requests made orally by IF & W last week and confirmed in writing in Thursday's submission. And due to micrositing of turbine elements, some components of the project were located
closer to the edge of where original wetland surveys were
delineated. And so they were requested to go back out and
resurvey certain areas to confirm that there were still no
vernal pool impacts. That we did last week and that
information is in your submission and Mr. Knapp will speak
to that today as well.

Finally, IF & W has raised some policy considerations
about how to calculate impacts to vernal pools. And this
is a new item that we think we want to discuss with you and
it will ultimately be your decision on how you want to
interpret your regulations. And we look forward to
discussing that with Dale and I'm sure you do with IF & W
as well.

The second submission relates to the post-construction
avian monitoring plan. That also consists of two parts.
The first was to correct an inadvertent omission on some
search dates that IF & W did recommend earlier, we intended
to put in the April 13th response to comments and quite
simply it was just left out. That has been included in the
plan.

The second relates to whether or not curtailment --
operational curtailment is a good idea at this project. IF
& W recommended it in March or suggested that it was. We,
in our initial response, did not put forth the curtailment
as an idea for this site. IF & W, again, last week,
requested that that be an option here. In response, we have agreed to -- or would like to discuss with you today the option of looking at a portion of the turbines having curtailment to see what the baseline is, impacts, and then see if it makes sense to apply it to the entire project. Post-construction monitoring details are often worked out as you go forward with a project and even after permit issuance and shouldn't -- we're happy to discuss and answer any questions today and provide any follow-up, but do not think it should present any type of delay to this proceeding and certainly isn't new information of the type that won't enable you to make a determination on this project.

So as we go forward, it's important to remember that no one is suggesting that this isn't a good project because of these informational requests or that they shouldn't be permitted, but it really goes to the specifics that will be contained in that permit and conditions of approval.

And I'm sure you're anxious to get started and hear from the experts on these topics and IF & W and with that I'm going to turn it over to Matt.

MR. KEARNS: Okay. Thank you. Good morning, commissioners. My name is Matt Kearns, I'm vice president of business development for First Wind. I've been working with the company since -- for the company since 2006 and
was last before the Commission on the Stetson 2 project. Since then we have been -- we have been quite busy, but we've been thinking about what makes the right place to put a wind farm, what are the search criteria that we ought to be thinking about.

And we've refined that using feedback from this Commission, from stakeholders, environmental groups, not the least of which, NRCCM, AMC, the Audubon Society, and trying to figure out what the -- how to strike the right balance in terms of siting. So we've spent a lot of time -- we've got 20 people located in Portland and we've spent a lot of time thinking about where to put the right -- where to put these projects.

As with our Stetson project, First Wind is focused on lower elevation sites that make use of existing roads and -- and that are located within industrial timberland. The Bull Hill project meets prudent site selection criteria. In fact, we think it is really exemplary in its -- in the way it meets all these criteria. It uses a network of existing logging roads, it's adjacent to transmission, and it's sited in the most gentle topography of any -- of any project that we've proposed in the state. So to, thereby, minimize cuts and fills.

A little bit about First Wind since -- since I was last before the Commission. We have a -- you can see a notable
concentration in the northeast, in the west and then Hawaii. So those are our three principal markets. We are still an independent North American wind power company. We're focused exclusively on the development, construction, and operation of wind farms. So we haven't drifted from our core business.

First Wind has 196 employees, 14 percent of which reside in Maine, live and work right in Maine. And one of the things I think that's also unique about First Wind is that we have a lot of inhouse expertise. So we're just -- we're not just a bunch of folks who kind of cut purchase orders for third-party consultants. We actually write the scopes of work, work with our consultants, but we really own the information inhouse first before we release work to consultants. So we have inhouse meteorologists, engineers, environmental and permitting experts, transmission experts, finance experts and asset management experts and also a legal department.

So since 2008, when we were last before the Commission on Stetson 2, we continue as a company to add new projects and complete successful project financings and capital raises. So you can see how the footprint of the company has expanded. We now have nine operating projects in the northeast, Hawaii and the west with a total of 635 megawatts operating.
This is an update from the application because a couple of weeks ago we added our Milford -- our Milford 2 project in Utah. So it just came on line. So we're very pleased about that.

So as described in our financial capacity letter from our president and COO Michael Alvarez, we now have assets in excess of $1.5 billion. Since 2009 First Wind has executed over 2.8 billion in financings and including a $98 million financing for our Rawlings project in Penobscot County with Key Bank.

So a little bit about our track record. As most know and several have mentioned, we do have an extensive track record here in Maine. We really put our roots down in Maine very early and we continue to invest here and hire Maine companies to do the work. So we now have Mars Hill, Stetson 1 and 2, Rawlings is under construction and due to be commercial in July, and then we have the Oakfield project which is in DEP jurisdiction, but may require some LURC involvement.

So I think it's safe to say that during these various proceedings the Commission has had -- or commissioners have had questions about the demonstrated benefits of these projects. And -- so I want to just talk a little bit about sort of what's happened and -- and how it's -- how the promise was made and the promise has been kept.
So since 2004, from an economic perspective, the wind industry has invested $900 million in Maine. More than $46 million in wages have been paid to Mainers. Over 300 Maine businesses during that period have benefitted. And all of this is documented in a recent report that is in a record from Charlie Colgan at USM in 2010.

On the environmental front, our projects are responsible for achieving nearly 10 percent of the state's energy goals of 2,000 megawatts installed by 2015. More specifically, on the Stetson 1 and 2, which is really where I am most familiar, we recently filed our compliance filings for those projects and showed the avoided emissions and economic benefits associated with those projects.

In addition, the Washington County TIF, we're seeing movement on that, we're seeing progress and real economic impact in the community. The TIF -- the county was awarded roughly $300,000 in TIF grants. And that money has been used to secure over $3 million in matching funds. So this money is being use to leverage additional matching dollars, which is pretty exciting, from our perspective.

The Stetson Mountain Fund, which was created and is -- was created as part of the Stetson 1 and 2 project is now being co-hosted with the Forest Society of Maine. First Wind has a nonvoting board seat there. But we now have $140,000 in the -- in the bank. And that -- those dollars
are being awarded for recreation and conservation uses, principally to nature-based tourism businesses that operate in the UT. So those have been -- we are prepared to -- to issue grants on that.

I think it's important to note that much of this investment in wind power in Maine has been in rural parts of the state. And I think, you know, economic opportunities of this scale are pretty rare in some of these areas. We believe that wind is a business that is consistent with the traditional and cultural and economic makeup of the UT.

We're really pleased to be in front of the Commission again and look forward to answering your questions and we have a deep commitment to Maine and we have been here for a while and we hope to be here for -- for many years to come. Thank you very much.

MR. FOWLER: Good morning. My name is Dave Fowler and I'm the development manager for First Wind and the lead developer on the Bull Hill project. This morning I would like to give you just a brief overview of the project. One of my responsibilities as a developer is -- is to start out as prospecting. And several of the key components that I look at when I'm prospecting are transmission, viable wind resource, constructability and the community, both in support and benefits.
On Bull Hill, as you can see, one of the key components that brought us here to -- when we tried to identify this site, is Bangor Hydro's line 66. It's a 115 kilovolt line. Right now it has the capacity to handle this project without any structural upgrades required, which is, obviously, a great consideration given that that means there's not going to be any -- any further impact to that line. Also, it's proximity to the project was extremely advantageous.

As you can see, we've got one string, the Bull Hill ridge, to the north of the line, which is very close to where we've placed both the substation and the O and M building, which is -- as you recall yesterday, for those of you who were able to attend the site visit, it's all right next to an existing road that will access it. And then just to the south of that line is our Heifer Hill ridge string, also extremely close. So that's the transmission component.

From there we look at the constructability of a project. Again, one of the key features to the Bull Hill project which is unique is the soil types in the area. That allowed us, on this particular project, to go with an underground collection system. Obviously, we had the option for an overhead system and we could -- we could have collected that -- all these lines to the operation -- I
mean, the substation overhead, but, instead, to try to minimize the impact, both to the wetlands and the vernal pools, we utilized the unbelievably existing road structure that was available to us and we're placing the underground utility line within the existing roads and underneath the new crane roads that will be created. That's a total of 4.8 miles.

So, you know, we were able -- also during that time to help reduce the -- the wetland and the vernal pool impact was the micrositing of the turbines. Again, typically we like to keep the string straight, we like to keep the road straight, but we were able to microsite all of these turbines and literally get down to a zero wetland impact and a zero vernal pool impact.

From construction we move on to -- to community and -- or, I'm sorry, wind. So this wind resource -- you know, given the -- given the proximity and the low elevation of this site, we weren't quite sure what the wind resource was going to be when we first started here. But we have had the opportunity to collect over two and half years of wind data on this site. That's through local met towers that were placed here. So we're very comfortable with this data. It's a 7.2 meter per second average wind speed here. That is at 100 meter -- a 95 meter hub height, excuse me, not an 80 meter hub height. That is 95 meters that that
wind speed is at.

We have this wind data verified through a third-party. It's impossible to get financing without doing that. So we're very confident in our wind data.

And, finally, the community support and the community benefits of this project. As you all know, this project is in Township 16, which actually has no residences in the entire township. There are some camps, hunting camps, fishing camps, but there's no full-time residences in the town that we're aware of.

So what we do have is the adjacent community of Eastbrook, which I've been working very closely with. I have been in the community discussing this project for well over two years now, ever since we started putting the met tower up. I've also discussed this project to local user groups, the Ellsworth Snowmobile Club, the Airline Snowmobile Club, the Molasses Pond Camp Owner's Association. I've also talked to individuals on Spectacle Pond that are well aware of this project, as well as the hunting and fishing people who use this area.

So -- and what we've discussed as well is the benefit package that comes along with this, which is the tangible benefits section of this -- of our application. Given that it is in Township 16, this project is in Hancock County Commissioner's jurisdiction. And they have agreed to
accept the $4,000 tangible benefit money. Above and beyond that we also have just recently executed a community benefit agreement with the Town of Eastbrook, which we will be supplying. It was signed on -- last week. So we'll be submitting that. But it is for $20,000 a year for 20 years. They voted on that at a special town meeting and the vote was 46 to 1. So they've accepted that.

We've also offered a $20,000 a year for 20 years community benefit agreement to the Down East Salmon Federation. We are discussing that agreement with them. The money is earmarked towards conservation within the watersheds of this project that they -- that they can use as they see conservation needed.

I think that's it. Great. Okay. So thank you. So with that, though, I would like to introduce -- before we give it to Adam Gravel from Stantec, I would also like to let everyone know that we have Jeff West, who is our environmental coordinator, and David Ertz from First Wind as well who is the director of construction who will also be helping us answer questions today.

MS. HILTON: Can I just confirm with you that the map is in the record?

MR. FOWLER: Excuse me?

MS. HILTON: Is this map in the record?

MR. FOWLER: Yes, it is.
MS. HILTON: Okay.

MR. GRAVEL: Good morning. My name is Adam Gravel and I'm a certified wildlife biologist with Stantec Consulting. I assisted with the study design and implementation of the bird and bat field surveys conducted at the Bull Hill wind project.

Stantec conducted bird and bat studies at the Bull Hill project consistent with those conducted at other proposed wind projects in the state as well as the northeast and followed a work plan developed in consultation with the Fish & Wildlife Service and IF & W. My presentation will briefly address four topics including nocturnal migrants, raptors, including eagles, post-construction monitoring, and bats and operational control measures.

The bird and bat field surveys conducted at the site include nocturnal radar surveys, acoustic bat surveys, raptor migration surveys, area bald eagle nest surveys and a white sucker spawning assessment.

Before I begin discussing these topics, I would like to point out that to date pre-construction survey results have not correlated well with post-construction bird and bat mortality. This is not to say that pre-construction surveys are meaningless. They can be used to characterize migration, timing of activity within a year and species composition to put a site into perspective with other
projects that have conducted similar surveys using the same methods.

Pre-construction survey results alone are not capable of quantifying risk as a result of the construction and operation of a project. Perhaps, the most useful information is comparisons to projects that have conducted both pre- and post-construction surveys.

In Maine, Maine is in a somewhat unique position relative to other states in New England. We have numerous projects that have conducted pre-construction surveys and have at least two projects that have conducted two years' post-construction bird and bat mortality monitoring. It's important that this is considered when listening to the rest of my discussion today.

Nocturnal radar surveys, like those conducted at the Bull Hill project, is currently the best tool for characterizing nocturnal migration over a site. Previous methods included shining a spot light to the sky and counting bird and bats that fly through that spotlight beam, or watching the moon on clear nights with binoculars and counting birds that fly across the moon face. These two methods are limited to a very small view, whereas, the radar can cover a much broader distance and actually document how birds travel over a project area.

The radar surveys conducted at Bull Hill are consistent
with how radar surveys have been conducted at other projects in Maine and the northeast. The usefulness of radar surveys for characterizing migration at proposed projects is considered by IF & W to be -- to currently be the best tool available and has continued to be requested by IF & W. Michael Good also acknowledges that the radar accurately reflected the intensity of migration at the site in its pre-filed testimony.

Overall, the mean passage rate of the fall survey at Bull Hill was near the high end of the range of other studies in Maine, but during that same season reported one of the highest mean flight heights in the state. Conversely, the spring season documented passage rates in the middle of the range observed in Maine, but documented some of the highest percent of migrants below turbine height in the state.

However, it is important to know when making comparisons to other projects that the Bull Hill project is the only project that has proposed 145 meter turbines and analyzed data for flight height below 145 meters. The maximum turbine height at other projects to date has been 130 meters. And as a result, we expect higher percentages below turbine heights here.

All though there has not been any observed correlations between pre- and post-construction data, Stantec is
currently conducting a second year of nocturnal radar surveys at the site that was also recommended by IF & W and also supported by Michael Good in his testimony. The purpose of the second year of survey is to determine if the results of the first year are characteristic of migration through the site or if it was an anomaly due to unusual weather patterns that year.

Pre-construction radar survey results in Maine in the northeast have shown highly variable results night-to-night and site-to-site, but yet bird mortality across the northeast in Maine has been documented to be within the same range. Basically, consistent, as opposed to variable like the pre-construction results.

For example, Stantec conducted nocturnal radar survey during the first year of operation at Stetson followed by mortality surveys the morning after each night of radar surveys. This study showed that migrants continued to fly over the site in similar numbers, but their flight heights increased. The fact that their flight heights increased may be due to weather variables, but may also be due to birds actually detecting the presence of the turbines and adjusting their flight height accordingly.

Mortality surveys found -- following radar surveys found only two birds under one turbine on one morning out of 20 nights of radar surveys. This -- this data alone
makes it difficult to correlate pre-construction and post-construction mortality rates. Based on pre- and post-construction studies conducted in Maine in the northeast, it's expected that the mortality of birds at Bull Hill will be within the range of other projects that have conducted post-construction monitoring in the northeast.

For rapture and eagles, Stantec conducted over 237 hours of rapture migration surveys at one central prominent location within the project area. It consisted of one observer observing the sky and the surrounding airspace, which is considered the study area. So the study area is anything that the observer can see up to a distance of about 2 miles and make identifications. Anything that was observed in the project area, which is defined by the ridge line where turbines are proposed and where potential risk is present, flight heights and flight paths and behaviors were recorded.

The purpose of the spring and fall rapture migration surveys were to sample use and migration activity including migrants flight height and flight path as they move across the project area or the vicinity of the project area. During over 237 hours of survey two state -- one state listed endangered species, the peregrine falcon, was observed and it was observed in the project area.
Two state species of special concern that were also observed during the surveys were the bald eagle and northern harrier. All bald eagle observations were observed outside of the project area. And of the five northern harrier observations, only one of them was observed in the project area.

During 2010 in aerial eagle nest surveys no active bald eagle nests were observed within the vicinity of the project area or the project area. The closest known bald eagle nest is located on an island in Molasses Pond, approximately 2 miles from the southwestern most turbine, but the nest was not active in 2010 aerial surveys. Subsequent surveys in 2011 documented that that nest on Molasses Pond may be active, but a follow-up flight will be conducted to confirm.

Overall season mean passage rate of raptors through the project area were at the low end of the range of other pre-construction studies conducted in Maine. To put this site into perspective, rapture surveys were conducted during the first year of operation at Stetson and documented nearly at a two times higher passage rate than Bull Hill and documented zero rapture -- turbine-related rapture fatalities.

Post-construction monitoring; post-construction monitoring for the most part incorporates all comments
received by IF & W and is standard -- pretty standard protocol across the northeast for conducting post-construction surveys. It's a method originally developed in part by Ed Arnett of Bat Conservation International and Paul Kerlingor of Curry & Kerlingor, both respected professionals in their field and cited in IF & W comments and Michael Good's testimony.

The methods have been assigned to account for variant biases such as searcher's ability to find carcasses under turbines due to ground cover and also other variables such as carcass removal by scavenger species such as raccoons or ravens. Such efficiency trials are conducted unannounced to the searching observer so the observer doesn't know that someone else is out there planting carcasses for the observer to find or to test the observer, the observer's ability to find them in varying ground conditions.

Scavenger removal trials are also conducted to see how long it takes before a carcass that falls on the ground is removed by a scavenger, whether it be a raccoon or a raven or other wildlife species that may eat the dead animals under turbines. Both of these trials are used to adjust the raw number of fatalities found for a corrected mortality estimate per turbine per year.

The methods that have been implemented in Maine are consistent with all of the methods conducted in the
northeast. And despite limitations and the ability to find
every carcass, all the sites have been conducted the same.
With all the sites conducted the same or following the same
protocol, Maine is at the very low end of the range of
mortality estimates in the northeast. As recommended by IF
& W, weekly mortality surveys will be conducted to cover
the time period from April 15th to June 7th and July 7th to
October 15th.

Bats and operational control measures. Acoustic bat
surveys were conducted to document general species
composition or species timing at the project. Acoustic bat
surveys are not capable of determining the number of bats
in an area, but provides an index of activity. In Maine we
have two general categories of bats, long-distance bats,
migratory bats or resident cave-dwelling bats called
myotis. Myotis is the genus that three different bats
belong to including the northern long-eared bat,
small-footed bat and little brown bat.

As observed with -- at other pre-construction acoustic
bat surveys, bat detectors deployed in trees at or below
tree canopy height document a greater proportion of calls
than those detectors deployed in met towers. In large
part, it has to do with the forging activities of myotis
species, the resident cave-dwelling bats that I just
referred to. These species forge at lower heights,
typically below -- at or below tree canopy while long-distance migratory species during the migration season will travel above tree canopy and are the ones being detected by our met tower detectors at greater heights.

Overall bat detection rates observed at the Bull Hill project were at the low end of the range of other similar studies conducted in Maine. For example, at Stetson during the first year of operation, nearly 10,000 bat calls were recorded at four tree detectors. At Bull Hill 7,000 -- just over 7,000 calls were recorded, approximately 26 percent lower than the survey conducted at Stetson.

Concurrent with acoustic bat surveys at Stetson, weekly turbine searches were also conducted and only five bats were found under wind turbines, which is also at the low end of range of mortality in the northeast. However, because bats are -- bat populations because of white-nose syndrome have declined significantly, First Wind and IF & W have expressed concern for bat mortality or additive mortality to already declining populations.

As a result, First Wind will implement operation control measures which have been proven in other areas of the country, particularly the mid Atlantic, to reduce bat mortality. These are areas in the country that have -- have received high bat mortality also. Operation control measures will be employed throughout the -- throughout
mid-May to September and will consist of curtailment of 50 percent of the turbines. So 50 percent of the turbines will be allowed to operate normally and 50 percent will be curtailed at -- at a wind speed of 5 meters per second or less, as opposed to the 3 meter per second cutting speed of normal operation.

The goal of splitting the -- the turbines in half is to first test whether or not operation control measures are effective in Maine in an area where low bat mortality has been reported. Second, the -- the other reason that they're going to be split 50/50 is so that you can identify -- you can look at timing of mortality across the project area at a -- you get a baseline from your uncurtailed turbines and your -- basically, your reduced impact with the curtailed turbines.

This will also allow for the timing of fatalities to see if this is an appropriate time period for -- for these curtailment measures. For example, the only two studies conducted -- that have conducted curtailment studies have been the mid Atlantic or Canada and they've only been conducted during late July to September, which is the peak period for bat activity as observed with pre-construction surveys and also coincides with the peak period for mortality as observed at operational facilities.

Curtailment will occur from a half hour after sunset to
sunrise. So, basically, the period within a night that bats are active. They're not active during the day, so the curtailment will occur at night. At the end of the -- at the end of the operation control study, which will be conducted for two years, if it has been proven or shown to be effective at reducing bat mortality, First Wind will commit to employing curtailment strategies at all turbines for the life of the project. Thank you.

MR. KNAPP: Did you guys get all that? Good morning, Commissioners. My name is Dale Knapp and I'm a wetland scientist and ecologist and a soil and site professional with Stantec Consulting. My responsibilities on this project were overseeing the wetland delineation, the vernal pool surveys, rare threatened and endangered plant surveys, natural community assessments, soil surveys and resource avoidance and impact minimization.

I'm going to start off talking a little bit with just some -- discussion of some general site characteristics. I hope you had an informative site visit yesterday, for those of you who were able to make it. What you saw along the ridge line is a beech-birch-maple forest, which is incredibly common throughout Maine. As you also, no doubt, observed, the area has been impacted by timber harvesting. The harvesting there is ongoing and has been for several decades. The ridge lines, again, are dominated by
regenerating upland forests intermixed with both scrub
shrub, emergent and forested wetland community types.

The rare, threatened and endangered plant surveys were
completed during the wetland delineations and vernal pool
surveys which occurred in the spring and the fall as well.
Based on responses from the Maine Natural Areas Program,
there were no documented occurrences within the project
area. And, in addition, our biologists did not locate any
rare, threatened, endangered plants or communities within
the project area.

Ms. O'Toole's rebuttal testimony -- or testimony
mentioned French Meadow, an S-3 community. This community
is over 1 mile from the nearest disturbed area within the
project, and the project is not expected to have any
impacts on that resource.

Wetlands within the project area were surveyed and
delineated in accordance with the U.S. Army Corps protocols
and LURC's Chapter 10. 50 percent of the wetlands that
occur within the project area are forested or somewhat
forested at various stages of regeneration. And then scrub
shrub and emergent wetlands make up the remaining two pairs
of 25 percent respectively. As you saw, as I've said, I
think, four times, forestry -- forestry practices have
impacted and altered some of these resources. But
regardless of that fact, through avoidance and minimization
this project has no direct wetland impacts. In other words, there will be no vegetation clearing, no fill and no alterations to any wetland resource within the project area regardless of origin.

Vernal pools within the project area were assessed in accordance with accepted industry standards following methods outlined by the Maine Department of Inland Fisheries & Wildlife. Concerns have been raised over the timing of our vernal pool surveys. I want to make sure that you understand that the dates given in Chapter 335 are strictly guidelines. Each spring is different, you know, as we all do, the weather changes every year, sometimes to our dismay.

But the initiation of amphibian breeding involves many different factors directly related to that. And so it's absolutely critical to conduct these surveys based on the actual conditions in the field, not what's written in a manual. And so we initiated these surveys when egg masses would be present.

The ways that we derive whether or not it's the appropriate timing, we'll visit a site, we'll listen for calls, we'll visit areas we expect to contain egg masses to calibrate our timing before we initiate those full surveys to make sure that we're doing this right. Also, we utilize the Maine DEP message board. It's a vernal pool message
board that's now maintained by the Maine Association of Wetland Scientists. It's a way for biologists within different bioregions to share information on coercing wood frogs and the presence of indicator species within pools and distinct bioregions so we know and share that information across the state so we are getting that timing right.

Also, all natural pools within the project area received a minimum of two visits to determine what the counts were at peak breeding for both wood frogs and salamanders as well.

Ms. O'Toole also states in her testimony that surveys for fairy shrimp should have been conducted in late May or June. Fairly shrimp hatch shortly after ice out. That occurred in these pools in early April. This species cannot tolerate water temperatures above 70 degrees, so they're typically not found in the northeast past late May or June. Our surveys were appropriately timed to determine if fairy shrimp were present within any of these pools.

As was referenced earlier, we just filed some information yesterday. This is available for review by interested parties and for the Commission, but I'm going to spend some time summarizing that information here.

Four pools were identified outside of the breeding season for vernal pool amphibians. And they are mapped and
shown in the application as potential vernal pools. Now, potential vernal pools may function as a vernal pool or a significant vernal pool, but we're identifying them outside of the season, so there's no way to make that assessment. They're simply used -- it's a monarch used as a placeholder within a permit application.

It's important to note that potential vernal pools are treated as significant vernal pool by the applicant unless proven otherwise in the spring. So I personally visited these pools earlier this season to ascertain whether or not they met the criteria for significance. Out of the four potential vernal pools present within the project area, one of them did meet the criteria for significance, which we expected, and the road was actually moved around that pool. So there are no impacts to that vernal pool basin or its surrounding critical terrestrial habitat.

Also was referenced during the micrositing process, we start with a project area, we give them the resource information and they align the project around these resources. So in some instances the project infrastructure and clearing limits were closer than 250 feet to the boundary of our assessment. IF & W requested additional surveys to assess these areas so they would know if there were any vernal pools that occurred within 250 feet of project clearing infrastructure or any project element. We
returned to the site, we assessed those areas and we
located four areas that had breeding amphibians in them.
Three were manmade resources, one was a natural pool that
did not have the -- meet the egg mass thresholds for
consideration as a significant pool. So there were no
additional significant pools located during that work.
And the map that was included in that submission shows the
areas that were revisited just last week.

I've got my schematic here.

MS. MILLS: Kelly, this is another oversized exhibit
that's already in the record?

MS. BODEN: Yes.

MR. KNAPP: This is out of the permit application. So
-- I'll just try to speak up.

So the IF & W comments contend that use of an existing
road within 250 feet of a significant vernal pool
constitutes an impact that a project must mitigate for.
Now, remember, just to get you oriented, you were here on
the site visit yesterday. This is the substation site,
here is the existing transmission line corridor. And then
I believe, if I'm not mistaken, you actually stopped at
this pool right here.

So, again, one of the points I'd like to make here is
this is the pool that was raised as a concern by Fish &
Wildlife for not meeting their development standards and
they're looking at impacts. There is no new clearing or no new -- no vegetation clearing, no new roads, no new infrastructure being placed within any of these areas. So the brown represents what exists, the green represents forested canopy cover or habitat. This road here would not be used by the project and there are no upgrades or alterations within the transmission line.

This is the only road that would be used to access the project. And it just touches on the fringe of the pool that was raised as a concern by IF & W. And the only permanent alterations would be this buried cable here.

Now, I guess the point I want to make here is if IF & W is viewing this as an impact to the vernal pool buffer for which an applicant must provide mitigation for, as they've suggested in their comments, then it creates, you know, a perverse incentive for an applicant to utilize existing infrastructure. And, you know, the State has had a longstanding and really an environmentally sound policy of having applicants minimize new impacts by using existing roads and existing infrastructure.

And from a biologist's standpoint, you want to minimize new disturbance and impacts. And the use of existing roads should be encouraged and not discouraged. You've seen the roads out there, they're in fantastic shape. And it makes no sense not to use them.
So just in closing, I want to make sure to let you know that around any significant vernal pool present within the project area there is no new proposed clearing or impact associated with this project to the basin itself or that 250-foot critical habitat.

Finally, there was some concerns expressed by Ms. O'Toole about the adequacy of the soils information and the presence of a high water table within the project area. Soils mapping within the project area was completed by Albert Frick Associates following a standard set by the Maine Association of Professional Soil Scientists.

The kind of material at this site isn't -- isn't an outwash material, for the most part. It's primarily composed of a dense basil till. Some of the ridge lines may be a bit shallow to rock -- bedrock. And the firm nature of this till may create a purged water table across the project, you know, due to low permeability and infiltration. But these site issues should be addressed through the implementation of -- the implementation of standard construction techniques. Mr. Brett Hart with Sewall Company will be addressing these concerns further in his testimony.

In conclusion, I'd like to highlight what you saw at the site visit yesterday. The existing infrastructure and the adjacency to a transmission -- existing transmission
capacity make this site well-suited for wind development. The project has no direct wetland impact and no impact to any significant vernal pool basin or critical habitat, which is impressive for a project of this scale. I've been involved with many grid scale facility developments within Maine and throughout the northeast and this project has avoided and minimized impacts fully and effectively. Thank you.

Also, I'd like to let you know with me here today is also Brooke Barns from Stantec Consulting and he will be available to answer questions as well. With that I'll turn it over to Brett.

MR. HART: Hello. My name is Brett Hart, I'm an engineer with James Sewall Company in Old Town. With me today is John Theriault and Jodi O'Neal also from Sewall Company. Between the three of us, hopefully we can answer all your civil engineering questions.

Just to give you some reference, Sewall has provided civil engineering services on many of the wind projects in Maine, including Stetson 1 and 2, Bowers, Rawlings, Record Hill, Kibby, Highland. So we do have some experience to draw from and we did draw from in the design of -- of the Bull Hill project.

I would like to start out by summarizing some of our design objectives going into the project. We wanted to
utilize existing roadway network as much as practical, as Dale touched upon. We were tasked with avoiding wetland and vernal pool disturbance. We wanted to minimize earthwork impacts and clearing. We wanted to provide storm water treatment to mitigate water quality impacts. We wanted to provide appropriate erosion and sedimentation control measures. And, obviously, we needed to provide access during construction and operation for the project.

So to provide access to the project, we designed roadways. The design criteria we utilized for the roadways came from turbine manufacturer's transport manuals, our experience working on past wind projects and our experience working with general contractors such as Reed & Reed who has built several of these projects. So there's a couple of different kinds of roads I'd like to clarify.

Access roads are 24-foot wide roads. They provide access for turbine component delivery and construction access in general. There's also roads that we refer to as crane paths. These are 36-foot wide roads. They provide access to the turbine paths themselves and allow the erection crane to crawl between -- from one pad to another. And we also took advantage of the extensive network of existing roads on the site. So we reused those extensively.

As you likely noted from the site visit yesterday, the
terrain is fairly gradual. This really helped us minimize earthwork impacts for roadways and the project in general.

So another component of our design is -- were the turbine pads themselves. Again, design criteria, we used turbine manufacturer information, our past experience ourselves in working with contractors. The pads are generally 200 by 175 feet. Some of them include a 75-by-250 turnaround which allows component trucks to get in, unload, get turned around and back out of the site. The turbine pad themselves allow for turbine component lay down, construction staging, turbine erection.

So to make room for the -- for the roads and the turbine pads, clearing is required. Total project clearing is 89.9 acres. 34 and a half acres is permanent clearing, 55.4 acres is temporary. The re-vegetated areas or the areas that would be allowed to re-vegetate will include the majority of the turbine pads, the turnarounds, the lay down areas, areas like that.

There was an issue raised with the clear widths for the roads. I wanted to provide some clarification. The average clearing width for a path is approximately 95 feet. This allows the room for the 36-foot wide road, the ditching with stabilized forward slopes and back slopes, and a little space between the edge of earthwork and the clearing just to allow for construction access. So I just
wanted to emphasize, the crane path itself is 36-feet wide.

Incorporated in our design are storm water and phosphorus. Our storm water calculations were reviewed and approved by DEP. It generally includes implementation of buffers, which are vegetated non-lawn areas that stores and removes pollutants from storm water runoff. A couple different kind of buffers we used throughout the project; roadside buffers, which treat sheet flow runoff from roadway surfaces, ditch turnout buffers which redistribute concentrated ditch flow, back to sheet flow with a buffer that extends down gradient.

Our phosphorous calculations, again, were reviewed and approved by DEP. We were required to meet a per-acre phosphorus allocation as determined by DEP in two watersheds, the Spectacle Pond watershed and the Narraguagus Lake watershed. Again, we provided buffers to treat for phosphorous in our storm water design in general.

There was a concern raised over the Narraguagus River watershed. That's not a watershed that we were required to perform phosphorus calculations on. There are storm water buffers within that watershed just like all the other watersheds on the project. To put that in perspective, the Narraguagus River watershed, we have designed a 13.3 acres of new impervious in this very large watershed.

I do have to provide a clarification to our pre-filed
testimony, we had an error. We incorrectly identified the watershed -- the Narraguagus River watershed at greater than 20 million acres. That's actually approaching the size of the state of Maine. So a little embarrassing, but it was a spreadsheet error, we added up the cells incorrectly. So I wanted to correct that. The total direct watershed for the Narraguagus River watershed is a little over 113,000 acres. The indirect watershed for the Narraguagus River is a little over 155,000 acres. So we're proposing 13.3 acres of impervious area.

We implemented sedimentation and erosion control throughout our design. They include such features as erosion control mix berms, which are stump grinding soil mixtures that create filters to capture silt from surface runoff, silt fence, which is that -- the black fabric fence you've seen on numerous construction projects, riprap and erosion control mix, which both provides stabilization of surfaces.

I wanted to comment, we -- we've seen erosion sedimentation -- these erosion and sedimentation controls implemented, we've designed them with experience. We've seen them implemented by experienced contractors, they're checked by the developer, they're checked by a third-party inspector. So they're quite successful in doing what their intended purpose is.
I wanted to comment on the high water table and the
dewatering issue. There is a high water table present on
this project, dewatering will be required. It's not
atypical for a construction project in Maine to have these
conditions. We've reviewed the dewatering issues with
agencies, we've incorporated their suggestions and included
them in our design. They include such measures as dirt
bags, sedimentation basins, stone lined ditch protection.
So I just want to emphasize, these measures are -- are
utilized in construction projects all the time, they're
very common and they're very effective.

That's all I have. I appreciate your time.

MS. BROWNE: Can I just do a time check with you?

MS. CARROLL: Sure.

MS. BROWNE: We have --

MS. CARROLL: I'll tell you -- I'll tell you how much
time you have left.

MS. BROWNE: Perfect.

MS. CARROLL: All right. You have 20 minutes.

MS. BROWNE: Perfect.

MS. CARROLL: Is that -- would you agree?

MS. BROWNE: I agree.

MS. CARROLL: Super.

MR. DE WAN: Chair Hilton, members of the commission,
my name is Terry De Wan, I'm a landscape architect from
Yarmouth, Maine, and I'm here to talk about the visual impact assessment of the Bull Hill wind project. And I'll describe the project, look at the scenic resources of state or national significance, talk about the visual impacts of the project and associated facilities and then draw conclusions.

Those of you who were fortunate enough to be with us yesterday know that the project is divided into two components. On the north we have 10 turbines on Bull Hill and the south there are 9 turbines on Heifer Hill and Beech Knoll. There's also the transmission line which runs through the project site right here, the 115 line. And adjacent to that, of course, will be the O and M facility and the substation.

What I would like to do then is look at the scenic resources of state or national significance where that's really the focus of the -- the application. Unfortunately, the screen doesn't show the entire slide here. But I believe you have handouts that show paper copies of this.

What we did is look at the entire study area within 8 miles of the project area. The blue stars indicate those areas that are scenic resources, there are about 15 of those. And of those there are six that are considered to be -- that may have a view of project. It's also interesting, too, to look at the scenic byways, the
Blackwoods scenic byways which we traveled on partly yesterday, this is Route 182. It does not have any views of the project area, it is also -- does not have any overlooks of the project area. So it is not considered to be a scenic resource of state or national significance.

Those resources that we will look, though, are Narraguagus Lake, Donnell Pond, Black Mountain, Schoodic Beach and Tunk Mountain. And I'll evaluate those in order.

First of all, Narraguagus Lake, which we passed by on the travel yesterday, we went down a gravel road on the west side of the property, this is the only resource within 3 miles. This is a line right here that shows a 3-mile diameter from the nearest turbines, which are located up here. It's a 426-acre lake. It's about 2 miles at the northern end to the nearest turbine. And it's rated by the Maine Wildland Lake Assessment as a significant scenic resource.

In our evaluation we found that there were very few places where the public could get down to it. There's no formal places of public access. There are several camps on the northern part of the -- the lake and somewhat on the northwest and northeast.

Tunk Mountain is really the focal point for the lake. In fact, if you look here, this is the profile of Tunk Mountain seen in the distance. Keep in mind, this patch of
rock out here, we'll come back to that later when we talk about Tunk Mountain. This is the view from the western shoreline. The turbines are to the -- in back of us and to the left. There would be no views of the turbines from this location.

There are, as I said, several camps along the shoreline. They are not visible from these locations. From this particular site right here, the turbines are generally in back of the photographer. This is a normal view at the northern end of the lake.

This is the first of the photo simulation that we'll be presenting. This is what it looks like today and this is what it would look like with the turbines in place. From this particular advantage point and for, roughly, half the lake or a little bit more than half the lake, you'd be seeing all 19 of the turbines at distances of 2.9 to 5.7 miles.

For each of the resources then we did an overall visual assessment. In our evaluation we felt that this -- the overall impact would be low to medium. We drew that conclusion by looking at the degree of dominance that the turbines would have especially at the northern end of the lake. The fact that there is limited public access and relatively few users, those people who would be using the lake are primarily people that would be fishing or boating
on the lake and the fact that the view to Tunk Mountain
still is the dominant feature of the lake.

Myrick Lake on the right side of the screen right here, as you can see, it's adjacent to and somewhat east of Narraguagus Lake, is a much smaller body of water, only 45 acres, it's 4.6 miles to the nearest turbine, it's rated as significant and this is a lake with no public access. Here is a panoramic view taken from the shoreline. We were not able to get out onto the lake. And the -- because of the amount of private property, we were not able to take views from points where the turbines may be visible.

We felt after looking at it and from our computer simulations and other evaluative techniques that you may be able to see the tops of four to six blades just above the treeline just to the left of the photograph. In our evaluation, this would have a relatively low overall scenic impact on the -- on this resource. Because of the fact that you would be seeing the blades of some of the turbines, it would be visible over -- a little over 10 percent of the lake. There's limited public access and relatively few users.

Donnell Pond is a much different situation. This is a much larger body of water. This is the pond down at the lower left part of the screen right here. This is rated as an outstanding scenic resource. It does have public
access, it's largely surrounded by land that's -- that's
controlled by -- by the state under the Maine Public
Reserve Land Program. And it's 5.3 miles at the northern
end to the nearest turbine up here. And here's the 8 mile
line down here. Schoodic Beach is at the lower end of the
lake. Here's an enlargement of the -- of the pond. There
will be a couple of photo simulations that we'll be looking
at, these points right here and here and also down at
Schoodic Beach as we go through the evaluation.

What I would like to do now is start on the west end
and move east, look at resources along the way and then
travel through the narrows up to Martin Ridge Cove and then
look at the southern part of the lake. It's divided into
three very distinctive parts of the lake.

At the Cardville boat launch at the western end of the
lake, here we are looking to the -- to the east, there are
no turbines visible from this location. There are several
camps along the way, probably four or five dozen camps.
It's interesting when you're out on the lake, there are a
series of focal points, places that draw your eye, primary
natural features.

In this case, Caribou Mountain is very highly visible
at the -- at the eastern end of this particular viewshed.
Turbines are not visible because they're diagonally -- or
they're off to the left at right angles to this particular
vantage point. Here are people enjoying the lake. This is just east of Little Island at the western end of the -- the pond. The turbines at this point are much to the right of the photograph.

Here we are in the middle of the lake. And I'll be looking at a viewpoint where the point is right now; this is a panoramic view looking at both Caribou Mountain and Tunk Mountain further in the background here. There are no views at this particular point, they're much to the left of this hill right here.

It's an interesting lake to be on because of the -- the land forms and the islands that make the turbines appear and reappear at various points. You'll see from the -- the map right here where the turbines may be visible. The darker the green color, the more turbines that are visible. The lighter shades right here indicate between one and six turbines that may be visible from various points of the lake.

Here is a photo simulation taken near the narrows. At this particular point you are able to see the tops of four of the turbines. I'll point them out, right in here. And those are turbines at this point that are within 8 miles. Further to the east is Redman Beach. This is one of the two main sand beaches within the lake, a very popular place. There will be no views from this location either
because the -- the beach and the camping area is oriented to the west and to the south. The turbines, of course, are to the north of this location.

We're now going to go into the narrows. We're at this point right here in this photograph heading up to Martin Ridge Cove. There may be four turbines located just to the left of this low hill right here, very similar to the previous photo simulation. Again, as a focal point, a low hill and mountains up in here, the turbines will be off on the left side here.

This is an area -- the shoreline is outside of the Maine Public Reserve land. There are probably a dozen or so camps located along the shoreline. There may be blades of up to four turbines to the left of the photograph right here. Here's Otter Bog Mountain. Again, that's the focal point for the northern part of the -- of the lake. The turbines are off to the left side at this point and would not be visible from this particular location.

This -- these slides give you a general indication of the character of the lake. We weren't able to see that yesterday, unfortunately, because of the -- the rain and the fog. One of the -- the dominant manmade features is a communication tower, a radio tower, on Martin Ridge, which is clearly visible from this location and it's also visible from Schoodic Beach, where we were yesterday.
Now going to the southern part of the lake, the southern third or so, there are a series of 14 campsites on -- on the lake. Many of them are these small isolated canoe-to locations. None of them will have views of the turbines because of their orientation generally to the south or to the south -- southeast. This particular slide is taken at a point right here.

The next slide, Viewpoint 4, I actually walked to when we did our fieldwork starting at Schoodic Beach. This is a view that we used in the intercept survey to test peoples' reactions to turbines seen from the body of water. Here is the view as it is today looking north and here is the photo simulation looking at a distance of about 7 and a half miles. There would be five turbines visible within 8 miles of this location. Here are the turbines right here.

So our overall analysis of the impact on Donnell Pond, we felt that the impact of the turbines would be low to medium. This is based upon the fact that they would be seen, as you can see from the illustration here, over about 19 percent of the lake. The survey -- the intercept survey that -- the people who were interviewed felt that it would have an effect on the scenic value, but the majority of the people said that it would not have an effect on their desire to return to the lake or to the Donnell Pond unit for recreational pursuits.
As you can see from the photo simulations, the turbines do not dominate the landscape, they do not interfere with the focal points that are present surrounding the -- the body of water and will have minimal to no effect on the beaches and the campsites, which are one of the main reasons why people visit the area.

Schoodic Beach, again, we wish that it had been a beautiful day yesterday, but those are the chances you take. It's about a 900-foot length of sand beach right here. And as you can see from the viewshed analysis, that at that particular point where we stood by the small stream it may be possible to see the blades of one or two turbines rising at a distance of 8.01 miles, technically, outside of the 8-mile area. This, of course, is an easily accessible walk-to beach and camping facility. It's a very popular part of the -- the Donnell Pond unit and has recently been improved by the Bureau of Parks and Lands.

Here is a panoramic view of what we saw yesterday looking east towards Black Mountain, which we'll talk about in a moment. If we look to the other side on the west side, Schoodic Mountain rises way up in here. The 8-mile line is about in through here. So the top of Schoodic Mountain is outside of the 8-mile area. But the lower reaches of it, which do not have views of the project, extend down to the lake.
Here is an impression of what the lake -- the beach itself looks like, a beautiful sand beach about 900 feet in length. The -- the outer end on the west side there is where one might get a view of the tops of those two or three turbines -- one or two turbines rather. Here is the view looking north, it's a normal view looking north from that western end of the beach. This is what it looks like without the turbines in place. With the turbines in place, it would look like that. If you have a hard time seeing it, there is a little white spec right there which indicates the blade that -- or of one or two turbines that may be visible.

I know -- and we've talked with Jim Palmer in the past. One of the reasons that the 8-mile limit was used was that beyond 8 miles you generally cannot see the blades of turbines. In this particular case, we emphasize it in our computer analysis just to indicate where it would be. Our sense, though, is that people who are on the beach who are either camping -- the campers would not see it because this is not where the campsites are. The people at the end of the beach are probably not going to be aware of the fact that the turbines would be visible, would be present.

So on balance, we felt that the impact to Schoodic Beach is very low because of the fact that the majority of the turbines are not visible, it would just be the upper
blades of one or two of the turbines at that very small end of the beach. Going --

MS. CARROLL: Five minutes, please.

MR. DE WAN: Okay. I've got about four minutes left.

Here is Schoodic Beach right here. We're now going to hike up to Black Mountain. We parked yesterday right there, that's where the new parking lot is. There are a number of ways to get up to Black Mountain from the beach itself and the parking lot. And there's also a road that goes down from the east side.

This is a scenic viewpoint within the Donnell Pond unit. There are actually three distinct peaks of Black Mountain. We're looking at this peak right here, this is where the intercept study was done and where the photo simulation was done. This is also -- here's the 8-mile line. As you can see, it's just at that cusp, 7.9 miles to the nearest turbine. This is an interesting peak because it not only has three separate distinct peaks, but there's also a 360 degree view from the top of the east peak, which is why we looked at them as the -- the primary resource.

It's also interesting too because it's surrounded by a wonderful display of very highly complex water forms and views to the mountains and views down to the ocean to the south. There is an opportunity from the -- the middle peak to get a brief view of the project area at a distance of
about 8 miles. It would be visible on the ridge line here above Caribou Mountain. This is not a photo simulation, so you don't have to look for any -- any dots on the horizon there.

What is spectacular about the mountain, though, is the quality of the views, especially the views to the south as you climb the mountain, the views out to Acadia National Park and Frenchman's Bay and so forth. Once you get to the top, here's a -- an image of -- the top of Black Mountain is a bald summit. As I said, there's a 360-degree view from the top. There are views that are both long views to the distant mountains, there are views that are focused on the lakes around it. There's also views that are very -- and really low focused on the natural rock formations and the karens which also create a sculpture-like quality at the very top.

At this particular point we're looking south, the turbines are behind the photographer. Notice the arrows down here. This is where we're at right here. We're looking through a panoramic photograph at Tunk Mountain, the foreground here. Here you can see the mountains of Mt. Desert Island, Acadia National Park and Frenchman's Bay of in the far distance at a distance of about 20 miles or so. Turbines would not be visible, would not interfere with this view or any of the really spectacular views out
to the -- to the south.

Here's a view to the east, here's Tunk Lake over here which is a scenic resource, but it has no views of the project. Again, this is a panorama. There's no turbines visible from this location. Once we start looking to the north, the turbines will appear off to the left. Here's Tunk Mountain over here, here's Catherine and here's Caribou Mountain right here.

Let's turn a little bit more to the left and this is the -- the view looking out towards the project area, which is in through here. There are five turbines that will be visible within 8 miles of this location. Here is a normal view. You'd have to be about one and a half times the width of the screen away from this image right here to effectively look at it -- to make it look like a normal person looking at this view. So this is a view to the north, northwest.

The photo simulations indicate that there would be all the turbines visible at this location, they would be seen at 11 degrees of -- of the total 360-degree view. The nearest turbine is 7.8 miles away. So on balance we felt that the -- the views from Black Mountain -- and by Black Mountain we mean all the views to the south, the other ridge line locations -- the impact would be low to medium because of the fact that they would be visible.
There would be no effect on the highly-rated views from the intercept survey to the south. There would be no impacts on the trails that go up to the -- to the peak. We also found from the survey that it would have minimal effect on peoples' desire to come back to Black Mountain.

The other more close mountain is Tunk Mountain. This is inventoried in the Down East coastal scenic inventory. Most of the summit is privately held. Unlike Black Mountain, this is a very distinct ridge line as you saw from the earlier photograph. That one particular bald spot that we saw at Narraguagus Lake is located right here. Most of the views, again, are looking down to the south.

Here is, again, an indication of the context seeing the lakes surrounding -- surrounding Tunk Mountain. Here's a panoramic view looking southwest towards Schoodic, Black and Caribou Mountain. No turbines are visible from this location because we're looking in the opposite direction. This is the classic view from Tunk Mountain.

This is also a very difficult mountain to find. There's very minimal access to it. The trails are not particularly well marked, but they are being improved by the Bureau of Parks and Land. This is a view looking southeast towards Spring River Lake. There are no turbines visible at this location.

You do -- this is the point where you do get the view,
there's that one viewpoint right here which has a small building and a communications tower on it. Here's a view looking out toward the north towards Narraguagus Lake on the left and Molasses Pond beyond it. Here's a normal view looking at the project site, which is located right in here.

This simulation also shows the location of the associated facilities. If you look very carefully, you will be able to see the lay down area, the crane roads and so forth as well as the turbines. Turbines are visible at this location at 4.9 to 7.2 miles. They occupy 22 degrees out of a 71-degree view right here. This is not a 360-degree view. There are a series of views that look out to the greater landscape, this happens to be one of them. The majority of the views look to the south.

So our evaluation said that this has a low tending to medium impact on balance because of the fact that the majority of the views from Tunk Mountain are not affected by the project. Those that look to the north already have the small building and an antenna whip that's seen at that location. And there's no impact on the ridge line trails that connect all of these view -- locations.

In conclusion, the project will have low to medium impact on six scenic resources of state or national significance. The associated facilities will have limited
to no impact on these resources. The project will not have an unreasonable adverse impact on scenic values and existing uses of scenic resources of state or national significance. Thank you very much.

MS. HILTON: Finished? Okay. Good. You went over a little bit. All right. I guess we're going to take a break, about a 10-minute break. So we will be back at 10:25 sharp.

(Whereupon a recess was held at 10:15 a.m., and the hearing was resumed at 10:30 a.m. this date.)

MS. HILTON: I'd like to call us back to order here and pick up where we left off. We're going to start out with questions by commissioners, LURC staff and consultants and governmental agencies. We have about 45 minutes set aside for this.

So one of the things that we talked about doing was focusing on issues and having commissioners as well as staff coordinate -- or work together in asking some of the questions. So the first topic on my list is decommissioning. And who's -- Don, are you going to frame this up a little bit for us?

MR. MURPHY: Yes, I will.

MS. HILTON: All right.

MR. MURPHY: The process that we went through was to take a look at the applicant's submittal on the
decommissioning plan and, secondly, to -- to compare it to projects from Site Location Development Act, those that were approved and pending, and also our own LURC projects that were approved and pending and take a look at the different similarities and disparities between those projects.

So our questions are to take a look at when to review -- when to take a look at -- whether it's 7 years, 15 years, what the review period is for recalculating the -- the escrow amount number, and then also the -- the difference between resalvage -- selling it for a salvage value or for reuse and how that was calculated.

The applicant resubmitted -- had Sewall do a study -- that's why we've asked Sewall to be here today -- to break down the assumptions and take a look at that. So our questions are focused at that. And we can continue or take all of the staff --.

MS. HILTON: Who is the person from Sewall that --?

Okay. All right. Do any commissioners want to start off with any questions on decommissioning?

MR. LAVERTY: Yes. My understanding is that your approach to determining the amount of decommissioning funds that the applicant will be responsible for is going to be based on an estimated removal cost minus salvage opportunities. And what I'm particularly interested in is
how that -- those salvage values were determined. I guess it's kind of surprising to me that in your submittal you talk about 9.-some-odd million dollars for decommissioning. If I'm not correct, it's been a little while since I read this material. And that in calculating salvage value you come down to a very little amount of money required of the applicant to be put aside because of the salvage value of the materials.

And, number one, I think any of us who have done any -- many of us -- and I'm assuming many people in this room -- may have done some salvaging lately because of the high -- it's very substantially high value right now, particularly No. 1 steel, copper and other salvageable materials, which is extraordinary given the last few years and is not projected to sustain into the future.

So I'm wondering, number one, is how you -- how you calculated those values, do they represent the 10-year average of salvage values, something other than the current value today at salvage yards? And then, secondly, I guess what -- a larger question is, if the people of the state are responsible for decommissioning a project like this and the salvage values change dramatically between now and the decommissioning, are the people of the state of Maine going to be put on the hook for a very substantial amount of money to remove these towers and associated facilities?
And if the money placed in escrow based on your salvage estimates is not sufficient to do that, does that mean that either we're going to have to cough up some taxpayer money -- substantial amount of money to undertake this activity, or are these nonfunctional units going to be left to decay in place in some of the most remote areas of the state?

I guess those are my two questions and I'd like to hear your comments on that.

MR. HART: So to address your -- your first question, the -- the estimates that we developed to estimate the scrap value, the steel value, not to reuse the turbines was today's dollars. There was no estimation of a 10-year average or a 15-year projection or a 20-year projection. It was a -- calls to local scrap facilities to see what the scrap value of steel was.

We were conservative -- utilizing today's estimates we were conservative in our numbers in that we averaged the cost -- or the estimates between No. 1 steel and No. 2 steel -- I think most of this project will be No. 1 steel which is a higher quality. Simply explained, it's a thicker steel that can -- it has more value.

MR. LAVERTY: What was the estimate of tonnage for No. 1 steel?

MR. HART: Well, we averaged -- it was a mixture of 50/50 No. 1 and No. 2 steel. So, you know, we've got --
there's a whole slew of -- 127,000 pounds for the base
tower, 139,000 pounds for the lower mid --. I don't know
if it's all summed up completely here, but it's on -- it's
in our memo on Page 5. Several hundred thousand pounds.

MR. LAVERY: Per ton? What was the --

MR. HART: Excuse me. $235 a ton. Based on today's
dollars.

MR. LAVERY: Today's dollars?

MR. HART: Yep.

MR. LAVERY: Is there any reason why you wouldn't want
to do, let's say, average of -- a 10-year average to
determine, perhaps, a more realistic assessment of where
it's going in the future? I mean, would you disagree that
scrap values are exceptionally high at this moment?

MR. HART: I don't know if steel scrap is exceptionally
high right now. I know -- I know -- I've heard copper is
high. I'm not sure if steel is extraordinarily high right
now. I don't know that.

MR. LAVERY: You undertook -- and you didn't determine
the --?

MR. HART: Well, steel fluctuates. My engineering --

MR. LAVERY: That's my point, right.

MR. HART: Yeah. And it fluctuates to the point where
it becomes nearly impossible to try to determine what it
would be five or ten years down.
MR. LAVERTY: Then what does that say for the veracity of your -- I mean, the reliability of your analysis?

MR. HART: I think that in our report, you know, we're saying that this is today's -- based on today's numbers. And perhaps First Wind or Matt or somebody could comment on how that will be adjusted over time to make sure that there isn't a shortfall.

MR. LAVERTY: I didn't understand that from the proposal that it was going to be adjusted over time. Is that -- is that correct?

MR. HART: My understanding is that this will be reevaluated at certain time periods to make sure it's in line with the most accurate estimates we can have at the -- at the time.

MR. LAVERTY: And just to get back to that -- to sort of the factual basis here, we're talking about, what, $9-some-odd million estimated decommissioning cost; is that correct?

MR. HART: The disassembly and removal costs?

MR. LAVERTY: Yeah.

MR. HART: The total opinion of probable disassembly and removal was 1.8 -- a little over 1.8 million.

MR. LAVERTY: 1.8 million. Okay. I stand absolutely corrected on that. There's a very substantial difference. But given that and the salvage costs, how much money do
you recommend that First Wind hold in escrow for the
decommissioning of these facilities?

MR. HART: We've estimated that when you take all the
costs to disassemble and you take credit for all of the
value of the scrap, we have a net estimate opinion of
probable cost of decommissioning of 250,000 roughly.

MR. LAVERTY: $250,000 over the life of this project to
pay for decommissioning.

MR. HART: That's based on today's dollars.

MR. LAVERTY: Now, I understand that you did -- this is
a second analysis you've done; is that not correct? Or the
first -- this is the second submission by First Wind with
regard to decommissioning?

MR. KEARNS: Commissioner, if I could, could I add a
little perspective on how we --

MR. LAVERTY: Please.

MR. KEARNS: So with respect to decommissioning, we've
really -- really wanted to simplify the approach that was
first outlined in the application because of a lot of the
issues that you're raising. So we started to have this
classification internally, a lot of these issues came up. We
heard from other stakeholders that there was confusion or
maybe increased risk around it.

So what we -- the initial methodology was that we
would, essentially, remove the equipment piece by piece
while preserving each component in its -- in its best condition for resale. So -- and the notion was there's a gray market or a used market right now for this equipment and the notion was it will take us a lot of -- it will cost us a lot to remove that equipment, but we'll also get a lot. So that -- therefore, that 9 million number that you were talking about, it was so -- it was high.

MR. LAVERTY: Now, I guess our concern as a Commission is the public interest.

MR. KEARNES: Right.

MR. LAVERTY: And I think our question is, if for some reason First Wind isn't around to undertake the decommissioning -- I mean, if you are around and that amount is in escrow, that amount would be available to you to use for decommissioning. But the whole purpose of this decommissioning fund, as I originally understood it, was to protect the public so that the public would not be on the hook if First Wind or Blue Sky were not around to undertake the decommissioning.

I mean -- and that's the point. So we're trying to protect the public purse and the public interests here.

MR. KEARNES: Understood.

MR. LAVERTY: You agree with that?

MR. KEARNES: I do. And, you know, that is the goal of the plan. And the shift in the methodology to go with
scrap was with that end in mind. So it was to simplify the approach and make sure that there's a true-up provision so that we are checking in on scrap value -- changes in scrap value and then adjusting the security. And I think there's a 7-year check in and then a 15-year check in. And the full cost of the -- the thing has to be fully funded at year 15.

MR. LAVERTY: Explain the check-ins, please, just quickly.

MR. KEARNS: So the notion is they true-up, essentially, so you're paying into the fund on an annual basis and then at year 7 and at year 15 we would check in on the scrap values, see if they've changed from what we projected in the memo and then top up, resize the letter of security, which LURC is the beneficiary. So we would need to be here in order for you to draw on those funds.

MR. LAVERTY: Okay. And --

MR. KEARNS: And then at 15 it tops out entirely and you have full decommissioning.

MR. LAVERTY: I guess I -- you know, it seems -- I mean, I'm not -- I don't know anything about this, I'm not, obviously, an expert, I'm just the guy off the street here. But my -- you know, I just want to make sure when we use scrap value -- which I think a simple way to look at it and clarify -- let's just make sure we're using appropriate
scrap values.

And, again, I know you guys -- you have an interest, and I understand it, in minimizing the amount of money you have to put into this fund because it's a sum cost, you know. And there are opportunity costs associated with doing that. And I understand that, why you would want that minimized. But if we can agree that we're trying to protect the public interest here in some reasonable formula to determine how the public can in a sense be indemnified against a complete closure, that's my interest.

And if the 7-year, based on reasonable, you know, salvage estimates, I have no problem. But I guess I just have no way to judge whether or not your decommissioning fund is appropriate to protect the public interest. I guess that's my insight.

MR. KEARNS: And I think it's a great question and I understand the intent. I guess the way we are thinking about it -- I appreciate your sensitivity to the commercial issue, which is that it costs a lot of money to post a letter of credit. But for those first 7 years, essentially, you know, the risk of decommissioning, in our view, is very, very low. So we wanted to size the letter of credit -- I mean, our goal is not to throw money away, essentially, by holding an LC in place that costs the project a lot of money.
But that as that -- as we go further on in the project life and the risk of a decommissioning event -- you know, it becomes less certain as you go forward, just like commodity prices, that that -- you know, you're increasing the letter of credit to, in a sense, indemnify the people of Maine.

MR. LAVERTY: I guess, you know, just -- and I'll defer, I think, to -- staff had some questions here. But I guess my concern is is it just -- and, again, it's a gut feeling -- you know, I'm a layperson -- is that a couple hundred thousand dollars for a 78 million -- decommissioning of $78 million project -- I mean, I'd like to see, you know, some -- I would like to be convinced, I guess, that that really does reflect the public interest.

And I certainly don't mean to imply that you're not taking that into account or you're not -- you know, you're trying to somehow be slippery in your estimates, but I just think that we owe it to everybody to be sound in these estimates.

MR. KEARNS: And I think that's the -- that's the shared goal. So, you know, if we can provide additional information, we'd be happy to. The objective, again, is to balance the commercial requirements of the project with the stated objective of making sure that the people of Maine are protected in the event of a default. I mean, we're not
-- we're not naive about the possibility of changes in financial situations, right. I mean, that's real life.

MR. LAVERY: Thank you.

MR. KEARNS: Thank you.

MS. HILTON: Any other commissioner questions at this point? How about staff?

MR. MURPHY: Yes, I'd like to just follow up on a few. I think it's giving us an opportunity to clarify the Sewall follow-up study that has taken place of the initial exhibit that was in the application.

The 7-year period which is -- that you were referring to, in the -- in the report it does have a -- 98 percent of the value would be funded at that time and then the 15-year goes out to 100 percent of the value. But I -- I would like to clarify that we are going to -- you know, you are going to assess at 7-year the salvage value. We need to nail that down in terms of it's not --

MR. KEARNS: So if it's not in there today, it will be. Because that is -- I think it's required -- or it's what we've done on DEP applications. I'd assume we would -- we would match.

MR. MURPHY: Yes. And it seems you'd have to to know 98 percent at year 7. But it's never -- it's not spelled out at that point.

MR. KEARNS: Okay.
MR. MURPHY: And I think it would be worth spelling out
the methodology which you -- or how would you spell out --
you know, how would you further define your methodology for
coming up with that number as a continuum of the Sewall
report outline.

I'd like to follow up on Ed's question. What
contingencies were built in in the categories when -- the
Sewall report breaks the categories down in terms of
project management, that would include oversight, crane, I
believe, was -- yes, crane time was in that as well, site
work, civil, the wind turbine foundations, the foundations
are ground down 2 foot below -- below grade and either
disposed of on site -- or trucked off rather. In this
particular case, you refer to -- to leaving them on site.
So, obviously, there's a -- quite a trucking difference
there.

And then the fourth category was the actual salvage or
resale of the wind turbines and generators. So I wonder if
you could comment on the contingencies that are built into
each of those? In one case it does have -- mention
something and in other cases it remains silent. So I was
wondering if you would comment on that.

MR. KEARNS: I'm going to let Sewall speak about their
report.

MR. HART: So the -- the contingency line item you see
under project management, that's -- that's a
decommissioning contingency, it's not a project management
contingency. It just happens to fall under that line item.
So that is a -- and quite honestly, incidentals, which, you
know, we describe -- you know, incidental items, unknown
types of things, that's really -- there's not much
distinction between what we refer to as incidentals and
contingency.

So it's a 15-percent project contingency to deal with
unforeseen unknowns for the project.

MR. MURPHY: And to be clear, that's in the category
project management?

MR. HART: Yes.

MR. MURPHY: Okay. Then I'd like to continue through
the other categories where that is not as -- as obvious.
You're saying it's for the whole report, but I -- I'd have
to beg to differ on some of those.

In other words, they put forward 2011 Washington County
labor rates, yet those are never touched on or projected
out. Have you actually started going through all the
different ones that --

MR. HART: The 10 percent contingency and the 5 percent
under the incidentals were of the total decommissioning
costs. So add up all the items we have under
decommissioning budget.
MR. MURPHY: And then put in that number.

MR. HART: Right.

MR. MURPHY: Okay. The -- what -- what do you foresee as the financial instrument to fully fund -- partially and then fully fund the -- the decommissioning escrow, be it whatever number, and at what point does that get established?

MR. KEARNS: We typically establish a -- we have a letter of credit at a holding company level and then we would seek to create a project level letter of credit associated with this entity. So -- and I assume that we would -- I'm not exactly sure how the condition would read, but I assume that we would be posting the required amount and then resizing it periodically as required by the -- the condition.

MR. MURPHY: I'd like to follow up on the number again. It's all about -- and, Ed, you may want to take it further as well. Following up on the calculation of that number, the method now is to use scrap salvage value. And that's something of all the -- of all the numbers that are in there in terms of contingency, that's the most -- probably most volatile.

So that just remains flat throughout the process. Yet, in all the other categories how will you -- how will you continue in the next reporting in, which sounds like a
7-year period, how do you see building that analysis?

MR. KEARNS: In terms of the other variables that are used in the report?

MR. MURPHY: Yes. To then come up with that -- with that end number.

MR. KEARNS: Yeah, my assumption is that we would update the report that's been provided to you here. That's really the foundation that we've used to do these calculations. So I would see no reason to depart from that and it would offer consistency in the process.

MR. MURPHY: Is -- do you see the -- do you see the possibility here to do an either per turbine or per megawatt figure site specific -- you know, project specific on the Bull Hill project that can become the basis of a calculation?

MR. KEARNS: A per turbine removal cost?

MR. MURPHY: Yes.

MR. KEARNS: I think so. I think that's just another -- I'd have to talk to Sewall, but I assume that's just a way -- another way of kind of packaging the number.

MR. MURPHY: Okay. And then -- then that would -- actually, devising that methodology would then provide a way to come up with that number on this project?

MR. KEARNS: If that's the preference, absolutely.

MR. MURPHY: In looking at a comparison -- we presented
all the parties with other DEP orders, other LURC approvals, so all the information is there to really start to get at a per turbine cost qualified for each particular site -- site specifics. There's quite -- and when you do discount all those other specifics out, there's still quite a difference between this project, when it's rather comparative for other ones, once discounted for other site specifics, this number remains low, comparatively low, if not the lowest.

So we need to -- I don't know if you want to address that or how you're going to revisit that or --.

MR. KEARNS: My understanding is that there are a few assumptions here in the report that I can let Sewall talk about, but that are slightly different here than other projects. For example, the -- the thing you mentioned about foundations and then, I think, some of the collection -- my recollection is some of the collection would be left in place. That is not true with others.

So I think there's some -- as you noted, there are some assumption differences here. But we should take a look at those and maybe Sewall can comment on that right now.

MS. HILTON: Can I just jump in here? I'm a little concerned about our time constraints. On the other hand, these are very critical questions that I think need to be fleshed out and answered. So I think that we need to
revisit this. And I think you folks get a general idea of
where Don is going with this and it is a great concern to
the Commission.

Are there any other questions the commissioners want to
ask about decommissioning at this time?

MR. LAVERTY: No, but how do we revisit it? I'm not
sure.

MS. HILTON: Amy had a suggestion here.

MS. MILLS: Well, again, your hearing time is
constrained and I don't want to talk for very long for that
reason. But certainly, you know, Gwen sits as your chair
and she has a close relationship with your staff in moving
through these judicatory processes. So, you know, frankly,
if you just don't have time today for your staff to fully
ferret out these issues that they are taking a look at, I
would recommend that Gwen have a conversation with them
after the hearing and if there's information that staff
needs to evaluate these issues that that can be made
available through staff, through Gwen and that as the
Commission is sitting here today as a body that -- I think
what Gwen is saying is that she would like to move on to
come back to your -- the commissioner's questions at this point.

MS. HILTON: I think -- and there's a lot of details
here. And, you know, I know -- I think it needs to be --
needs some work, more fleshing out. And I'm not sure that
this is necessarily the best format to do it given where we're at in our hearing.

MR. LAVERY: As long as it gets done.

MS. HILTON: Yes. I agree.

MR. FARRAND: Can I add my agreement with Don's suggestion about a per turbine cost. I think that's a great addition.

MS. HILTON: Okay. Thank you. The next topic I have is tangible benefits. And can one of you just sort of frame that up for us.

MR. MURPHY: That -- the pre-filed testimony -- Dave Fowler spoke on this earlier, the pre-filed testimony laid out their meeting the community benefits aspect, the Hancock County Commissioners, Town of Eastbrook, Down East Salmon Federation. And the questions would be if -- taking a look at the documentation that's been placed as verification of that. And that's where we would -- taking a look at the documentation.

MS. HORN OLSEN: I mean, I think the two issues are whether -- for us, anyway, are whether the documentation that's been presented is sufficient for the Commission and whether the level of the specificity of the commitment on the part of the Hancock County Commissioners, in particular, allows the Commission to determine whether the tangible benefits are significant or not. And that's
something for you to consider, whether you're satisfied
with that demonstration or not.

MR. LAVERTY: My only -- to staff and the applicant --
is that we -- our motus operandi here, actually, through
the good offices of Senator Mills and his presentation to
us is that we -- it is not appropriate for us to get
involved in negotiations between the applicant and
communities with regard to tangible benefits. But what we
have to do is we have -- as a result of statutory and
regulatory obligations, we have to make a finding and it's
a very significant finding with regard to tangible
benefits.

And in order to do that, the tangible benefits package
has to be in place at the time of our decision. And I
guess our concern is that we don't seem to have a finalized
tangible benefits package at least in terms of the
information in the record. And so I think our concern is
we need to have a final -- not, it will be concluded at
some later point, or there is a generalized commitment. We
need a specific commitment to the -- to the package so we
can make that determination.

MR. FOWLER: And that's our goal as well, to have that
final package to you prior to the close of record.

MR. LAVERTY: Thank you.

MR. BODWELL: And I think -- okay.
MR. MURPHY: One really brief point of clarification is that the Down East Salmon Federation, the application has a $25,000 lump sum and we -- I did hear that's amended and it was in the pre-filed that that's going to be 20,000 per year and they've been put in to take over the watershed quality program that was intended originally.

MR. BODWELL: That is correct.

MR. MURPHY: That is, could you just clarify, is that still a -- is there still the one-time payment as was referenced in the letter, or has it been changed now to the annual program?

MR. BODWELL: It's both.

MR. MURPHY: It is both?

MR. BODWELL: Yes.

MR. MURPHY: Okay.

MS. HILTON: Anybody else?

MR. LAVERTY: There is one other thing here that we had talked about is that on your estimates of employment, Don, you might want to reference --.

MR. MURPHY: Okay. For those of you that were here last night, part of the testimony was a big -- and a point raised by Ed that there's a big difference between four to eight people being permanently employed, you know, how many are permanently employed? And having the experience of Stetson we would like to -- can you address permanent
employment at the Stetson facility and/or -- and other
facilities that you have in Maine?

MR. FOWLER: So we did call our facilities this morning
just to verify the positions at hand right now. And Mars
Hill right now has three First Wind positions currently
active and we have one open position that we're trying to
fill. We also have onsite -- six GE people onsite. They
also have an opening as well. For a total of ten. So
right now there's -- there's nine people working on site
with two openings to be filled.

And you do get a range. That will fluctuate depending
on the warranty package that we -- that we get with these
turbines, whether or not the turbine manufacturer provides
more or less people and then we adjust accordingly.

At Stetson right now we are also at -- we have five
First Wind people there and one current position open and
six General Electric people are on site there as well for a
total of 11 at Stetson as well. And those people are
handling Stetson 1 and 2 together. So there are three
openings if you want to let anyone know about our job
applications, we can talk about that afterwards.

MR. LAVERTY: Yeah, we may all be looking --.

Obviously, what we're looking for here is whether -- who
pays is not the point. The point is the how many full-time
jobs. And as long as the GE jobs are full-time jobs, not
temporary or fluctuating jobs or --. Because at this point after -- the projects that have been approved, we ought to be able to say how many jobs. And the extent to which we can doe that with specificity, I think would make everybody better off. That's the point.

MR. FOWLER: I mean -- and I have to clarify, the current -- the openings are not in addition to what I stated. So there's nine people at Mars Hill and 11 at Stetson. But those jobs need to be filled, those bodies need to be filled regardless of whether they're First Wind employees or General Electric.

MR. LAVERY: And the salaries are paid in Maine?

MR. FOWLER: That's correct.

MS. KURTZ: Is there any -- should we expect that each of these employees will be only assigned to one project, or is there a possibility that there's a sharing among the different projects? Like, are we actually talking about that many individual people or do -- are there employees that could work at both facilities either remotely or go back and forth so that it really is one person as opposed to two?

MR. KEARNS: So it is possible that we would have some sharing with our Rawlings project, which is in DEP jurisdiction. But -- so we don't fully have the staffing plan done yet, but it makes sense. And we are, obviously,
interested in the bottom line. But given the proximity of Rawlings and Stetson, there might be a roving operator, for example.

MS. KURTZ: So that point needs to be clarified then. If we're really talking about individuals or -- at each site or if we're talking about one or two people that could share two or three jobs. Do you know what I'm saying? We need that absolute number.

MR. KEARNS: And we can clarify that with our asset management person. I can fill in that blank.

MR. SCHAEFER: And I'd just like to point out that GE may not be the turbine constructor and some others, so we can't really count -- GE is a nice number to hear, but they're not the applicant. Okay?

So as a -- it can be an addendum or this is -- this is a number, but for the applicant's employees, that has to be -- there has to be a little bit of a firewall there because there could be two different suppliers or several, you know, so --. But it's a nice number to hear.

And just to tie this into a state of Maine issue, these openings that you're talking about, NMCC has developed a -- are they training the kind of people that could fill these openings?

MR. KEARNS: They are indeed.

MR. SCHAEFER: Thank you. That's all I want -- thanks.
MR. LAVERTY: This may be -- I don't know whether it's under tangible benefits, but another thing is the -- it seems that we're getting estimates of production -- and I know that it takes -- my understanding is that a year, year and a half, two years to actually get up to where you know exactly what your production rate is going to be in terms of --. But can we get -- like, the estimate here is, what, 38 percent at maximum because of the transmission facility. Can we get something that -- based on actual operating history rather than a conjecture? It just seems that at this point that we ought to be getting to the point -- we've got operating, you know, facilities out there in Maine, we ought to be able to get down to more specific determinants here rather than just sort of these estimates based on transmission capacity, which would be a maximum estimate.

MR. KEARNS: So are you talking about output?

MR. LAVERTY: Output.

MR. KEARNS: Yeah. So we have a -- we have some of those numbers that are -- yeah, we have a P-50 number, which is, basically, a probability of 50 percent that you're either right or wrong. So that's the -- that's the kind of big bucket. Then you've got -- as you get more data, as you say, you get up to the P-99 and that kind of stuff. I'll stop talking about jargon.
But that is the -- obviously, the more data points you get, the better -- as you say, the better the resolution.

MR. LAVERY: And it just seems we ought to be getting better.

MR. KEARNS: Yes, indeed. Indeed. And we are -- there is some information in the application, I believe. And Jeff is reminding me that we did submit our Stetson 1 and 2 production numbers. So we are -- as you say, we are tying out the application estimates with actual production.

MR. LAVERY: Thank you.

MS. HILTON: All right. Next topic, vernal pool.

MR. MURPHY: Yes, we're ready.

MS. HILTON: Do you want to just sort of set the stage?

MR. MURPHY: Yeah. Things that we're going to be looking at, questions the Commission and staff have, in reference to the -- the IF & W requests, the filings that came in and, as you stated earlier, there was some additional information needed that you didn't hear about it earlier, but you responded to it and put it together.

Also, the -- the discussion about the additional boundary -- resources identification boundary. The -- and then the no impacts -- the statement of no impacts to wetlands, we -- it's straightforward. No impacts to vernal pools, but the position that you're taking that existing impacts are not included. And that -- a follow-up question
could be in reference to, how can you -- you know, what kind of mitigation could -- could be taken into consideration. So those are the -- that's the broad landscape.

MR. LAVERTY: We're quickly running out of time here, which is extremely unfortunate. But there are sort of three sets of questions that I had here with regard to this. The first is the applicability of NRPA, our Natural Resources Protection Act, which requires a 250-foot setback from vernal pools. And a couple issues regarding that.

First is, the -- did you -- my understanding is that you did not evaluate the potential for vernal pool incursion 250 feet beyond the project boundary. The assumption was they would operate only within the project boundary. But I'm just wondering if there is a vernal pool within 250 feet of project boundary that may be adversely affected, shouldn't that be taken into consideration?

And I guess this is a -- something we need to determine, what is going to be our consistent position on this and the -- to move forward. So I'm just wondering if there's some logic why vernal pool -- there was not an assessment of vernal pool impact 250 feet beyond the project boundary.

MR. KNAPP: A lot of times when we develop the concept of a project, we don't have a turbine string to work with,
we don't have access roads, so we're the first boots on the
ground, so we have a bubble. We collect resource
identification through that bubble, which is what we did in
the spring of last year. Design changes proceed and then
through the course of the winter and in advance of the
submission, micrositing of the turbines and the roads
occurred they ended up being within that 250-foot boundary
of the delineation limits that we worked with earlier in
the spring.

We haven't seen that request previously on projects.
We saw it on this one. We went out in the field and we
visited every area within 250 feet of the project footprint
to assess it for vernal pools.

MR. LAVERY: The footprint or the boundary?

MR. KNAPP: The boundary of the project as it exists
today. So if you look at that submission we put in late
yesterday, you can see the additional areas outside of our
delineation limits that were assessed. So we've addressed
that issue.

MR. LAVERY: Okay. Thank you. I've got two other --
just quickly because this may -- this may be some of those
issues that could be dealt with at a later point, but I
just want to get them on the record.

The second is that you do the assessment on vernal
pools particularly in terms of existing conditions, but we
understand from our site visit and also the application that the pads that are going to be constructed here are either going to be concrete pads and/or a combination of concrete pads and drilling into bedrock. In either instance, you're creating a pervious surfaces. And the Sewall people testified that there's a very high water table in this area.

And I guess one of the questions is, did you assess the impact of runoff from both construction and operation on vernal pools as opposed to the mere design of the -- in the 250-foot buffer?

MR. KNAPP: I think that's a question for Sewall.

MR. HART: So we discussed with the agencies, LURC, DEP, Maine State soil scientist Dave Rocque the issue of dewatering both construction and permanent foundation drains. So implemented in our design are features that direct dewatering activities away from protected natural resources, do not discharge to protected natural resources. They also provide sedimentation barriers that prevent sediments from leaving the site.

So through consultation with the agencies, we've taken their recommendations, we've implemented those recommendations in the design of this project and they are included in our plan sets.

MR. LAVERTY: So the answer would be, yes, that, yes,
you have -- you have undertaken the assessment of the
impact on vernal pools of construction and operation of the
project given the development of impervious --
impervious --

MR. KNAPP: Surfaces.

MR. LAVERTY: -- surfaces, right, and the high water
table? You have done that; is that correct?

MR. HART: I can't answer to a specific assessment on
the impact of a vernal pool, but the assessment of
dewatering the project, yes.

MR. LAVERTY: Okay. Then I think I would leave that to
staff to follow up on if it's appropriate.

The third area I'm interested in here is this question
-- again, we've got NRPA that we're subject to -- we're all
subject to, which says a 250-foot buffer. Your argument is
that the existing road, although it might -- it might
represent encouragement of that 250-foot buffer, is
reasonable because a reconstruction of the road might
create other impacts? And I'm just not so sure that we can
say because the road is already there, the vernal pool is
already being compromised by the road, that we ought to
accept that.

I'm not sure whether that's a -- and I'd like to hear
somebody's response to that.

MR. BARNS: This is an excellent policy question. And
that's why I'm the one who's answering, I guess. Those of you who went on the site tower yesterday, you saw the roads that exist out there. Those roads have been in existence since at least 1957, the ones that we're talking about that are in vernal pool envelopes. If you look at Exhibit 15-C, Figure 4, there's a USGS quadra angle in the historic report which shows the road. That's my evidence of in existence since at least 1957.

This project is not going to do anything in that -- those significant vernal pool buffers that in any way is going to increase the impact to those significant vernal pools. The only activity is going to be excavating within the road surface that's there, putting in a cable trench and covering it back over.

It's not the situation of a change in use that is meant to be protected in -- by DEP and --- I don't know if you have run into that before as well at LURC, where someone uses a forestry exemption to put in a forestry road which is not subject to the vernal pool regulations and then builds a subdivision. Basically, turns that forestry road into another use. This road is there, this road is permanent, this road is not going anywhere. The only change is going to be putting power in it.

The question -- the policy question -- the design was very carefully done to avoid further fragmentation and to
avoid other wetland and vernal pool impacts. The way to do that is to use existing infrastructure. If this applicant is required to mitigate or compensate for a zero impact, zero, then why shouldn't they go somewhere else with their road, further fragment and have impacts elsewhere rather than using the existing road and infrastructure which has no additional impact.

MR. LAVERTY: I understand that. I guess my concern is, we're charged with protecting the vernal pool. And if we have an opportunity to eliminate a current incursion into that vernal pool --. I mean, we've done this in other instances where we've had just camps, for example, where their -- their sewer system is inappropriate and they're asking for some kind of upgrade or reuse. We've said, okay, but you have to upgrade the sewer system because we're concerned with creating benefit to the resource.

And here we're charged specifically to deal with vernal pools, to protect these vernal pools 250 feet and we're -- and you're suggesting that, you know, we might retain the incursion of the -- the vernal pool by limiting impacts somewhere else. And it seems to me that's kind of a -- I mean, I understand the argument, don't get me wrong. And I don't know what the solution to it is. But it seems to me that might be a slippery slope.

MR. BARNS: Well, the only difference I think here is
what you're suggesting is every mitigation just because they're using the road. If this project had impacts in wetlands or significant vernal pools, then I think the question of mitigation might come into play. But this is a zero impact project, there is no impact to wetlands or vernal pools. So to suggest that there's -- you're required to do mitigation where there's no impact, just seems strange.

MR. LAVERTY: We have an opportunity -- you and I, who are concerned about the resources of the state of Maine, we have an opportunity, it seems to me, to provide additional protections that are now and, quite -- are not in the best interest of the vernal pool. We have an opportunity to change that to increase the value of the vernal pool. Do you see what I'm saying?

MR. BARNES: And, again, look at what this applicant's -- should this applicant bear the burden of the fact that there's an existing transmission line there, the one vernal pool that we're talking about --

MR. LAVERTY: They are asking for a privilege from the people of the state of Maine and that's a license, right?

MR. BARNES: That's correct.

MR. LAVERTY: Well, I shouldn't have said that. License, right, we won't get into that. Do you know what I'm saying? I mean, I think it's an important question to
be asked, I'm not sure we need to spend a lot of time
talking about it, but I think do it's an important question
here.

As far as the vernal pool is concerned, is the pool
half empty -- never mind. I'm done, but I think that's
something we might want to look at.

MS. KURTZ: I have a quick question, hopefully, with
regard to the vernal pools and this notion of an -- I think
you said that there was a fairly shallow layer of soil and
then a bedrock which would allow the drilling to put -- you
know, the drill or drilling to install the pads.

Does your analysis of the impacts to the vernal pools
talk about what would happen if there was fracturing of the
bedrock how it might affect seeps, how it might affect the
actual hydrology and its possible impacts on vernal pools?

MR. KNAPP: I think most of the pools observed within
this project area are based on the dense -- the dense till
that the project area is based on, so they're not
influenced by groundwater. I can't speak to fractured
issues, I'm not a hydro geologist. Brett?

MR. HART: No.

MR. KNAPP: But I don't believe that would impact these
pools.

MS. KURTZ: Were you saying, no, you don't have the
expertise or, no, there's no impact?
MR. HART: I don't have the expertise to answer that.

MR. KNAPP: Based on the soils and the conditions that I saw in the pools in the field.

MS. KURTZ: But if there's a perched water table and there's a fracture, won't the water go somewhere else and couldn't it go away from -- somehow impact the volume of water in a vernal pool? I'm assuming it's not all runoff, that vernal pools are not entirely made of runoff, that there's a --

MR. KNAPP: Most of the pools that I saw are -- they are not groundwater -- they were not influenced by groundwater. Some of them are fed by seeps, some of them are in depressions, but the majority of them are snow melt and rainfall.

MS. KURTZ: So I think that gets at my question then. Are the -- the seeps that are feeding the vernal pools, are they going to be affected by any of the drilling or any of the blasting of bedrock?

MR. HART: I don't know if I can answer your question specifically, but I did want to add, especially, comparative to other projects, there's very little blasting on this project. There's a couple areas of ledge at one of the ridge lines and near the substation.

Perhaps Dave can comment on potential foundation types, but not much blasting will occur on this project.
MS. HILTON: I'm struggling with this existing road, vernal pool policy issue here. And I guess the part that I'm not getting -- and when I think about whether or not you're changing use with this road or not, I don't see how you're not changing the use. I mean, it is a road -- an existing road that was used for forestry, now you're going to be using it for an industrial wind farm and in addition to that you're putting in an electrical -- underground electrical supply. That isn't a change of use?

MR. BARNS: What I did when this issue first came up through a phone call from IF & W was try to understand what the change in use idea and policy was. I don't believe it appears in regulation or anything like that. It's sort of a commonsense kind of approach to prevent abuse, basically, of the exemptions that exist.

I called and spoke with Mike Mullen of DEP who is the head of licensing. DEP has the most experience with this and that's where the concept has come from. And I said, what's behind this, what is -- what is the notion of a change in use? And it's as I described, it was making sure someone didn't get the camel's nose under the tent and turn what truly is a skid road or a forestry road into a major industrial road or to a subdivision or something like that.

These roads are permanent roads, they are not haul roads, they are used for recreation, they're used for
forestry, they're used for access to camps and things like that. They aren't forestry roads which is what the change in use policy is designed to protect and to prevent from being turned into commercial roads. They are commercial roads right now, they're used for commercial forestry, and they're not in any way, shape or form temporary roads.

Again, in existence for more than 50 years. It's hard to argue that that's a temporary forestry road.

MS. HILTON: It sounds like semantics.

MR. BARNS: No, I don't think so because, again, the purpose of the change in use policy is to prevent a temporary impact from becoming a permanent impact and doing it in a way through a forestry exemption that gets around the law. That's my understanding of the intent of it.

MS. HILTON: So are you saying that this is a temporary impact that you're going to be --

MR. BARNS: No, the temporary impact would be a forestry road -- a true forestry road. It would be used for forestry activities put to bed and that would grow back.

MS. HILTON: Right. Well, this is definitely not that.

MR. BARNS: That's correct, the road is definitely not that. That's my point is it's a commercial, permanent road and now they're going to put a utility in it. So there's an additional use of the road, but it's not a change in use
of the road. It's a commercial road.

MR. LAVERY: Do you think that the landowner -- that Haynes would argue that this is a -- not a forestry road and --

MR. BEAUPAIN: Can I answer that question?

MR. LAVERY: -- therefore, exempt -- exempt from regulation because of the forestry designation, or that it is a multiple use road which would be subject to NRPA?

MR. BARNS: I can't speak on behalf of the landowner, but I assume it's a multiple use road.

MR. LAVERY: And subject to NRPA regulation, as opposed to being exempt as a forestry road?

MR. BARNS: That's exactly my point is that --

MR. LAVERY: It was exempt as a forestry road?

MR. BARNS: No, that it's regulated and it can be used as a multiple use road.

MR. LAVERY: Then shouldn't it be consistent with NRPA?

MR. BARNS: And it is.

MR. LAVERY: Except for the incursion into the vernal pool.

MR. BARNS: The road has been there for 50 years, it predates NRPA. And this --

MR. LAVERY: This -- we'll talk about this.

MR. MURPHY: I'm done with that, although there seems to be some continuance that we need to be charged to do.

The -- just a housekeeping is that there was a question asked yesterday on the -- on turbine site 11 in reference to the sound, the decibel output while it was in operation. I'm not sure if you want me to get that in now or --?

MS. HILTON: Okay.

MR. MURPHY: Okay. A question was raised during the site visit yesterday -- this, I imagine, would be for Scott Bodwell, or whoever, and that is Turbine 11, when it is in operation, fully operating, what would be the -- the decibel output? That's pretty much restating how that question was asked when we were in the field.

MR. BODWELL: So -- I'm not sure I really understand the purpose of the question.

MS. HILTON: Can you state your name and --

MR. BODWELL: Oh, my name is Scott Bodwell.

MS. HILTON: And you are --?

MR. BODWELL: I'm with Bodwell Environmental Acoustics and I did the sound assessment for the project.

MS. HILTON: Okay. Thank you.

MS. BODEN: I'm not sure I really understand what the question is.

MR. MURPHY: Yes, Scott, I realize that it's -- there's -- it's not a -- the way it was asked was, when the turbine
is up and operating, what -- at its full capacity at that
-- at that location right at the turbine, what the output
would be -- you know, what the sound impact -- sound
decibel level would be?

MS. BODEN: Right near the turbine?

MR. MURPHY: Yes.

MS. BODEN: Okay.

MR. MURPHY: And it was -- I realize it's an over --
it's a question that has several different ways to answer
it, I understand that, but that's -- rephrased was exactly
how that was put on the site.

MS. BODEN: Okay. Well, just looking at the Figure 8
from the sound level assessment, which was part of the
application, I'm looking at Turbine 11. And, you know,
within approximately 300 feet or so you're down to a sound
level of 55. And right at the base of the turbine you
would be predicting someplace close to 58 or 59 decibels on
the ground.

MR. MURPHY: And this is based on the modeling?

MR. BODWELL: Yes.


MS. HILTON: Any other sound questions? Okay. I guess
we're good on that. How about scenic?

MS. HORN OLSEN: Gwen, can I just clarify? I mean, if
you -- if we have time to go over sound questions, staff
certainly has some, but I understood that we were running short on time. So it just is a question of whether you'd like us to proceed on that now or try to deal with that in another format, which we can discuss with you and Amy. It's totally up to you.

MS. HILTON: What is the nature of your questions?

MS. HORN OLSEN: I think primarily to do with -- well, let me get my notes -- the applicability of the Eastbrook ordinance.

MS. HILTON: Why don't we -- I guess I would like to -- commissioners? I think we'd like to hear -- have some discussion about that.

MR. MURPHY: Scott, you were asked by staff earlier and also Warren Brown, our consultant, had reviewed that, to additionally look at the receptor points in Eastbrook as Eastbrook has its own wind facility ordinance that was passed in January. And could you comment on your analysis of the two sites P-1 and P-2 based on the Eastbrook ordinance?

And, for the benefit of the Commission and everyone here, compare the process, see if there are similarities or differences in the process between Chapter 375.10 DEP, which is what the statute has us look at?

MR. BODWELL: Sure. The Eastbrook ordinance -- I don't know how much people understand about it, but it's -- it
does sort of follow the DEP ordinance in several ways, but there's a definite distinction when it comes to where it applies these limits. The limits are based on hourly sound levels, same as the DEP. The DEP limit -- nighttime limit is 45, which applies within 500 feet of a residence on a protected location. The Eastbrook limit is -- it's 40 decibels, okay, and it applies not just within 500 feet of the residence, but over the whole parcel upon which a residence sits, plus another 660 feet from that parcel. So the area of coverage of that ordinance is expanded quite a bit over what the DEP has.

Has everybody kind of got the basis of that? I mean, there is a schematic that is in my testimony that if people find that confusing, that might help to look at.

MR. LAVERTY: I just need to ask you, the -- my understanding is that the state planning office has developed a model ordinance for municipalities for their potential adoption that would regulate wind power development in the municipalities, and that the Eastbrook planning board took that ordinance and, essentially, made some tailored modification to it, but their ordinance is based on the state model ordinance; is that correct?

MS. BODWELL: Well, it is in certain ways. I mean, it sort of follows --

MR. LAVERTY: So it isn't just the DEP regulations?
MR. BODWELL: -- the outline --. Well, the state model ordinance is really the DEP --

MR. LAVERTY: That's what you're talking about, the model one and --

MR. BODWELL: They're basically one in the same, correct. So, I mean, they follow quite a bit of that model ordinance. The big -- big change is where they -- what the limit is and where it applies. And, you know, it makes it -- makes a big difference.

So instead of -- now, I have a schematic if that would help to illustrate what that difference is. Would that -- would that be helpful or does everybody kind of understand --? I could even draw it on that paper there, but --. Would it be possible to fire that up, Scott?

MS. HORN OLSEN: Gwen, how much time would you like to take with this? Because Warren is here and he certainly has some questions he'd like to ask. And I know we're really limited. So if you could give us a sense of how far you want to take this, that would be helpful.

MR. BODWELL: I think once we see this it would only take a couple minutes to explain it, but --.

MS. HILTON: Why don't -- say what you just said again, Warren has some questions?

MS. HORN OLSEN: I'm sorry, I was mistaken, Warren is all set. So then it's just what the applicant has to
present now, I guess.

    MS. HILTON: Okay. Thank you.

    MR. BODWELL: It's on Page 9. So in the original assessment this wasn't addressed because we weren't sure what the policy was going to be. The requirement, as I understand it, is that you -- the LURC Commission needs to consider, similar to the Board of Environmental Protection -- if this occurs, needs to consider the Eastbrook ordinance. It doesn't say apply, it doesn't exactly tell you what it is that you should do.

    This is the DEP -- this is the property line. I don't know if everyone can see this, but that would be a house right there and this is a property line and there's a house. And at 500 feet from the house a limit of 45 would apply right there.

    And here's Eastbrook -- and beyond that is a 55 limit for daytime. So the lower nighttime limit close to the house since -- because it's the most sensitive area of a property. For Eastbrook, let's take the same parcel, and you extend 660 feet further from the entire parcel and you're -- that's 40 decibels there is what that requirement is. So it sort of followed the concept of the protected location, you know, as the land use to protect, but where it applies and what the number is is different.

    So in taking a look at that -- and I think Warren
actually did estimates for the P-1 and P-2 parcels that are
the closest parcels to proposed turbines. And he did
estimates 660 feet beyond those parcels. We did not. They
could be done if requested.

But what we did -- there is -- if you could -- where
did he go? If you could move to exhibit -- I think it's
Exhibit F. Here is Exhibit F from the pre-filed testimony.
It shows what -- what -- the calculations that were done.
And this is the P-1 residences right at that point there
and then that's 500 feet. That is the -- the DEP point of
compliance. And there's the P-2 and then an estimate at
the property line.

And what the -- what we found out was that anyplace on
the -- there's a 40 decibel line that -- that goes right
along here predicted. That's 45, that's 40 and that's 35.
And the 40 decibel line doesn't cross any of those parcels.
And those predictions are with very conservative
assumptions, that based on all the testing that's been done
at other wind projects in Maine, of which I've participated
in all of it, the typical values will be 2 to 4 decibels
less than these predictions because you want to make sure
your predictions are high enough so that you don't go over.

And so predicted sound levels -- it won't reach 40 at
the houses, at the DEP compliance points or any point on
these parcels, the predicted. But if you go 660 feet
closer to the project, you'll be slightly over 40, where
the Eastbrook limit could be applied depending on what your
consideration is. And even though they would be slightly
over on the predicted side, it's my view that because of
the testing that's been done that shows you typically 2 to
4 decibels below these predictions, that you would probably
meet those limits nearly all the time. There may be a few
excursions, but for the most part you would be 40 decibels
or below even at those -- at those points, 660 feet beyond
the property toward the project. Is that --?

MS. HILTON: I think that was very helpful.

MR. SCHAEFER: Just one other -- these P-1 and P-2 are
to the west of the turbines?

MR. BODWELL: That's correct.

MR. SCHAEFER: Okay. So they are in the prevailing
side predicted breeze?

MR. BODWELL: Well, they would be, actually, upwind.
So when most -- for most of the time when the turbines are
-- and these estimates are at full turbine sound output.
And most of the time when that happens, these locations
will be upwind of the turbines and so these numbers will
probably be even lower.

MR. SCHAEFER: I guess that's what -- based on the wind
rows we saw last night, I'm trying to visualize that as an
overlay here. Okay. Thanks.
MR. BODWELL: The wind rows have been a source of confusion off and on with -- with several folks. The biggest part of the wind rows is where the wind is coming from. And it -- it kind of gives you the impression it's where it's blowing to, so that might -- that might factor in.

MS. HILTON: Okay. Good. Scenic. And I don't --

MS. HORN OLSEN: I think Jim might have a question once the commissioners are done, if there's time.

MS. HILTON: Sally, you --

MR. FARRAND: Yeah, I just have one quick question to Mr. De Wan. The -- throughout your presentation, the impact was described as low tending to -- to medium. And I'm wondering if you could provide me with a little better understanding of that, first of all, fairly gradient when the visual impact on Narraguagus is dramatically different from the impact on any of the other areas that you described?

MR. DE WAN: When we describe an overall visual impact -- scenic impact as low tending towards medium, it doesn't look just at the -- the view that you saw there, it's a compilation of the various factors. And those factors include things like the amount of public use that it has, the significance, the rating that it's been given by the Maine Wildland Lake Assessment, the types of activities
that occur there and similar factors.

MR. FARRAND: I guess I found that the impact was
significant on both, most especially on the Narraguagus
property as depicted. And I wouldn't -- that visual impact
doesn't even come close to anything but medium to high, in
my opinion, as a visual impact.

And some of this, I think, does get to a question about
the impacts in those -- in those areas beyond -- in
addition to the visual impacts. But I just found those two
so startling different that it's hard for me to appreciate
a gradient where the differences are so substantially
different.

MR. DE WAN: It does get back to the criteria that are
in the wind law that are used to make those types of
assessments. And, you know, both Dr. Palmer and I have
used the same criteria to apply to that particular
situation. There's no doubt -- as we saw, that's a very
stark change from what's out there today and what would be
expected in the future. But you have to, you know, take
into consideration those other factors that are talked
about in the wind power law to come up with a final
determination.

MR. FARRAND: And I am reminded of our concerns about
having more information from BPL on the general impact,
particularly on those areas that are highly regarded and
outstanding. And so we had talked about having an
opportunity to get information from them that is not
currently available. So that if you could direct staff to
get that information from them, that would be very helpful.
Thanks.

MR. LAVERTY: You acknowledge -- or as you stated, you
acknowledge you certainly definitely offered the
information that several of these resources that you've
assessed are of either outstanding resource value or
significant resource value based on the lakes management
program, which is incorporated into our CLUP, the
Comprehensive Land Use Plan and, therefore, our regulatory
standards.

You assessed the scenic impact on those resources from
points that are accessible to the public or that would be
normally viewed by the public and seem to diminish the
value of those impacts when there is no readily available
public viewing point.

And my concern -- and it's a larger policy concern and
I -- is that the way in which these lakes and ponds are
classified, one of the -- by IF & W is based on a set of
criteria, one of which is scenic value. These resources
are identified, several -- the Myrick, for example, are
identified -- are classified because of either significant
or outstanding scenic value without public viewshed. In
other words, some of these lakes are -- these ponds are remote and they're defined as remote because of limited public access.

I guess my concern is, if we're going to start evaluating scenic impacts only on the basis of public viewing points available, does that mean that we're going to allow for development or scenic incursions onto these resources that may in fact be used as a justification to declassify or change the classification of these resources? And I'm wondering why you -- you evaluated the scenic impact only on the basis of public viewsheds, public available -- public sites of viewing, and you diminished those -- like, for example, on Narraguagus Lake you point out that there was a substantial impact or a substantial -- I mean, an impact, let's not get -- there was substantial numbers -- the visibility of towers is readily apparent, but it's diminished because camps face away from that. But, yet, part of the classification of IF & W to make that an outstanding -- a significant resource was the source that it has these viewsheds irrespective of public viewing. I don't know if I'm making my point. I think I am.

And I understand -- but please explain to me why we should not be concerned about scenic impacts other than those that are readily available to the public for viewing?

MR. DE WAN: Okay. I -- I think we are, we're very
concerned. That's why we're here today -- or at least why I'm here today, because of that concern. If you go back to my testimony that has to do with the evaluation of places like Narraguagus Lake -- and that was done as part of the Maine Wild Land Lake Assessment. In determining whether or not it's a significant or an outstanding resource or not meeting those criteria at all, it takes a look at different factors, physical relief, physical features, shoreline consideration, vegetation diversity, special features and inharmonious development.

One of the things that we've done and that also Dr. Palmer has done is taken a look at why the resource -- in this particular case, these ponds and lakes -- met the criteria. They accumulated a certain number of points for certain types of features. Narraguagus Lake, for example, was rated as medium for physical features because of the cliffs, vertical ledges, the view towards Tunk Mountain, for example. It got a medium rating for vegetation diversity. And it got a -- those are the things that gave it its characteristic landscape evaluation. The total number of points that was accumulated on Narraguagus was 30, which was within the threshold of -- of significant.

I know when Dr. Palmer did his evaluation, he then surmised, well, what would the score then be if it had the facility in place? And using the criteria that's -- that
was done when this evaluation was done several years ago, you would take off points because of the presence of it, irrespective of whether or not it would be visible from a public viewpoint or not. And in this particular case, it was found that the score may be diminished from 30 points down to 20 points. That's still within the range of a significant resource.

So in this particular case, it was found that it would still be classified -- or classifiable as significant.

MR. LAVERTY: But I guess I -- I accept that -- obviously, if you state it, I accept it. But I guess I'm wondering is that your testimony is all based on assessment from public viewpoints and the diminution of -- of visibility impacts on those points on these resources that are not readily viewable by the public.

And I -- you have a slide here that shows turbines readily viewable on Narraguagus Lake and you say, that has limited impact because it's not within the viewshed -- public viewshed from the location of various camps on the lake.

MR. DE WAN: I don't know if that's quite what I said. I said, from those camps you would not see it, the ones that I showed. But -- and for members of the public who got there any way they could or if they lived on the camps and just put a boat in to cast a line, you know, they would
-- over half the lake they would be able to see the project.

MR. LAVERTY: Right. I guess my issue here -- and I'd like to, perhaps, query IF & W with regard to the potential for classification -- is that many of these -- there was also great credit given to outstanding resources because they are, in fact, remote and not readily available for the public to view. And I just want to know how that fits together with the -- the Lakes Management Program that is incorporated into our CLUP? And I think it's a question, I think, that's -- that's beginning to arise.

MR. BARNS: If I could offer a comment on that distinction? Two different sets of sort of approaches, one is a classification of the lakes, which is done in sort of a bigger lake classification system; the second is dealing with a wind power project and the scenic impacts of a wind power project.

One of the specific criteria for a wind power project is the extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the generating facility's presence on the public's continued use and enjoyment. The use by the public of one of those particular resources is important in wind power permitting because it helps gauge what -- the effect on the public's use and enjoyment. If there's
limited public use and enjoyment -- and I think that may have been Mr. De Wan's point -- is that some of these lakes are remote, fairly inaccessible, so there's limited public use and enjoyment, there may be less of an impact on the public's use and enjoyment of that facility. It's a different measure and evaluation and approach than what you'd do to measure a lake.

MR. LAVERTY: I understand that, but I think, again, it's a matter of semantics. Like Bucky Owen and others, former commissioner of IF & W and -- I won't get into -- you know, have suggested that we need to revisit the classification -- these lake classifications, that they will come up for review, there's a time that's going to be clicked in.

And I think it would be really unfortunate, as a larger issue here, to have remote ponds that are particularly protected because of resource values to include scenic values to be declassified or have their classification reduced because of visual impacts of wind turbines. And I'm not sure how that fits in, but I would like to have -- I would really appreciate the position of the applicant and particularly DEP on this.

I mean, I understand -- but, you know, we could talk about what does it mean -- you were talking about some use and enjoyment?
MR. BARNS: Public use and enjoyment.

MR. LAVERTY: Public use and enjoyment. I get tremendous enjoyment about going to Foss and Knowlton Pond, tremendous, even though I have to work my butt off to get there. And, I mean, I think -- I mean, I just think that there's an issue here. And we want to be very concerned that we're not -- that we're not having one regulatory approach contradict another regulatory approach to the detriment of the resource, which is, again -- I have to keep saying, is what we're here for is the resource balanced by appropriate use.

MR. BARNS: And I understand your point.

MR. LAVERTY: Okay. So, I mean, could we get IF & W to perhaps comment on this?

MR. MURPHY: Yep.

MR. LAVERTY: Thank you.

MS. HILTON: Rebecca.

MS. KURTZ: Mr. De Wan, this morning Attorney Williams walked us through several pieces of the application that aren't -- that we don't see, that we don't have information on. And one of the things she had talked about was Dr. Palmer's request for drawings of cut and fill of roads and -- with the idea that they're just not -- they're not made visible in the -- in the impact assessment. How do you respond to Attorney Williams' critique this morning?
MR. DE WAN: I think that was one of the reasons I pointed out in the view from Tunk Mountain how we did indeed take into account the associated facilities. I mean, we could go back and look at that slide, but it did show that -- the associated facilities. In this case, the roads that would be built, as well as the turbine pad areas around, have been modeled as part of the photo simulation from the views from both Black Mountain and from Tunk Mountain.

They would also -- the associated facilities would not be visible from the other resources. Like, Narraguagus Lake, for example, when you're down below looking up at the turbines, you're not seeing any of the associated facilities. The same with Myrick Pond because you're just going to be seeing the tops of the blades.

MS. KURTZ: So what you're saying is that the only -- you have, indeed, shown the only places that you're going to be able to see any of the cuts or the roads are on those -- those two perspectives? I think there's only two in the presentation.

MR. DE WAN: From those scenic resources -- of state or national significance, yes. If you were to take the photo simulation and enlarge it, you can see, you know, very clearly that we do show the -- a very faint green stripe that's an indication of where the -- the roads would be
MS. KURTZ: Okay. My next question -- and this is, I think, more for the rest of the folks. What troubles me about these scenic impact assessments is there's no night sky assessment, there's no way, apparently, to really show what the FAA lights look like in the dark. But I've seen them and they're quite compelling.

And I'm wondering if you know which -- of this presentation, which of those turbines and from which perspectives -- which ones are going to be lit and how visible are they going to be from the night sky? Even if you can't simulate it, I think there needs to be an assessment of what's going to be visible.

MR. BARNS: The FAA lighting plan is included in your application. So that identifies which of the 19 turbines that will be lit. There are 12 that are going to be lit. And I'll leave it to Mr. De Wan to speak about simulations.

MS. KURTZ: Does it correspond -- or can we easily correspond it to this presentation? I mean, it's one thing to see them on a chart, but if we knew -- if we could take a chart and say, okay, it's this one and this --. On this presentation it happens to be, that one, that one and that one.

I mean, that -- do you know what I'm saying? An attempt needs to be made in a visual fashion where those
lights are going to be visible from.

MR. DE WAN: Typically the turbines are lit on the ends. We have a string of 10 and 9. So the ones on the end. And typically then every half a mile.

Now, I -- I couldn't give you which numbers are going to be lit, but that's -- that's how you arrive at spacing for the turbine lighting.

MS. KURTZ: But I think it's important for us to assess them, taking something from a chart that says, okay, this one is lit, this one is lit and this one is lit. Wedding it to a visual -- you know, a series of images so that we at least know how many of those within -- I mean, do you know what I'm saying? That we have a way of at least assessing, okay, there's going to be a light here, a light there, a light there, wedding a chart and a -- and something like this.

MR. DE WAN: Are you saying a photo simulation or --? We could say, like, the view from Schoodic Beach you might see, you know, one light, which you would be seeing in conjunction with the other light that's out there from the communications tower.

MS. KURTZ: That's exactly what I'm saying. I'd like to see something on an image that may -- it may be a little red dot or something that won't accurately capture the impact, but it will at least allow us to see where they are
and how they are.

MR. DE WAN: We could certainly do that.

MS. KURTZ: And then how that might change the low to medium impact assessment.

MR. DE WAN: Well, again, it would call into question, though, the impact on the uses, you know, the affect on the continued use. And you have to ask the question, well, if you're up on top of Black Mountain, there's no overnight facilities, people generally don't hike at night. The same with Tunk Mountain. It sort of begs the question, is it going to have an impact on people -- is it going to have an impact if people aren't going to be up there to see it?

MS. KURTZ: A lot could happen in 15 years. Meaning, that these -- that this is not a static landscape. And I just would -- for my own benefit, I don't know how the other commissioners feel, but I think it's important that there's a visual piece to the night sky even though we can't -- from what I understand, you can't accurately capture what it looks like. We at least need to know where those lights are.

MS. HILTON: Jim, you have --.

MR. PALMER: We've done this a number of times now and one of my questions as we've gone through this is, how would we know an unreasonably adverse scenic impact if we saw one that --? You know, we've gone through identifying
the worst cases now on several projects and simulating them
and none of them reach that threshold.

So what would it take, for instance, in Narraguagus
Lake to make that -- given its scope and scale to make that
an unreasonably adverse impact?

MR. DE WAN: That's a multifaceted question. And I
know soil scientists have these gradation charts, you know,
and they're shown in color. So it would be nice to think
that there was some way to say, you know, here is no
impact, here is a really -- the greatest impact. And if
you could do a graduated chart, you'd be able to tell
reasonably well what constitutes an unreasonable one. We
don't have that tool right now. I would like to see Dr.
Palmer or someone like that develop that in the future as a
research project.

But having said that, though, you know, what would it
take to make Narraguagus Lake an unreasonable one? Well,
for one thing, if a state park surrounded it, for example.
It's not. At this point it's, for the most part, privately
held land. The last I heard there was a large tract of
land that was for sale down there. If there was a place --
a scenic overlook, for example, that took advantage of the
view to Narraguagus Lake, there is not.

If there was a historic inn, let's say, that looked out
to Narraguagus Lake and because of its setting on the lake,
it derived its character from that setting and it would be
disturbed by it, then that, I think, would rise to that
level. But in this particular case -- you know, it goes
back to the criteria, what's the effect on the continued
use and enjoyment --? The continued use and enjoyment
seems to be it's going to continue to be used as a very low
impact, lightly visited place.

Now, we could talk about other areas. For example, the
view from -- from the beach that we saw yesterday, if there
were turbines on the lower slope of Schoodic Mountain right
there that were within a mile or two, let's say,
overlooking the lake so when you were on the lake in the
camping area, picnic area and your view was dominated by
those and it took away from the focal points that I talked
about before, I think that that would probably rise to that
level. Does that --?

MR. PALMER: So we just haven't seen the situation yet?

MR. DE WAN: Not in this project.

MR. PALMER: Not in this project and not in any of them
yet. I mean, I've had the same problem, I keep looking.

MR. DE WAN: Yeah.

MR. PALMER: Another question. The survey for this
project was done sort of at the end of the recreation
season in October. And maybe you can kind of address that.
But I -- I mean, I'm concerned that the sort of most use
possible in this area was probably the Donnell Pond water use. And, yet, we weren't there at a time when we could get any sense of what that use was like and what the extent of that use is. And so what could -- what should we be doing to better address those kinds of things?

MR. DE WAN: Could I ask Dr. Brian Robertson to address that question? He's the person from Market Decisions who conducted the survey or organized it. He has been sworn in, I believe.

MS. MILLS: Did he pre-file testimony?

MS. BROWNE: He's in pre-filed rebuttal.

MS. MILLS: Okay.

MR. DE WAN: Of course, then there's no more room at the table here, so --.

MR. FARRAND: Your comment sort of makes me think, too, how accurate is our assessment of the traffic and use of Narraguagus? I mean, we say it's remote and we say that people don't go there and, therefore, it doesn't matter. But I'm not sure that our assessment of that lake's use is -- I don't know how accurate it is. Where it's probably a lot more quantifiable with the Donnell Pond.

MR. PALMER: Actually, there aren't any statistics for any of them. BPL was asked and there is -- was a dialogue and Mr. De Wan also had a dialogue with them about this issue. Actually, he's the one that brought me into the
dialogue. They don't have figures now about that.

MR. ROBERTSON: My name is Brian Robertson, I work for a company called Market Decisions, we did the intercept survey that is a part of this.

In answer to his question about the timing of the survey, of course, we have to do the surveys when we are asked to do them. But one of the things that's important to note is that while we did it during this particular weekend, we did evaluate the use of the people that we spoke with over the long-term. We asked what they did in the prior years, how many times they visited this place.

So in a sense we did get the people that use the lake -- or the pond resources. We asked them how often they are there for the various activities. And in addition to hiking, we found a significant portion of them were there for kayaking, canoeing, using the lake for other reasons, camping. So we did get that kind of broad perspective. It wasn't just solely from the people that may have been hiking on that day. These are people that use that area quite frequently.

MR. PALMER: So specifically I'm thinking about the Donnell Pond simulation. We asked -- not we, I guess -- you asked whether or not people would likely to be returning to do water-based activities in Donnell Pond after looking at that simulation. But you didn't ask how
that simulation -- if the project was built, how it would affect their enjoyment of those water-based activities. Usually those pairs -- those two questions are paired.

What happened there?

MR. ROBERTSON: For that particular -- for the water-based resources, I believe we asked the general question, which was their likelihood to return to the unit and then their likelihood to return specifically for waterborne activities. And, quite frankly, given the percentage that we saw, which was, I think, if I remember off the top of my head, roughly 80 percent indicated that they would return. Basically, if we rated it on a scale from 1 to 7, 4 being, yes, basically, it's going to have no impact on my likelihood to return and so on and so forth, I think it was something along the order of 80 percent rated 4 or high. So 80 percent of the people said that it would have no impact or -- even a few people said it would have a positive impact on their likelihood to return to the pond.

And then, specifically, about roughly the same percentage, I think it was 82 percent, indicated it would have, in essence, no impact on their likelihood of doing activities on the water. I think it's, like -- for the enjoyment question, I think we assessed that from the mountain top, I think.

MR. PALMER: I was just surprised you didn't do it for
each simulation. So -- and then the follow-up question
is -- a result that is consistent, but I do find surprising
even though I do this stuff for a living -- the impact is
high. So you could have a 30-percent decrease in scenic
value rating and yet it's not affecting people's enjoyment
or people's likelihood of return.

What's going on -- that's counterintuitive. What's
going on here, do you think?

MR. ROBERTSON: Well, I can answer from the survey
perspective, I guess. And it depends on where we're
looking at. Are we talking about on Donnell Pond or are we
talking about on the viewshed up above? On the pond, I
think, quite frankly, when we look at the assessment, it
may be -- I mean, there was, quite frankly, a huge
difference in the visual impact from the people that we
talked to and did the assessments of via the impact on
Donnell Pond versus the assessments up on the mountain.
There was a larger impact up on top, of course.

At the pond I think it might have to do largely with
the fact that -- I mean, the impact at the pond literally
wasn't that dramatic, I mean, compared to the view up top.
And I think that may have had some impact. If we look at
the impact on the view up top, I think part of the
mitigating factor is it's, again, where are people getting
these views from? It's like you have a 360-degree
panoramic view of which I think that probably the most
scenic view, I guess -- I mean, this was actually backed up
by the research, was looking out over Frenchman's Bay. I
mean, that was dramatically ranked higher than the view
inland. And maybe that's what's mitigating the fact.

It's, like, well, the view that we really, in essence,
are coming up here is not impacted at all because we're
actually -- basically, the turbines are at our back.

MR. DE WAN: I think the other side of looking at it
then is looking at the activities that are happening on the
ponds, on Donnell Pond. We know that there are two main
beaches. Neither one of them would be affected by the
views of the project, it would not affect people's
enjoyment when we're there one way or the other because
generally they wouldn't be able to see it unless they were
at the very far end of the Schoodic Beach area. From
Edmond Beach, which is also very popular, especially with
large groups, it's oriented in the other direction.

People who are boating and fishing, there are many
places on the pond to go if they didn't want to see the
four or five turbines. You know, the -- there's -- we said
there's 19 percent of the surface area that it may be
visible from. You know, the majority of the lake you would
not see the turbines. I'm done.

MR. ROBERTSON: And I'll just add -- just to put this
in a little context, like I said, largely people there were hiking. But I think when we assessed the activities that people participated in, over 50 percent of people at one time during the times they visited Donnell Pond, they have been involved in water-based activities. So those people were actually out there doing those types of things.

MR. PALMER: I'm done.

MS. HILTON: Any other questions?

MR. LAVERTY: I have -- there's an area that we haven't addressed yet and I just wanted to quickly mention that and leave it to staff, hopefully, and -- and other people to address it.

And this has to do with the bat migration and the difference between IF & W's position and the difference between the applicant's position. Kelly Boden suggests that because, as Mr. Gravel said, that monitoring is indicated, that this is some of the highest bat migration areas in the state -- or opportunities in the state. She has suggested that based on current information that's been assessed through studies undertaken that an operating regime should be established right now at the permitting stage to address mitigation of bat mortality. Whereas, the applicant seems to be saying that what they want to do is take a couple of years out, which it's been -- take a couple of years in operating and try various operating
regimes to assess that mortality.

And I would hope that at some point Ms. Boden and Mr. Gravel could get together and, perhaps, resolve this question. It's a conflict in the -- in the record.

MS. KURTZ: I'm glad you piped up because I had a quick question. We've had applicants come before us that have done surveys of birds and bats I think with horizontal and vertical radar. And I think yours is an acoustic survey; is that correct? Can you tell me why or why you may not-- why you may not have used the radar and what the value -- what kinds of data that might have produced that the acoustic doesn't and --?

MR. GRAVEL: We did use the radar in foot between horizontal and vertical to get passage rates, flight heights and flight directions. So that was for birds and bats. We can't distinguish between the two because we're just -- we're seeing targets on the radar screen. So we can't tell which is a bird or a bat, but we can tell which is bird, slash, bat from an insect.

And then in addition to the radar surveys, we also conducted acoustic bat detector surveys which document bat calls.

MS. KURTZ: But this morning most of your testimony, I think, was on the acoustic piece of it. I don't recall anything about the radar part. And I'm wondering --
MR. GRAVEL: The first five minutes was radar.

MS. KURTZ: It must have been early. Okay. Thank you.

MS. HILTON: All right. I think what we're going to do now -- I think we want to give Angie a break. So why don't we also combine that break with lunch. And we're going to shorten lunch, because remember we are running behind, and be back here, how about, quarter of 1:00 and -- to continue on.

(Whereupon a recess was held at 12:12 p.m., and the hearing was resumed at 12:54 p.m. this date.)

MS. HILTON: Okay. Let's get back into our agenda here. First up we have cross-examination by Lynn. These are the Concerned Citizens of Hancock County.

MS. HORN OLSEN: Are the commissioners done because we'll have the --

MS. HILTON: Oh, I see. I guess I didn't follow what you were --.

MS. HORN OLSEN: If the commissioners are done with questions for these folks, then we'll have them move back to give Lynn room.

MS. HILTON: Okay. Do any commissioners want to ask any questions at this point in time?

MR. LAVERTY: I don't have any questions, but we delegated to staff, you know, that -- we asked them to follow through. Is there some point -- today at some point
where we could summarize those things or list those things so we're all clear on what it is we're asking them to pursue?

MS. HILTON: I think we should do that. Certainly at the end of the day I think we need to revisit where we're at.

MS. CARROLL: It would be helpful if staff could get a recap from the Commission right now with respect to what you would like us to follow up with as a result of the commissioner questions.

MR. LAVERTY: I was hoping you were taking some notes.

MS. CARROLL: Well, yes, I imagine we were, but do you want to reiterate --

MR. LAVERTY: Well, at some point we have to -- if we're putting all this off -- if we're putting all this off because we don't have time to deal with it, I think we ought to be very clear on what we're putting off and what we need information on in order to make a decision on this project. I think we owe it to everybody.

MS. MILLS: Yes, Ed, I hear you. I've certainly been taking notes, I'm sure that your staff has been taking notes. And my recommendation is that you continue to move forward with your hearing. I will make sure that I sit down with Gwen and that I sit down with staff and that we
have an accurate collection of the issues so that they can
be appropriately addressed.

    MR. LAVERTY: And made available to the intervenors and
the applicant, right? We're all clear on -- because that's
all I'm afraid of is that we're going to walk away with
confusion.

    MS. MILLS: Right.

    MR. LAVERTY: Thank you. Thank you, Amy.

    MS. HILTON: Okay. So I guess we can -- I don't think
we need all of you folks at the table. How is that? I'm
not sure exactly who at the moment, but --.

    MS. CARROLL: Terry. Lynn wants to cross-examine
Terry.

    MS. HILTON: Okay. All right. Sorry for any confusion
on my part.

    EXAMINATION OF TERRY DE WAN.

    BY MS. WILLIAMS:

    Q Hi, Terry. Nice to see you again.

    A Ditto.

    Q I have some questions. You have your report here, right,
in front of you?

    A I do.

    Q Okay. Because I'm going to refer to a couple of the
viewshed maps in it. The first one being Viewshed Map E.

    What was the contour interval of the topographic data
that you used to do this map?

MS. MILLS: I just want to make sure the commissioners know what we're looking at.

MS. WILLIAMS: I'm sorry.

MS. MILLS: That's okay.

MS. WILLIAMS: In Mr. De Wan's report -- in the VIA, the Viewshed Map E.

MS. MILLS: The letter E?

MS. WILLIAMS: Yes.

MS. MILLS: Okay.

BY MS. WILLIAMS:

Q And my question was, what was the contour interval of the topographic data used to complete this viewshed map?

A I'm not positive, I think it's 10 feet.

Q Thanks. And what's the margin of error in top -- USGS topographic data, or at least what's the margin of error for the creation of this?

A I don't know the exact number. I would say it's probably plus or minus 5 percent, but I -- I'm certainly not an expert on that.

Q Okay. According to Jim Palmer's report, after he inquired about the assumptions included in -- we're going to Viewshed Map F. It should be the next one.

A Topographic and vegetation map?

Q Yeah. He inquired about the assumptions included here and
you indicated that you had used MCLD, which is Maine Land Cover Data; is that correct?

A That's correct.

Q What's the difference in tree heights between forested areas and forest regeneration areas?

A We typically use a 40-foot average height for forested areas for both deciduous evergreen and mixed. We had assumed in the regeneration area that the average tree height would be 20 feet.

Q Okay. Thanks. Do you know what the date of the MCLD was that you used?

A I don't. It's probably within the last ten years.

Q Do you ever use Google Earth to do this?

A We do.

Q And why did you use MCLD versus Google Earth for this one?

A Google Earth is not a source of land cover data, it does not provide us the information on vegetation.

Q Okay. Now refer -- I'd like to refer to Exhibit 18, Figure 2. 18 -- Exhibit 18.

A Which appendix?

Q The exhibits in -- that were part of the application. Yes.

A Okay. This is the aerial view of Bull Hill using Google Earth. Yes, that was on Page 11 of our -- of our report.

Q Thanks. How much of that image would be considered forest regeneration, if you could give an estimate?
A What percentage? Probably a third of it, perhaps.

Q Okay. So if -- if an area of this -- if a certain percentage of this area is considered -- contains vegetation that is 20 feet tall or less, okay, how would that impact on your visual assumptions?

A I know that was a concern that Dr. Palmer had raised and we went back and looked at it. We actually reran these simulations and the viewshed analyses and it makes virtually no difference.

Q Okay. How does that work that it makes no difference?

A Okay. Well, if you recall, as part of Jim Palmer's work, he evaluated or counted the number of turbines that would be visible from the scenic resources that we've identified. And he counted them both in many different ways.

One using topography only, one using the vegetation as we had defined it, and then using a much more conservative approach in which case the wetland forest, light partial cut, heavy partial cut and regeneration was assumed to be a value of zero. And he compared those numbers to the numbers that we had come up with to identify how many turbines would be visible from each of these places.

And the numbers that he arrived at with a very conservative number were identical with the numbers that we came up with looking at -- making different assumptions about the height of the re-vegetated areas of the
Q So are you saying that vegetation provides no screening of this project?
A I didn't say that at all, no.
Q Okay. What are you saying?
A That is a significant part of the evaluation. You know -- and the viewshed analysis, of course, is just one too. You know, it's not the end all and be all. It's the starting point for doing the assessment, trying to find out where areas of particular sensitivity are. You start with the topographic analyses and then you apply another layer, you look at the vegetation to find out how vegetation works into screening, for example, along the scenic byway. And if there are places that you feel are questionable, then you go out and visit it. You do that for the entire project area.

But the -- the viewshed analyses is a way of getting the office look. It's sort of the hypothetical. It's not a substitution for actually going out in the field with these tools in hand to verify the tools and then to, in some places, supplement them. In some places we had to do cross-sections to find out -- using different assumptions. For example, the tree heights along some of the -- the edges of the lakes. You know, the model that we use says that the average tree height is 40 feet, which is pretty
typical. Perhaps, it would even be a bit on the conservative side for most forested areas in this part of Maine. But in reality, when you have the buffer zone around the ponds and the lakes, the trees are typically in the 60, 70 feet range and, therefore, have a much higher screening valve.

Q So does your report have any anticipation of how much of the vegetation depicted in your photographs will remain over the next 5, 10 or 20 years?

A It's impossible to predict what's going to happen vegetation-wise. You know, this an active, industrial forestland and, you know, I'm assuming that current cutting practices are going to continue.

Q And did you discuss or analyze screening from deciduous trees?

A Good question. And I think that the way to answer that is to look at the topo only map, which assumes no vegetation, which is sort of the extreme case of having a tree without leaves on it. And so if the topography only shows that something is going to be visible, it would be somewhat equivalent to having a tree without any leaves on it.

Q Now, on another topic. We raised in our -- somewhere the idea of a balloon test.

A Yes, you did.

Q And why do you object to a balloon test?
A We don't object to it, we've used them a lot, but not on
wind power projects. And part of the problem, of course,
is inherent to the site. These are windy sites. And when
you raise a balloon up, you know, to the height of the top
of the blade, you know, 476 feet, it's going to be
subjected to a lot of the winds.

When we were out there yesterday, the wind was going,
you know, 15 or so miles an hour. And it's very difficult
to get an accurate read about where the balloon is. It can
be a very effective tool, don't get me wrong. But we feel
that the use of the -- the modeling that we have through
the combination of Google Earth, through cross-sections,
through Wind Pro and other pieces of software gives us an
accurate representation of where things are going to be
visible and not visible from.

Q So if it was -- if LURC, for example, if the Commission
decided that a balloon test would be useful -- and we do
know that the wind doesn't blow all the time. We know that
after going through a number of these hearings and looking
at output from turbines. So there are times that a balloon
would not be buffeted about by wind, correct? Is that
correct?

A Absolutely.

Q Okay. A few more questions for you. You didn't speak at
all -- you spoke about a lot of different recreational
activities, the survey talked to hikers and some of them were boaters and -- and there were fishermen or you alluded to people fishing on the lakes, but there was no mention of snowmobiles and the snowmobile trails. Did this come into your assessment at all?

A We were primarily looking at the activities that -- that had been identified as most significant in the area, which are primarily hiking and the use of the areas for -- for water sports.

MS. WILLIAMS: I think that might be it. Just give me a sec here. Okay. That's all I have. Thank you.

MS. HILTON: Cross-examination by Hancock County Commissioners. Did you folks --

MR. BROWN: We have nothing.

MS. HILTON: Okay. All right. And then we have redirect by the applicant.

MS. BODEN: I have a couple questions. Just a couple questions and I'll go in order of how they're sitting.

EXAMINATION OF MATT KEARNS

BY MS. BODEN:

Q Matt, are you aware of any other project in Maine where the applicant has prepared an independent report on salvage and removal value?

A I'm not. And, again, I think to the commissioner's point, you know, the reason we commissioned this third-party
report was to provide additional clarity and certainty around this issue so that we would have a document that we could work and present to substantiate our figures.

EXAMINATION OF ADAM GRAVEL

BY MS. BODEN:

Q Adam, Mr. Laverty asked about the difference between what First Wind, Blue Sky East is proposing for curtailment at this site and what IF & W is recommending. And I'd just ask you to describe the differences, if any.

A Yes. Pretty much everything is exactly what IF & W recommended including the search period. The search period of post-construction surveys, the search interval weekly versus daily searches, the flooding effect, which is another -- basically, not putting out too many carcasses for scavenger removal trials. The only difference is that we're looking to -- instead of just curtailing all turbines, we're proposing to curtail 50 percent of turbines so that the -- basically so that we can determine the effectiveness of curtailment in Maine and to determine the timing of fatalities so that maybe curtailment can focus on those -- that peak period for known bat mortality and also peak bat activity.

For example, the -- the two studies that have conducted curtailment investigations were conducted in the peak period for bat activity, which is mid July to mid
September. We're proposing to cover from May through September with curtailment studies so that we'd cover the window and -- you know, the -- basically, the entire window that bats are known to be active and have been killed by wind projects. So that's the only difference.

Q And you're not aware of any particular issue at this site that's driving the request for curtailment?

A No. Actually, bat activity at this site is near the middle of the range of other studies -- middle to low end of the range of other studies, pre-construction studies conducted in Maine. And if you look at the spectrum, you know, from -- these pre-construction surveys have been conducted from West Virginia to Maine. And the range is bat activity is lower up here and higher down there. And the same goes for bat mortality, bat mortality has been lower in Maine and much greater in -- in places like Pennsylvania and West Virginia.

MS. BODEN: Okay. Thank you. Dale, just a couple for you.

EXAMINATION OF DALE KNAPP

BY MS. BODEN:

Q We discussed with the commissioners the change in use. And I just had a question. From a biology perspective, is there any change in the functions and values from any changed proposed use on this -- on the roads?
A No.

Q And we also talked a little bit about the additional surveys that were requested in the 250-foot buffer. Can you just describe the scope of what we're talking about as far as additional search area?

A Certainly. I guess just to make sure we're very clear, the additional searches were conducted anywhere around the boundary -- the -- the extents of clearing on the project. So the furthest out this project may disturb, in addition to that, we've surveyed for vernal pools within 250 feet of that. So we've assessed whether or not there are significant vernal pool habitats in proximity to this project. And, again, I'd reference the map we submitted yesterday.

MS. BODEN: Okay. Thank you. Terry, just a few for you.

EXAMINATION OF TERRY DE WAN

BY MS. BODEN:

Q Some comments were made last night about the use of the Down East Region Management Plan in considering the visual and other impacts on the area. And did you consider the plan in your assessment of this project?

A We did. We read the entire thing with the concentration on the Donnell Pond unit. And, you know, one of the things which I think is fair to say is that the management plan
which was written in 2007 concentrates almost exclusively on the land within the Maine Public Reserve System. It does not make recommendations for land outside of the reserve unit.

Q: Thank you. And with respect to the intercept data, was that data the only source of information you relied on when considering use and enjoyment of the area?

A: Oh, no. As we showed in our report, there are a lot of other sources of data. Admittedly, there's not a lot of data out there, but we went to the sources that we had available to us. And that's all, of course, contained in our report.

Q: And one last question. What has your experience been with the correlation between visibility and use and enjoyment?

A: Well, that gets to Jim Palmer's question earlier. Clearly, people hike for various reasons. One of the things that we found in some earlier survey work, now also in this one, is that people climb mountains, for example, for -- you know, to see the view, but that's not always the -- the primary reason that they go there. You know, there's a lot of different reasons that people recreate outdoors, you know, included in -- you know, their reasons that we've seen from other surveys is just to be outdoors, to spend quality time with their families, to commune with nature and so forth.

And so while there is -- you know, there is a lot of
discussion on the relationship, just because there is a presence of a -- of a turbine or any other type of activity that may be seen as a negative feature in the landscape, doesn't necessarily mean that people are going to change their use patterns.

MS. BODEN: Thank you. That's all I have.

MS. HILTON: Okay. Do any of the commissioners have any follow-up questions at this point of any of these folks? Okay.

All right. Staff has indicated an interest in asking a few questions of Commissioner Brown from the Hancock County Commissioners. And, let's see, I think you folks can --

MS. BODEN: Can I excuse them?

MS. HILTON: You are excused. There we go. That's good. I'll need to swear you in as well. So if you could just stand and raise your right hand.

Do you solemnly swear to tell the whole truth and nothing but the truth?

MR. BROWN: I will.

MS. HILTONS: All right. Thank you. And I'm not sure -- Samantha, Don?

EXAMINATION OF PERCY BROWN

BY MS. HORN OLSEN:

Q Good afternoon.

A How are you?
Q Fine. Thank you. I just wanted -- since you were good enough to come today, I just wondered if you could briefly describe for us the process you're in now for tangible benefits. Where are the Hancock County Commissioners at? They issued that letter that we saw so far. And what's next, what's happening in that arena for you guys?

A We've been in negotiations with First Wind on tangible benefits and the TIFs. On June 2nd at 1:00 p.m. we will have the TIF hearing at the courthouse in Ellsworth. After that meeting we will vote on what we project for the TIFs.

Q And is that -- is the decision regarding the final tangible benefits package related to that date as well, or is there a separate decision that needs to be made?

A No, that will be it on the TIFs and --

Q So it's the TIFs and the tangible benefits package at the same time?

A That's correct.

MS. HORN OLSEN: Okay. Thank you very much.

MS. HILTON: Any other questions? Okay. Thank you.

So this is a summary of testimony by Concerned Citizens of Rural Hancock County and -- summary of testimony?

MS. CARROLL: Lynn, are you still requesting 45 minutes for summary of testimony? That's what you had.

MS. WILLIAMS: I know. We had four people at the time.

So I think I can probably do it in a half an hour.
MS. CARROLL: All right. I just wanted to get a sense. So --

MS. WILLIAMS: That was based on Renata also. So 30 minutes is fine.

MS. CARROLL: 30 minutes?

MS. WILLIAMS: Yeah.

MS. CARROLL: Great. Fine. Thank you.

MS. O'TOOLE: Good afternoon, madam chair and commissioners. The Land Use District and Standards --

MS. HILTON: Can you state your name and --

MS. O'TOOLE: Oh, I forgot about that. Nancy O'Toole from Phillips. The Land Use District and Standards gives the Commission principles for sound land use planning and development. It encourages the most desirable and appropriate use of the natural resources consistent with the Comprehensive Land Use Plan while maintaining minimal adverse impacts.

The question, can we meet the state goals for wind, brings up an interesting point your staff made in an earlier document. I think it was pertaining to cumulative impact and I think Sarah had sent it out. It was to meet the target of 3,000 megawatts of energy and you used Saddleback's proposal of 12 turbines -- and that's the one over in Carthage -- as a standard size. And then they calculated that it would require 91 similar projects in
order to meet the state goals. This would change the very
nature of this great state, whether it's clustered together
or spread apart.

The Bull Hill project raises many questions. Is it
sited appropriate given the numerous waterways, vernal
pools and wetlands? Is heavy construction of any time
reasonable here given the saturated soils and constant
close proximity to water? The project includes a majority
of area to be cleared labeled as temporary with the
assumption that this will be re-vegetated and reverted to
an emerging forest in the near future. I would like to
examine that concept.

Permanent in this conversation means for the life of
the project. That's how I understand it. These turbines
are engineered to operate for roughly 20 years before they
require complete overhaul or replacement. This information
comes from the manufacturer. Thus, the worst case
scenario, the life of the project might be no more than 20
years.

Temporary in this conversation must mean a small
fraction of that, let's say, five years. In that amount of
time the scars of construction are expected by the designer
to heal, the soil to be renewed and the forest to
reestablish itself. The habitat of the local wildlife will
have the majority of the land back for its use. It takes a
forest a very long time to reestablish itself once it has been cut away, grubbed out and had roads built through it. Temporary clearing means within a modest fraction of the project life you will again have a self-sustaining, young forest providing hydrological buffering and habitat as it did before construction.

Guidelines for land-use based wind power from the U.S. Fisheries & Wildlife Services forces us to bring up questions and concerns I think need to be considered. How extensive will the unavoidable direct and indirect impacts to waterfowl, passerines and raptors that migrate, nest, forage and live in and around the project footprint? Within a short distance you have significant wetland communities. And those include the Oxbow Heath, French's Dam Meadow and Austin Dam Heath. These large open wetlands with narrow stream channels are critical for species of all kinds and they lie downstream from this project.

Noise effects on wildlife should be included as a factor in wind turbine siting and operation. Migration is species specific. It is the act of moving from one location to another, be it, in the flight of a bird from one area to another, or the travels of a frog from a stream to a favored swamp to reproduce. All types of creatures from the most common to rare or cryptic species, ground dwellers, birds and bats, move throughout the year and
should be considered as potential affected species.

Displacement as well as indirect effects such as sound, visual flicker and regular human presence often result in behavior changes and may result in reducing nesting and breeding successes and the extended ramifications as of those reductions. Loss of foraging habitat, edge effect, fragmentation of their environments will reek havoc on species that can't just get up and leave.

If there will be no impact to the watersheds of the Narraguagus Lake, Narraguagus River and Spectacle Pond, I am curious why there is mitigation money being offered. Why is the applicant offering as much as 20,000 a year for 20 years for water quality restoration?

With so many waterways, vernal pools, wetlands so close in proximity to their proposed roads, changes in the design will not need to be significant to result in impacts. The current haul roads that will connect the lower turbines to the upper parts of the project might need significant upgrades. The applicant chose not to include the construction blueprints of existing roadways connecting to new access and crane roads. Therefore, we have no way of knowing the extent of upgrades or impacts to natural resources. The applicant claims no significant impact on the wetlands and bogs immediately next to it. We strongly disagree.
And I'm going to go off that a little bit because last night Alan Michka kind of introduced my idea, which was really wonderful, we didn't plan this, about the vagueness of the application. And I would like to just bring up a few points on that. Let me just get my notes here, please.

The first one when in my brief I talked about total project clearing and I actually put in there 95 acres and it was wrong because I really honestly didn't know what the total impact was. And on the rebuttal they -- they brought back on the rebuttal, they kept referring to Table 1, which is on the narrative, Page 4, and it's called Table 1, key facts, about that it's only 89.9 acres. And I thought, okay. I'll have to read this. Let me find this.

In the narrative on Page 6, entitled Rights and Interests, it states here: The portion of the leased area that is necessary for the project, dot, dot, dot, potentially disturbed areas and storm water buffers is approximately 158 acres. Then on Exhibit 11-A, Page 1, there's another table that's labeled Table 1. And down here the total project clearing is 92.8 acres. That was a discrepancy I wasn't sure how -- so I just put in 95, just thought maybe I'd see what happened.

My second point is the existing roads. Let me get my little point here on this one. Let's see if I can find it. On the existing roads they say there won't be any upgrades
at all, maybe to small areas that the turning factor is not
good enough, so they're going to have to change that a
little bit. Now, on Page 7 of the narrative -- and I'm
going to read the whole thing because I don't want to cut
it out so you won't understand -- the project plan takes
advantage of the existing topography at each turbine
location by settling the top of the turbine foundation
elevations near existing grade elevations. In addition,
the vast network of existing gravel logging roads will be
utilized for the project to directly access crane paths to
the turbine pads. Only minor widening and grading
modifications are necessary to fully utilize the existing
roadways to provide access to turbine component delivery
vehicles to the crane path on Bull Hill and on the southern
string on Heifer Hill.

And then I'd like to note on the construction
blueprints C 400, it talks about existing access road grade
notes. Now, they are going to have some upgrades on that
road, but the general notes usually on the construction
blueprints talk about the whole area, the whole existing
roadway. And I'd like to read two of them to you.

And they call them existing access roads grading notes.
And it says here: In the areas that require cut more than
3 inches, contractor will reconstruct roadways to provide a
minimum of 18-inches of gravel base material or as approved
by a geotechnical engineer. And then 5 states that: The
gravel for roadway reconstruction shall be similar to
Maine's type D or approved substitute within top 6 inches
of screened or 2 inch minus, it's kind of like an idea of
you want to just put a little extra on the road to shore it
up. Because I really do think that they need to shore up
those roads for the big turbines and for the big trucks
that are coming though.

Now, if you think about it, it's a logging road. And a
logging truck loaded is 60 tons. He comes in empty and he
leaves full. Okay? These roads are going to be used over
and over and over and over all day, every day, when it
rains, whether it doesn't rain. They're going to have to
shore these up a little bit. I can't see -- maybe in some
areas they probably won't have to and I'll probably get
questioned on this. But my personal opinion is that
they're going to have to shore up these roads just a little
bit in areas.

And I really believe that it's going to impact some of
those vernal pools and wetlands right along the side of the
road. All that dust just running constantly is just going
to be an impact to those areas.

Okay. Now, the third one I want to bring up is the lay
down areas. Let me see my notes. I'm sorry. The lay down
areas they spoke about -- and I looked at it in the
blueprints and I also looked at it on here in Exhibit 6 -- it says -- 1.3, it says: They provide six 200-foot-by-400-foot typically lay down areas. And I looked on the blueprints and they had the same thing. Well, in the table that they gave me -- that they referred to in their rebuttal -- let me find it -- lay down areas are 9.6 acres. Well, I did the math and it's 11 acres. And in another area -- I can't find the other area -- it looked like they said it was 13 acres. I know that's not much, but it's -- it's vague, it's discrepancies. I was confused when I was reading this the whole time trying to figure out what the real numbers were.

And then the met towers, which I found really interesting, because the -- let me get this. I've got too many papers in front of me. Permanent met towers. Okay, the permanent clearing is 8.4 acres and they're going to put in three met towers. Now, when I looked on the blueprints, it talked about, I think it was -- the access roads to the permanent clearing was 2 acres. So we're thinking right around 10.4 acres.

What was interesting about this is when I looked at the blueprints some of the roads looked like they were only 12 feet wide. And I thought maybe they were just digging up the 12 feet and putting everything in and that kind of sounded right, but I couldn't quite scale off the roads
because they were deciding where -- geotechnically where
they would put the met towers. And so I found -- all
right, here we go. Hold on just a second. I'm sorry.

Here it is. Okay. Met towers, 1.6 --

MS. BODEN: I'm sorry, Nancy, what page are you reading
from just so we know?

MS. O'TOOLE: Exhibit 6.

MS. BODEN: Is there a page number?

MS. O'TOOLE: Page 2. I apologize. I will be a little
bit more clear.

MS. BODEN: Thank you.

MS. O'TOOLE: Hm-hmm. Now, this one says four
potential locations are set on the plans, which I know they
are only going to put three, but the towers will be 12-feet
wide with a typical clearing of approximately 50 feet.

Now, I didn't see any temporary impacts on this sheet they
keep talking about, which is Table 1 of the narrative, Page
4. So that was confusing to me. If you're not sure where
the met tower is, you're not sure how long the road is
going to be, but you're also going to clear cut 50 feet,
but you're going to shrink it down to 12, shouldn't there
be some temporary permanent impacts? I thought that was
interesting.

And then the turbine pads, we can't -- they can't
decide whether they want to do the footer or the anchor.
And usually that's because you haven't done the
geotechnical analysis. And that was all through the
application was it's -- geotechnical analysis is not done
yet, it's not determined, we're not sure what we're going
to do. But they're really sure that it's only going to be
.28 acres of permanent impact after they've cleared 1.3
acres for the whole thing. And then for that 1.2 -- let me
show you where it is here.

All right. So they're saying it's only going to be .28
acres per pad that's going to be permanent, but they don't
know what kind of turbine footers they're going to put in
there and they're not sure. And in that .2 acres you're
going to have a crane pad, a driveway, a foundation and a
37.5 radius around the turbine. So I was a little confused
on that one also.

And I'm -- I hope you're getting a gist of what I'm
trying to put here in front of you is that this is really
confusing -- this is a really confusing application. And I
could go on and on, but I think I'm going to bring up one
more and it's the forested buffer. Because there was an
issue that -- I hope I pronounce his name correctly --
Donald Waddell was talking about that some of the areas
that they're going to cut they want forested buffers.

And he talked about -- I think it was interesting the
-- here it is. They submitted -- First Wind submitted a
forested buffer restrictions and all these restrictions in
there that they can't cut more than 40 percent in ten years
and all this stuff. Well, when I talked to -- when I
looked at Donnell's, he -- he described, a buffer area to
meet water quality proposed are restricted to either
limited disturbance or no disturbance. Now, I didn't see
any area yesterday that there wasn't any disturbance at
all.

Now, I didn't go through the whole crane path, I didn't
go through the whole project, but it does question that.
If we're going to -- we're going to allow forested buffers
between 50 and 80 feet, don't you think we should have some
kind of forest in that buffer, that there shouldn't be any
disturbance at all or at least minimal disturbance? That
was another question that I thought was really important to
bring up.

And then the vernal pools, I know that's a huge
question. I am not an expert in vernal pools and I'm not
an expert in wetlands and all these things, I know that. I
just can't help myself. I just have to -- I read all these
applications and I have to talk about these things.

Now, the vernal pools I'm concerned with because they
keep talking about being microsited. As we all know what
that means is there's all these things around that are
natural resources and you microsite it right there and then
you adjust it based on geotechnical analysis. Now, they stated yesterday and they've stated in the application that there's going to be an adjustment of up to 100 feet one way or the other for the turbine pads. Well, is that going to clear all those vernal pools that are so close to everything or is it -- I'm not sure, I don't know and that concerns me.

And that's about all of them. I think I've got about 20 more, but I think you get the idea of what I'm doing. And I've read -- I've been before you guys before and I've been here since Black Nobel and Redington. I helped Bert Lambert on that one, I've studied Kibby, I've presented with Sisk, I've read other ones. I think I've read eight applications and that includes Highland, which now we don't have to worry about. I'm really glad about that one.

But I bring these things up because I care about this area and I really think it's important -- there's some tough questions that we need to ask and I'm here to ask them. I'm not an expert in all these areas. I know that, you know that and they're going to drill that. I know that. And that's okay, I don't care. I'm here because I care and I think these are really important questions that we need to ask.

And they need to shore up this application a lot more than they did because it's -- it's just a mess. It was
very difficult for me to follow and read and take my notes and make sure that I got everything, because I had to keep checking back because I got different numbers every time. Thank you.

MR. MOORE: How much time do we have left?

MS. CARROLL: You asked for 45 minutes and that would take you to roughly 5 minutes after 2:00 and it's 1:35. So there's roughly 30 minutes left. I'll defer to Mr. Good right now.

MR. GOOD: Okay. Which way do I push this thing? My name is Michael Good, I represent myself as a citizen, I represent my company, which is Down East Nature Tours, I'm also the president and director and founder of Acadia Birding Festival and the Penobscot Watershed Eco-Center in Bar Harbor.

My concern here, of course, is the birds. And I'm -- I'm somewhat concerned that I didn't write a summary, but I want to start off with showing you what's happening right now as we speak outdoors.

MS. BODEN: I'm sorry, Gwen, I don't believe this is in the record anywhere -- I just wanted to clarify -- this map.

MR. GOOD: I can add this to the record.

MS. MILLS: Well, the procedural orders were clear that for these administrative hearings we pre-file exhibits. So
if it wasn't attached to your pre-filed testimony, then we can't allow it. So I guess that's my -- a question for Lynn Williams, whether or not it was attached.

   MS. WILLIAMS: It was not attached.
   MS. MILLS: Okay. I'm sorry, we're going to have to take it down then.
   MR. GOOD: Well, can I say it's attached in the fact that it's associated with what I want to try to get across to you, so --.
   MS. MILLS: I guess the only thing I can offer is if there's an objection coming from the applicant.
   MS. WILLIAMS: It's a visual representation of the narrative in Mr. Good's testimony.
   MS. MILLS: And I guess I would characterize that as a demonstrative and, again, the procedural orders were clear on that.
   MR. GOOD: All right. Well, my fault. Okay. Well, what that map showed you was the Maine migration paths for neotropical migrants and birds in general that come up into the state. You saw the map of the United States. These birds are coming up from the Caribbean, South America, Central America and working their way into our state. When they hit the coastline, they're coming in in very large numbers. I can't really impress on you the sheer size of this bird migration that's coming up into the coast of
Maine.

It then goes from our coastline up through the wetland habitats, into the area of the Bull Hill project. And along with that are sandpipers into the watersheds that are there, raptors, it goes right across the board. And these are -- the birds that I'm concerned about, the neotropical migrants especially, the warblers and these types of birds.

And they're -- part of the concern and what I wanted to show you are things like, you know, Magnolia Warblers, Blackburnian Warblers, birds that are coming from South America so that you would have a better idea of who exactly is moving right now. This time period there are literally hundreds of thousands of birds moving into the state of Maine and they're all going to be impacted by the cumulative effect of all of the turbine projects that we have in the state of Maine.

So really from the research that I've done over the years, I can't impress on the -- on all of you the immensity, the duration and the intensity of this migration that comes into the region. So the reason why we're concerned about birds is because we are a destination for all of these neotropical migrants that are either nesting here or moving on into lands north of us. So we are transitory, we are a stopover for millions of birds on a daily basis -- or hundreds of thousands of birds on a daily
basis at this point in time right now as we speak.

In Sentence 3, Section 13 under wildlife, the applicant has stated that in the paragraph starting with no deer wintering that there are -- no rare, threatened or endangered species were documented or observed within this project area. And, quite frankly, having worked in the forests of Maine all of my life, just the other day I photographed a long-eared owl. It was mysteriously in the forest, nobody knows what's going on with those guys. So to make comments that this project area has no rare, threatened or endangered species is just not true. And we want to make sure that we understand what's going on in this area.

What we haven't done, we have not made a good pre-construction evaluation of what's going on in this area. And that concerns me. We, as scientists, do not really understand the migratory paths birds take in this region, we don't understand exactly how they're moving. We have some radar data and they've presented some radar data that suggests that birds might be going over the wind turbines in -- in certain areas. But it's my feeling, since we're at a point where we haven't done any construction yet, that we have a much better and much clearer idea of what's going on in this region. We are a pristine, remote area and this is an industrial site that
is going to clearly have an impact on migratory birds that are trying to make their way both north and south, south during the fall and north during the spring migration.

The map that was briefly up there showed migration coming down from Canada in the fall. What it didn't really show was the amount of migration that comes through this region. And it's many different types of species coming out of the tundra, basically, on northwesterly winds, which are the predominant winds in the -- the fall. During the spring migration, the predominant winds are southwest. Those are the predominant winds that the creatures are migrating on.

So someplace the applicant has said that the prevailing wind was northwest. And I'd like to make a clarification on that that southwest is one of our other very strong winds that blow here during the summer season.

Habitat fragmentation, that's a major issue, I think, in this project. You're talking about 85 -- or 89 to 95 acres. Many of the birds that I'm talking about, the neotropical migrants, are nesting and utilizing wetland habitats that are going to be on those 95 acres. That -- all of that -- I think that the total disturbance on this land needs to be considered.

There is a future forest there. All of you want to think of it as just a piece of junk land because Mr. Haynes
has removed most of the trees on it. I suggest that there is a forest there, there will be a forest in the future. But the current Forest Practices Act are not helping the situation at all. So in combination with the -- the wind turbines, there's going to be a huge amount of impact in this region.

If you look at some of the images for that entire region where Bull Hill is just part of it, the amount of clear-cutting and overharvesting is pretty intense. So you're thinking about this place as a piece of land that has no value, I would think into the future about 100 years because it's going to take that amount of time to grow back the forest that's in there.

During that time period, while the wind towers are there, you're going to have an increase in the number of birds using the forest. As a forest grows out of this -- whatever state that forest is out there, second growth forest -- as it grows into a more mature forest, you will see a greater number of raptors, owls, other birds coming into the area and utilizing the forest around it.

So to suggest now that there are -- at this moment there might not be very much visibility of birds in that area. In 20 years that will -- the whole story is going to change completely. So I'd like you to think about that -- the health of the forest down the road and the number of
birds that are going to be utilizing it as it emerges as --
out of it's second growth stage.

Again, the wetland connections I think are huge. We've
focused on vernal pools. Vernal pools are only part of the
story here when it comes to neotropical migrants. Vernal
pools are just one potential place where, for example,
Magnolia Warblers will focus on the edge of vernal pools.
The wetland connections to these pools, these seeps,
anything that's in these types of habitats is going to have
a major effect on the birds in that area. You're talking
about massively removing the forest and putting in roads
and clearing a 95-acre area. This is a huge disturbance in
my mind as an ecologist. And to think that there are no
impacts from this project are just -- it just can't be true
simply because of what ornithologists know and understand
about the forests of Maine. So I would think very
seriously about the kind of impacts that this project is
going to have.

We've touched on the cumulative effects. I think these
are major issues at this point. We have a huge number of
turbines in the area, we have industrial farms that are
already going up. I would suggest very strongly that we
take the data from that, understand what's going on in
these -- on these other projects and then take that data
and look at what's going on on Bull Hill. And let's see
whether this is a site that we should be disturbing, taking into consideration the scenic value, the spiritual value and all of the other aspects of Maine forests. I think that the cumulative effects are serious here. I think for our region with our extreme beauty that we have here, with the ecotourism and tourism that I've been part of over the last almost 20 years --.

Hancock and Washington Counties are putting their money into the ecotourism direction and really are concerned about the future of somebody who wants to come in from away and disturb the kind of concept that Maine people have about this place. And I'm thinking about birds, but I'm also thinking about the serenity of it and some of the things that people spoke to yesterday. I find those aspects involved with the ornithology as well. So those cumulative effects are very serious in my mind.

Night sky lighting has come up. Thank you for bringing it up. I think it's an important aspect of this. It's something I focused a lot of attention on. I notice that the applicant has also agreed to look at Kerlinger and Kerlinger's work on lighting of the turbines. I think this is a huge, major issue.

The Kibby farm -- or, sorry, the Stetson anomaly and bird mortality on 8/18 -- I'm sorry, of 8/8 of whatever year that is, 2007, shows clearly that you make one
mistake, you light one light for an evening and you draw in
a whole flock of birds into these -- into these sites. So
there should be no steady burning lights on any of these
turbines. They should have flashing red lights, as I
talked about in my testimony.

And I recommend that you also look to Paul Kerlinger
for some of the answers and some of the information in
this. Paul has told me this morning that he would be
available for consultation. And also in that discussion we
talked about the fact that there should definitely be a
technical advisory committee that keys in on these major
issues, environmental issues, and there should be major
transparency, both with the applicants and all of us
involved with the our concerns here.

And I also agree, I think that this idea of a technical
advisory committee before we do any destruction of the
site, before we start tearing things up, that we all take a
chance to sit down and think about this. I realize it's an
expedited situation, but I think, thinking about what
Hancock County and Washington County are trying to do with
our tourism, that, you know, some of these issues should
seriously be looked at in maybe a new way.

I'm coming into this kind of from a -- just recently
having gotten involved. I think some of you ought to take
some time and think about what's not going on on some of
these sites and from a different perspective. What are --
what are we going to lose, you know, by overdeveloping
Hancock and Washington County? I think these are major
issues and I want to thank Paul Kerlinger for bringing up
some of that for us to think about.

So, again, on the night sky lighting, no sodium vapor
lamps should be lit anywhere on outbuildings, anywhere. If
you have one foggy night, it's going to bring in the birds.
And this time of year it could be massive numbers. We may
not be seeing that in some of these other sites, but these
other sites aren't in Down East Maine. They already show
from radar that the numbers are the highest in, you know,
most of the places that you look. So the radar data
clearly supports my concern and shows very clearly that
there are huge numbers of birds moving through this area.

What I'm concerned about is that we may -- by the
things that we read last night, that they want to look at
this year's radar and see whether it's an anomaly. So I
want to make sure that there aren't any numbers being
fudged and that we look at the radar data. What I'd like
to see is more specific data, exactly what species are
migrating through. And we need to have some visual and
acoustic -- nighttime acoustic data would help us to
understand a little bit better exactly who's migrating
through this area.
I can tell you from our festivals that we've had and monitoring, just last weekend somebody counted 110 species moving through the area. I've had as many as 130 for Acadia Birding Festival. These are large numbers right across the board. And I think I'd like you to very seriously think about the impacts that this project is going to have on that. So thank you very much.

MR. MOORE: I have five minutes, right?

MR. GOOD: Did I go on there? Sorry.

MR. MOORE: A little bit. My name is Perry Moore, I'm a landscape architect, my office is in Bar Harbor. I've been retained by Ms. Williams' law office to assist with evaluating the visual assessment that you talked about earlier today.

One thing I'd like to touch on -- what I'd like to do is expand upon my pre-filed testimony and some of the things that I've heard today to address those. And one of the things that jumps out to me immediately is Mr. Laverty's comments earlier this morning about the listing of significant water bodies. If LURC is anything like it was when Paul Frederick was there, the document is still in your office. It was prepared by Alec Giffen around 1990. It's in a blue binder with a black binding and it lists them. The preamble gets to specifically what you were saying. And if the staff wanted to fish that up
for you and make that available, I think it would be insightful. Is it blue or green?

MR. LAVERY: It's an appendix to the Comprehensive Plan.

MR. PERRY: The original one was blue and the original one has a preamble.

MR. LAVERY: This is it.

MR. PERRY: Okay. We're on the same page. I guess I'll start off then with, one of things that strikes me -- I'm a landscape architect, I've done a couple visual assessments in -- in my checkered career. And one of the things that strikes me that hasn't been said is that this is an emerging methodology, it is not science yet. There is scientific method applied to it. Mr. De Wan is very good at it, he's published extensively on it. But at the end of the day, what you get is what you put in. And that's like -- that's one of the things I wanted to touch on.

One of my first concerns was the topography. The accuracy of the topography that was used, if I'm to understand correctly from the exhibits in their material, was the USGS, which is on a 20-foot contour interval. The USGS allows a one half contour interval error in maps that were compiled photogrammetrically as that one was. That is to say it can be off by 10 foot plus or 10 foot minus. So
that allowable error in the data that was inserted to use
for the topography is off by arguably 20 feet. That's
important later.

The accuracy of the vegetation is another concern. I
-- were I to do this with a client with, I presumably
gather, the pockets of this applicant, I would have taken a
little bit different step. I would have had a forester put
together a forest-type map from aerial photography or
satellite imagery. That is available.

What's useful for that is that we could then ascertain
the different stages of forestry generation; what's been
clear-cut, what's a seedling, what's a sapling, what's
brush growth? That then gets further into discerning
what's the stem diameter, how big are the trees and the
stem density, how far apart are they? If any of you
remember what some of this area was like before it was
logged, I've heard from some of the old hunters you could
see for a half mile in the woods because you could see
through everything, there was nothing there. That kind of
visibility is part -- is still left on some parts of the
Blackwoods Road, but it's gone. But that affects how we
see through the woods or over the woods and at what time of
year.

As the applicant's consultant said this morning, most
of this area is maple, beech and birch. That's all
deciduous. That's important. However, if we look at all
the submittals that the applicant's scenic assessment
provides, they were prepared during a time of year when
there's leaves on all the trees. I submit to you that
that's not an accurate representation of at least half of
the year. And that's important.

Title 12, Title 35-A and Title 38 do not tie your hands
to looking at it only with leaves on. I submit that that's
a valid part of what should have been provided.

I'm not sure how to handle this, but it's a concern for
me, the 8-mile limit. It's simply wrong. I'm originally
from Texas. T. Boone Pickins is a hometown hero. There
are wind farms all over the Texas panhandle and eastern New
Mexico. You can see a wind tower of this size from nearly
20 miles away, especially at sunrise and sunset. I'll get
to this later, but it's there.

And one of the other concerns I have is I've heard
anecdotally that you can see Kibby from Sugarloaf. That's
more than 8 miles. That's more than 8 miles. Commissioner
Kurtz brought up the night sky issue this morning. And
that's exactly on point, especially at night. The flashing
red light at night is visible from much more than 8 miles.

So what needs to be done? I would submit to you that
the applicant's scenic assessment needs to be revised. And
here's how I recommend that it be revised. The topographic
viewshed map, that would be exhibit -- or Viewshed Map E
should properly show a range, not a fixed limit of where
the viewshed might end. Admittedly, this could go in both
directions; it might be 20 feet short or 20 feet longer.
But I think that gives you a better idea of what we're
looking at where things can be seen from. Terry is
correct, you use that to identify where you want to look at
it. But if what you're using is flawed from the beginning,
what are we working with? I think that would be more
helpful.

Secondly, the -- and we would need to have more
accurate vegetation, as I mentioned earlier. That's how it
would be properly done. Let's get on the ground, find out
what there is and model it correctly. That Dr. Palmer and
Terry came up with the same result after taking out
selected pieces of types of -- of types of vegetation and
giving a zero value I find disturbing. That tells me that
something in there is not right. Perhaps, all of that was
behind taller vegetation, or perhaps it was in front of it,
or perhaps the taller vegetation is the only thing that's
in there. But that -- the model does not change when a
significant part of it comes out, tells me we're not
looking at the truth, we're looking at a model, an
approximation that's not accurate.

I think we do need to see it without the trees --
without the leaves on the trees, I'm sorry. And if we're not going to look at in the deciduous, I think what Terry said earlier is the way we look at it, we use simply the topographic map and say that's the viewshed. If we're not going to model the vegetation accurately, then throw it out. Otherwise, I don't think we're looking at something that's on point.

I disagree with Terry in saying that we can't know what trees are going to be cut. LURC is very familiar with timber removal plans that landowners have to file or should be. Most landowners do have them; they hire foresters, they put together a 10- or 15-year plan, they know what they're going to cut when, they know what they're regenerating, they know what's going to come out. Those things are out, or they should be, or they might be. Those could be looked up. We could try to find them. If they're there use them, but let's not just ignore the fact that part of what's there may not be there next year or five years from now or ten years from now.

As we speak, parts of 182 have been cleared in the last couple of months, significant parts of it. I don't think those are in the model because the model was done in December. But that stands out to me as an example of some place where there could be a problem that's not identified simply because we didn't look into the possibility that it
might happen. I'm fairly certain that the example I'm
talking about was filed for a forestry permit with either
the state or the town and someone would know it was going
to happen. So that -- the ability to get that information
is out there in some form.

And, finally, as I said earlier about the 8-mile
radius, I don't know to what extent you have discretion to
apply that, but it would occur to me that it's wrong to
ignore it, if for no reason other than to identify the
areas of national significance that might occur within
that. This is not to say that we're going to require
scenic assessment of the entire 20-mile radius. But at
least to know that 12 miles away there's something that's
going to be dramatically affected. I think that's a fair
question.

And, finally, while it's not exactly related to the --
this scenic evaluation, it did come up in the discussion
about it and it is related to this. I'm disturbed with
what seems to be a democratic resolution as to how we
determine scenic impact. It seems to be if it only bothers
a lot of people a little bit, it's okay; or if it destroys
the appreciation for only a few people, then it's okay.
That doesn't seem right to me. Why not, let's make a tough
call that landscape has merit of its own and that turbines
do not belong there.
While the standards and the publications I referenced earlier might be subject to argument, I think they're there. And -- and impacts to water bodies or places that are identified historically and currently by the Department and by the state as significant should not be looked upon as being impacted lightly. Thank you.

MS. HILTON: Okay. Do we have any commissioner questions at this point? Staff? Okay. I guess, go ahead.

MS. HORN OLSEN: Hi, I had a question for Mr. Good. I was reading in your testimony -- your pre-filed testimony about some of the suggestions you had for additional fieldwork that should have been done both in terms of the types of fieldwork or types of considerations, I wasn't totally clear. Can you clarify for me over what time period and which studies you're recommending be done and -- for this particular project?

MR. GOOD: Well, I think staying within this April 15th to June 7th, or whatever that is, for the spring migration is a good period to be doing more fieldwork. I think we need to have a better understanding -- and I didn't quite see that from the data from the applicant -- of specific birds that are coming into the area. So I think ground truthing some of what's happening in the area, that needs to be done, clearly.

I've only been in there -- in and around the area a few
times. So we need people in there who are ground truthing the radar. And, again, the radar is -- is our best information here. It's telling us that we are in a high migratory area. So we need to ground truth some of that on the -- on the land and have a better idea of who's moving through the area.

Yesterday was a very difficult day to have a clear idea of what was going on out there. It was cold, it was wet, we had a few white-throated sparrows calling. It didn't give me an impression at all of the true nature of what's happening. But as we drove through the area, there's an awful lot of wetland habitat that's associated with that project. I think that needs to -- I think we need to think about how to survey those areas and get a better idea of exactly who's coming through and try to use that with the radar information that will give us an idea of general numbers, masses of birds that are coming through.

So misnetting, banding, any of those kind of projects that will give us more information about the area, I think, are important.

MS. HORN OLSEN: Okay. Thank you. And I noticed you use the term non-biased and qualified avian scientists in terms of recommendation of who should be doing the studies. Can you tell me what would qualify someone as a non-biased and qualified avian scientist?
MR. GOOD: Well, I think somebody who doesn't have a financial connection to the project is what I was getting at. I know that the applicant has some of their own people that they are going to probably have to -- who they would want to have do some of this work. I think there are other organizations -- I'll just throw out a name -- Rebecca Holmberg up at the University of Maine is doing what -- what she has called the Gulf Watch Program -- Gulf Watch Project. They're setting up misnetting projects across coastal Maine trying to get a better understanding of what is happening out there.

I think we can honestly say that we don't have a clear understanding of what's happening with bird migration and -- in any kind of detail except from the lists and some of the studies that -- some of the very rudimentary studies, I think, that have been done in the region. That's why I'm very concerned about this -- the impacts on bird migration in this area.

MS. HORN OLSEN: And just -- I'm just a little -- I'm not exactly sure how that would work. So you would have someone who's not affiliated with the applicant at all doing the work. And how -- so how would they fund their work?

MR. GOOD: Well, that's a problem for all of us biologists. I'm not sure about that. There would have to
be some moneys gotten through grants or whatever to try to
do some of these studies. It's a big problem. I mean, we
don't know information because we don't get the -- the
grants and the money to -- to do the studies that have to
-- that would give us the information about the sheer size
and the intensity and diversity of this bird migration in
Down East Maine. There's very -- there are huge gaps in
our understanding.

MS. HORN OLSEN: Thank you very much.

MR. MURPHY: Nancy, my name is Don Murphy. You were --
on Page 13 of your pre-filed you were referring to the lay
down areas, you were looking at those. And I wonder if you
would comment a little further. I was looking for your
description and conclusion related to those, if you would.

MS. O'TOOLE: I found so many discrepancies in the
amount of lay down areas, not so much as numbers, as that
they propose six, as it was from the total impact from the
lay down areas. And that's where I was concerned when I
calculated them, I calculated 11 acres. And then -- and
that's from the blueprints and from the applicant. And
then they said there would be six at 200 to 400 and it was
only 9.6 acres. So I was just trying to understand the
discrepancy of that number.

MR. MURPHY: Okay. And then the -- the discussion of
restoring -- you know, re-vegetating those as is or
restoring those to their original contours. And you appear to prefer restoring those to their original contour. Can you address that?

MS. O'TOOLE: I can. Someone -- I think it was from the DEP -- suggested that since there are lay down areas and that they were temporary, that they needed to be restored to their -- to their original contours. And I think they worked out a deal of what they decided to do -- and I may be mistaken -- but they -- what they're going to do -- the applicant is going to do is put down 4 inches of erosion control mulch and then just let it re-vegetate on its own. So I don't see that as temporary, I see that as permanent.

MR. MURPHY: The only other -- well, one more point on when you went on a qualified look at the vernal pools, you qualified your experience with that. But in your review of those, based on enough to, you know, get into this, did you have any -- any particular ones that -- that were -- you know, identified or listed out in the exhibit that you would like a closer look at?

MS. O'TOOLE: I think I listed the ones -- I don't have the testimony in front of me -- the ones that were closest to the microsited turbines and roads. And I have a list of them on there.

MR. MURPHY: Okay.
MS. O'TOOLE: Those are the ones that I was most concerned with because given the fact that the turbines don't have the geotechnical analysis and it may shift 100 feet one way or the other, I was concerned about those vernal pools.

MR. MURPHY: Okay. Thank you.

MR. PALMER: Mr. Perry -- is this on? I do have a couple questions. In your testimony on Page 2 you've got a picture of a deciduous forest with leaves off.

MR. PERRY: Right.

MR. PALMER: You're claiming there's no screening through that forest?

MR. PERRY: No, I'm not. But it's also quite obvious, if you look at that, that turbines that would be located on that could be seen. That hill --

MR. PALMER: Potentially I think -- you certainly wouldn't want to walk very far focusing on the turbines, though, or you would walk into a tree. I would say -- or if you're on a road you're not going to see them because you're moving and it will get screened. I would say a gray turbine is not going to be seen through this forest particularly.

MR. PERRY: Dr. Palmer, I would disagree. If you're familiar with the experience of driving down a road with a fence that has pickets parted, if you drive, you can see
through the pickets easier than if you stop and the
screening is there.

MR. PALMER: That's because they're regular. You're
saying that if we ran a film -- a real film, a movie film
at a constantly varying speed, we can understand what we're
seeing? No.

MR. PERRY: Beyond those trees.

MR. PALMER: Well, I -- I disagree with you. I think
that there's more screening there than not.

MR. PERRY: The only thing I'll offer as rebuttal, sir,
is that for the past five years I've driven that road at
least three times a week to run my beagles and that was one
of the -- the reason I took that picture was I wasn't sure
what that hill was that was over there when I drove it.
That's taken from the Blackwoods Road. And I remember
driving up that hill the perception out of my -- the corner
of my eye that I could quite clearly see hills through the
trees that were not providing the screening that
Mr. De Wan's report asserted was there. That's simply the
reason for that submittal.

MR. PALMER: Yeah, I would agree that you could see the
hill. I'm just not sure that you're going to notice the
turbines as you're moving through the landscape, or for
that matter, if you're a hunter, walking through the
landscape looking for game.
MR. PERRY: I think you might underestimate most hunters, especially if it's white.

MR. PALMER: You've made several suggestions about how to improve the analysis, like, having a custom land cover made for this 8-mile area and other things like that. I mean, per se, I don't have any problems with those, but do you know of any studies of large scale projects where that's been done? I mean, is this common practice anywhere in the country?

MR. PERRY: That goes to my earlier comments, Dr. Palmer, is that we're talking about an emerging practice. And -- and I understand that there are standards of practice and that we do things a certain way and storm water modeling is a good example of that. And that's, I think, an analogy I'd like to focus on for a minute because that's very much how I approached this.

I do a lot of storm water work and I have several sophisticated programs that I use to model it. One of the things that strikes me as interesting is around half of the time, after I've done all of the standard practice methodology of taking things off of topographic maps and going out in the field to make a couple of checks, I'll, basically, to cover my ass, go out in a rain event and check a location where something is going on that I have modeled my analysis.
And as I said, about half of the time, something will be amiss. And it's that sensitivity that I bring to this. Okay, were I simply to go by the book and use something that we can take off the shelf and plug into a program and hand to somebody else and have a third-party reviewer come up with the same result using the same data, then, apparently, I've done my job. Honestly, folks, that's not good enough for me. And that's what I'm offering here, is that there's standard practice for identifying and describing forest types that I think would be useful.

Mr. De Wan certainly has the sophistication to be able to use that. And I think it would be a good way for us as landscape architects to take the practice. Let's get it right, let's not just keep going back to something that we've always done.

MR. PALMER: But it sounds to me using your storm runoff model, again, that the way to get it right is to go do fieldwork, which is what we did.

MR. PERRY: Absolutely.

MR. PALMER: I mean, both of us then did -- did that, but the model has inherent limitations such as the error of the topography, the fact that vegetation is going to get cut in the future and we don't necessarily know where that's going to be, all those kinds of things. It's not clear to me why -- where you expect to get a lot of benefit
out of a custom forest cover map for this 8 miles when what
you really believe and what you just told us is that doing
fieldwork is really the way to check all of this.

MR. PERRY: Well, the fieldwork is inherent in the
cover type map that I'm talking about. A forester --

MR. PALMER: Yeah, but who's --

MR. PERRY: -- will sit down with an aerial photograph,
delineate it and then go in the field and get the field
data. I hear what you're saying is that, you know, at the
end of the day it might be six when the first answer was
half a dozen, so what did we get? For me, the answer is
the risk.

If there's an inherent flaw in what we're -- we're
looking at and Dr. Palmer and Mr. De Wan are using the same
data and they're coming up with something that doesn't send
off a red flag, then we all assume it's okay. That's why I
suggested that I think balloon tests would be appropriate,
if for nothing, but to prove that I'm wrong. And how
valuable would that be? And they're not extensive.

MR. PALMER: And so what's the error in a balloon test,
the horizontal and vertical error? It's certainly a lot
more than the error in --

MR. PERRY: Well, if it's done properly, it would be a
lot less because --

MR. PALMER: A balloon raised to 400 feet is going to
be less than that? I mean, I haven't done --

MR. PERRY: If done -- if done properly, yes. Because here is the answer to that is if it's done properly, the answer is emphatic. I can see it or I can't. It's not we don't think you can see it, or the model says you can't see it, it's black or white. And I think for the limited expense that a balloon test would take and as low tech and as -- we can argue the accuracy of it all day. I think if it's about 400 feet tall and you can see it, there's a problem. If it's about 400 feet tall and you can't see it, then your report is confirmed, end of story.

MR. PALMER: Well, my experience with balloon tests is that they're highly inaccurate and especially in areas where there's even low wind. For this situation you have to see it from 8 miles away, which means a really big balloon. If you've done these, you know how difficult that is to get into a forest to inflate, let alone get up through a canopy. So --

MR. PERRY: I do. But, again, having grown up in the southwest, I can tell you that weather balloons or other -- there's more than one kind of balloon to use. And I think -- in the few balloon tests I've been involved with, the problem had less to do with the methodology than the equipment; that we tried to use something that was, as you suggest, easy to haul into the field, cheap to fill up and
it gets their quickly. Maybe we should go back and do a little bit more to get it accurate and more visible and closer to being right. And, admittedly, it's not going to be 50 bucks, but at the end of the day, I think that what we're talking about for a result, if it's wrong -- if the assessment is wrong, I think is significant.

MR. PALMER: Well, we've had different experiences. Maybe it's because you've worked in a different kind of forest where there's fewer trees, but --. Unless you're willing to cut a large opening in a northeastern forest --

MR. PERRY: From the testimony I've heard today, there's plenty of openings on this site.

MR. PALMER: I'm done.

MS. HILTON: Okay. Good. So any other questions commissioners, staff? I guess the applicant now has an opportunity to cross-examine these witnesses.

MS. CARROLL: You still want your 20 minutes?

MS. BODEN: It may take less.

MS. CARROLL: Okay. That's fine. I just wanted to make sure that modification remains the same.

EXAMINATION OF NANCY O'TOOLE

BY MS. BROWNE:

Q Good afternoon, commissioners, Juliet Browne. Ms. O'Toole, I'm going to begin with a few questions I have for you. And bear with me, you identified some difficulty you had in
understanding the application and went through a number of areas where you thought there was some confusion or at least you had questions.

Now, throughout this process the applicant has provided information that you've requested in response to your requests that they do so, right?

A Yes.

Q Okay. And you certainly could have -- if there was any confusion, you could have asked us and there's no reason to think we wouldn't have told you exactly what was in the tables and what they included, right?

A No, I disagree. I think it should be correct in the application.

Q Yep. Absolutely. And I'm not suggesting it's not correct. But my only question is, to the extent that you had difficulty understanding it, you could have asked, right?

A It wasn't the understanding, it was the vagueness. I understood that it was -- you make mistakes, I make mistakes, but, no, it was not. It was that I wasn't sure which one was correct.

Q Okay. Are you aware -- so, for example, you talked about the lay down areas. And are you aware -- in a discrepancy you saw. And are you aware that some of the lay down areas are already cleared?

A No, I didn't -- that was not in the application, no.
Q Okay. And you talked about concerns on -- discrepancy you saw between roads to permanent met towers and total clearing numbers and you're aware that the impacts associated with roads, including to the met towers, are all included under the category of road impacts?

A No, I disagree. If you look -- if I may -- maybe I'm wrong and I could be wrong. But there is on Table 1, new access roads -- wait a minute -- new met tower access roads permanent clearing 2 acres. And it's in a separate category by itself.

Q Okay. But you couldn't reconcile the roads to the met towers with the -- with the met towers clearing, total met tower clearings?

A I didn't try.

Q Okay. You also identified some concerns about potential shifts in final location for turbines and a concern that that would result in an increased impact -- or an impact into a wetland or a buffer area, right?

A Yes.

Q So are you aware that in -- the only instance in which there's a permit condition that allows such a shift, it can only occur if there is no additional intrusion into a resource area?

A Yes, I am aware of that.

Q Okay. So the applicant would not be permitted to shift the
turbine into a resource area that hadn't previously been identified?

A Yes.

Q Okay. You also in your pre-filed testimony identified some concerns with potential impacts to the Narraguagus River?

A Yes.

Q And are you aware that the closest disturbed area to the Narraguagus River is approximately 2 miles away?

A Yes, I am.

Q And you also talked about concern because of salmon habitat in the Narraguagus River, right?

A Yes.

Q And are you aware that Norm Dube reviewed this project?

A Yes, I am.

Q And are you aware that his conclusion -- and this is in his March 1st, 2011 comments -- his conclusion -- and I'm quoting -- was "the project will have no impact on Atlantic salmon populations or habitat." Are you aware of that?

A I am aware of that.

Q And you also identified some concerns with phosphorous loading in the Narraguagus River, right?

A Yes.

Q And that phosphorus loading is from, obviously, existing uses within the watershed, right?

A Yes.
Q Which, obviously, doesn't include anything associated with the project?
A Yes.

Q And it's fair to say that those -- the existing loading in the river could come from things such as current forest operation practices?
A You could say that, yes.

Q And you would agree that the oversight, the -- both the regulatory requirements and the regulatory oversight that will apply to construction activities associated with this project is substantially greater than governs the existing uses in the watershed, right?
A Yes.

Q And you're also familiar with the Down East Salmon Federation, right?
A I had read that in the application.

Q And it's your understanding that that organization, as others, are concerned about existing impacts within the Narraguagus River and the desire to protect salmon habitat?
A Yes.

Q So it's fair to say they would be concerned about existing impacts and would like an opportunity to take measures within -- to address existing impacts within the watershed, right?
A I would think so.
Okay. Just bear with me for a minute and I -- I may not have too much more for you.

On the road construction techniques here, you initially identified a concern with the so-called toolbox approach to construction?

Yes.

And are you aware that as part of the consultation process with the State soil scientist, the applicant is -- has now specified specific erosion control measures to be used in specific locations?

Yes, I am.

Okay. And you also identified some concerns with storm water management?

Yes.

And are you aware that Dave Waddell, who's the storm water expert from DEP, has reviewed the project, he actually went through a few rounds of comments on the project?

Hm-hmm.

And are you aware that in his final review comments on May 5th he concluded -- and I'm going to quote -- "the applicant's response has addressed all of my concerns with this project at this time and the project appears to meet the standards set forth in the Chapter 500 rules?"

Yes.

I think there was also a -- you had identified some --
well, let me just back up for a minute. In terms of cut
and fill on this project, you identified you've reviewed a
number of applications of grid scale projects?
A Yes.
Q And you, obviously, testified in the recent Kibby Expansion
hearings, which was the last project before this
Commission. And you went on the site visit yesterday,
right?
A Yes.
Q And it's fair to say that this project site has more
gradual slopes overall than probably any other wind power
project you've reviewed?
A Yes.
Q Okay. And that, among other things, results in -- on
balance less cut and fill?
A There's a half a million of cut and fill in this project
for 19 turbines. I would call that significant.
Q But I'm talking relative to a steeper site -- potential
site. With higher elevations you tend to have greater cut
and fill?
A I would say, yes.
Q On the vernal pool surveys, you heard Mr. Knapp's testimony
this morning?
A Yes, I did.
Q And you would agree with him that the timeline set out in
the -- in the NRPA regulations are just that, they're guidelines?

A Yes.

Q And would you agree that the appropriate time for conducting the surveys is based on the exercise of professional judgment based on the types of factors he described?

A Yes, but that was not my concern completely.

Q So you're not concerned that they were done at the wrong time of year then?

A I was concerned that they were and then when I realized and I read his explanation, then I understood.

Q Okay. So you're comfortable now with the timing of the surveys?

A The timing, yes.

EXAMINATION OF MICHAEL GOOD

BY MS. BODEN:

Q I guess I'll start with Mr. Good. Good afternoon, I'm Kelly Boden. I would just like to ask you a few questions about the work you've done in reviewing the applicant's project.

Did you review the application prior to preparing your
testimony?

A I did.

Q And when you drafted your testimony, you had not visited the project site?

A I had only been up there many -- a few years ago. So I was familiar with the area, but hadn't been there recently until the site visit yesterday.

Q Okay. And you haven't conducted any of your own studies on avian species in the project area?

A Not in the project area, no.

Q I'd like to ask you a few questions about some of the conclusions in your pre-filed testimony that I think you expanded on today. In a couple places you agree with us, in your testimony you request strongly that Blue Sky limit impacts to wetlands, correct?

A Wait. Say that again.

Q I'm sorry. In your testimony you request strongly that Blue Sky limit impacts to wetlands?

A Absolutely. These are nesting grounds and feeding grounds for neotropical migrants across the board. So these are places that I think we need to put a little extra time into thinking about how we're going to -- now, making the assumption that the project goes through, you know, maybe some new thinking about, how are you going to develop that piece of property so that some of those impacts are
Okay. So after reviewing the application and hearing Dale Knapp's testimony, you'd agree that Blue Sky is not clearing or placing any fill in wetlands?

I cannot believe that seeps and other habitat for birds and other wildlife isn't going to be impacted.

Okay.

So I --

But you don't have any basis for concluding that there are wetland impacts?

Just by driving around yesterday, I mean, it's pretty clear there's runoff and there's seeps and there's places that are -- in normal places, other parts of the forest of Maine are bird habitat and wildlife habitat. So I have to assume that it's the same in the Bull Hill region.

Okay. But you haven't done any of the fieldwork?

Not around Bull Hill, no.

And you haven't the identified any errors in the field surveys done for this project?

Haven't identified any errors pertaining to what?

Pertaining to wetland surveys.

No. I mean, I -- it looks to me like in the state of that forest, the wetland habitats and -- you guys have focused specifically on vernal pools. I'd suggest that there are other habitats out there besides vernal pools that should
be thought about as you look over where you're placing
turbines and --.

Q Okay. But you understand from the testimony earlier today
that we've done comprehensive wetland surveys as well as
vernal pool surveys?

A I understand that, but I also know that there hasn't been
any kind of groundwork on ornithology done, we have mostly
radar data. So there's very specific habitat for these
very specific birds coming into the region. And I would
say that we do not -- from the study that I've seen so far
-- have a clear understanding of that.

Q Okay. And in your testimony you've recommended that Blue
Sky avoid steady burning lights?

A Yes, totally.

Q Okay. And you understand from the application and the
testimony today that that's exactly what Blue Sky is
proposing?

A I do. And I was very happy to see that they agreed with
some of these issues that both IF & W and myself have
brought up. I have to say that I also agree with their
post-construction survey and I think those issues are
important. We need that data for understanding ornithology
in this region. So that -- any information we can glean
from this will give us a better idea of how to place
turbines in the future. So I think it's really imperative.
Q That's great. I just have one other -- a couple questions here.

You heard earlier that, according to Stantec, the only rare, threatened or endangered species documented or observed in the project area was a single peregrine falcon?

A Right.

Q But in your pre-filed testimony you suggested this statement is totally inaccurate and an attempt to hide the truth about avian populations in the project area?

A Right.

Q You're not testifying that you believe Stantec lied to LURC about the existence of rare, threatened or endangered species in the area, are you?

A I'm suggesting that there are many creatures in the forest that go undetected by biologists with an enormous amount of experience. So to suggest that there are no endangered or threatened species in the Bull Hill region doesn't fly with me as a biologist.

I've been in the forest too long, I know that there are creatures that are totally cryptic. There are female birds that are totally cryptic, we don't understand these critters. And so I would challenge the statement -- I'm glad that somebody saw a peregrine falcon there, but I would suggest that there are many other species that went undetected.
Q But you didn't do any site surveys to identify any of these species?

A Yesterday was pretty foggy, so --.

Q Okay. So you don't have any basis to dispute Stantec's conclusions?

A I have my own research from 20 years of being in the forests of Maine from coastal Maine to the deep forests of the Maine forests. And I know that there are many species out there that we just don't understand. So I'm not saying that anybody lied, I'm just saying that if you don't live in the woods the way some of us do, you don't have a clear understanding of how things are functioning in an intact functioning ecosystem around here.

Q So your conclusion is really just based on the presumption that these species exist everywhere?

A It's based on my understanding and my photography that these species definitely exist and --

Q And so they must be present?

A -- they're definitely -- they're definitely part of the forest and they have to be present.

MS. BODEN: Thank you.

MR. GOOD: Yeah. Thank you.

EXAMINATION OF MR. MOORE

BY MS. BODEN:

Q Mr. Moore, I just have a couple questions for you. You
agree with Mr. -- that Mr. De Wan has substantial expertise in preparing VIAs?

A Absolutely.

Q And substantial expertise in preparing photo simulations as well?

A Absolutely.

Q And substantial expertise in preparing VIAs for wind energy projects specifically?

A Absolutely.

Q And you would also agree that Dr. Palmer, State's outside reviewer on these visual issues, also has substantial expertise in assessing visibility?

A Without question.

Q And, in particular, visibility of wind projects?

A Without question.

Q You have not prepared a VIA for a wind energy project?

A I have not.

Q One question that came up in your testimony today with regard to the plus or minus 10 foot height issue. You understand that, for example, if a map shows it will be about 500 feet, that can be between 490 and 510 feet?

A No, you're incorrect. That would be in a horizontal distance. I'm talking vertical distance, which is distance measured between contours.

Q Okay. So for a 400-foot high turbine, your testimony is
that plus or minus is likely to result in a significant change in the prediction of visibility?

A No. What I'm saying is that the model that Mr. De Wan's office used to prepare his topographic map, which was, essentially, a layer cake of the world, the layers that they used could be off as much as an entire layer. That's significant when you consider that they're stacked.

So if some hill has -- and this is not uncommon especially in a project area -- a 100-foot hill from bottom to top relative elevation distance, if three of those are wrong, that could be as much as 60 feet off. That's not likely because there's usually topographic points at the hilltops which are used to check that. But for the model, what's seen from the top, the bottom and in between, as someone who has worked his way through college compiling photogrammetric maps, I can assure you the accuracy is not there.

And that's why I'm saying, if we're going to have a model -- a viewshed map that says this is what we're going to see, my only critique is, let's give a range, let's say it might be this far out or this far in. Let's not draw a line on the earth and say that's where it's at because that's simply an approximation and may not be accurate based on the inherent error that's allowed in the base data.
Q So you agree generally that viewshed maps are just predictions, regardless of this assessment?
A Approximations would be the word I would use.
Q Okay. And that site work and simulations are far truer ways to evaluate visual impacts?
A I believe that's what I said.
Q Okay. So you don't dispute the accuracy of the methodology of visual simulations that Mr. De Wan did?
A As approximations, no.
Q And just one final question. You suggested that when considering potential screening impacts or screening capacity that you would look to forestry permits or potential permits that had been applied for in the area?
A Those or management plans that private landowners do prepare. I mean, there's a cadre of foresters in the state of Maine who are in the employ of large landowners who put together plans for them. Most forestry owners are not cowboys, they're millionaires. And they got that way by hiring professionals to help them get there. They have management plans, they know what they're going to cut when, they know what they're going to replant when and they know when they're going to cut it next time.

Simply sitting down with landowners that might be large landowners in the area and asking them, what do you plan to cut, would be a -- to me, an invaluable compliment to a
visual assessment. If we knew, for example, that a swath
100 feet wide in a certain area was going to be cut in the
next couple of years and that was a view path or a view
corridor to a significant scenic resource, that would be
useful to know. That the question was not asked or does
not seem to be available was something that I take issue
with.

Q So you're suggesting an applicant needs to affirmatively go
out, research, reference all the area and try to identify
any future potential impacts as part as the VIA?

A I didn't say it that broadly, ma'am.

MS. BODEN: Thank you. That's all I have.

MS. HILTON: Any other questions, commissioners, staff?

All right. I guess thank you very much.

MR. PERRY: Thank you.

MS. HILTON: Oh, wait. I'm sorry. Hold it. I'm

sorry. Do you have any questions for these folks?

MR. BROWN: Not at this time.

MS. HILTON: Okay. All right. Oh, I'm sorry. Wait,
wait. I'm so sorry. Lynn, do you want to do redirect?

MS. WILLIAMS: No redirect.

MS. HILTON: All right. We're going to take a break.

(Whereupon a recess was held at 2:40 p.m., and the
hearing was resumed at 2:56 p.m. this date.)

MS. HILTON: All right. It looks like we're all set
with our State agencies and LURC consultants at the table
here. Thank you very much for coming, those of you who
just arrived.

The first thing I need to do is swear you in. And you
don't need to stand up, just raise your right hand. And do
you solemnly swear to tell the whole truth and nothing but
the truth?

PARTICIPANTS: I do.

MS. HILTON: All right. Thank you. Let's start -- you
know what I think I would like each of you to do is --
except we've only got three mikes -- is maybe just
introduce yourselves. I know -- I'm not sure I know who
each of you are. And go down -- just introduce yourselves
and say what agency you're -- what your capacity is here
today.

MR. WADDELL: Sure. My name is David Waddell. I'm
with the Maine Department of Environmental Protection. I
reviewed the portions for water quality and for water
quantity for the project.

MS. HILTON: Okay. All right.

MR. PALMER: My name is Jim Palmer. I'm a consultant
to LURC for scenic impacts.

MR. TANNENBAUM: Mitchell Tannenbaum with the Public
Utilities Commission.

MR. ROCQUE: Dave Rocque, State soil scientist with
Maine Department of Agriculture. And I review soils, soil
mapping, wetlands, storm water, erosion, sediment control,
a whole bunch of things.

MR. BROWN: Warren Brown, consultant to LURC for sound.

MR. BARD: Richard Bard, I'm a wildlife biologist with
IF & W.

MR. TIMPANO: Steve Timpano, environmental coordinator
with the Department of Inland Fisheries & Wildlife.

MR. TODD: Charlie Todd, wildlife biologist with Maine
Department of Inland Fisheries & Wildlife, Bangor.

MS. HILTON: Okay. Thank you very much for doing that.
We'll start with -- I guess I'll ask if any of the
commissioners have any questions or if they prefer for the
staff to start. Okay. All right. So, I guess, do you
have -- do you want to start off with some questions?

MR. MURPHY: We would like to -- we would like to as
the staff start off and then defer to the commissioners.
We'll go right to the -- right to the vernal pool topics.
And for those of you that are just arriving, we did discuss
some of this morning.

I think maybe, Richard, if you could give a bit of an
overview of the process we've been through so far and what
-- where you feel we've -- where that's come to right now
in terms of information that we're still looking -- might
still be looking for. And, also, one of the questions
that's gone back and forth is -- and maybe you can address
this -- is there are existing roads that are impacts in the
100-foot or 250-foot setback to significant vernal pools.
The applicant has taken the position that it is an existing
forestry road, that change of use may not -- you know, it
doesn't kick in.

And you use the word compensation, but mitigation,
either of -- of the -- the physical canopy or whatever or
construction methods may or may not be appropriate. So
that was sort of lay the -- to platform out. But the
question is to try to, you know, sum up what you've been
working with and try to clarify that for the applicant.

MR. BARD: Sure. It has been a long process, we've had
a lot of back and forth between the applicant and LURC and
our department. And I won't bore you with all of the
details of the back and forth, it's all in the record.
Most recently we had the submission of some materials
yesterday. And I just want to state right out that we have
not had a chance to review that. We'll have to take a look
at it. In fact, people in Bangor are looking at it right
now. But I can't really comment on anything that came in
yesterday.

The most pressing thing, as Don Murphy just alluded to,
is about the road usage and the change in use. And I think
for all of the vernal pools that we've identified -- at
least, disregarding anything that may have come up in this last round of submittals yesterday -- all of them, with the exception of one, are below the 25 percent of disturbed habitat within the buffer. And so the change of use really is not an issue for us on those because at less than 25 percent impact, basically we just -- that's allowable under the regulations and so we don't really have to comment on those.

The one that has come up already this morning where there's 39 percent impact currently, I've been in a number of conversations with our people in Bangor today while the hearings have been going on to try to work this out. And a question has arisen about the nature of the impacts in that vernal pool area. It appears, apparently, from the aerial photos and other information that a big part of that impact is actually the existing power line corridor. And potentially less than 25 of the impact would be from the road, which, again, a change in use of the road we do consider an impact.

However, if that power line corridor is not under the ownership or the management authority of the applicant, if that's under Bangor Hydro or some other entity, we probably would not have to account for that impact in our calculations. So I'm not sure if I've made that clear or not. But if the only impact that's under the control of
the applicant is the road and that's less than 25 percent of their -- of the area under their authority, then probably we don't have an issue with it.

MR. MURPHY: A follow-up question on that is, looking at a road that goes through -- this is separate from the transmission line now. Where we do -- whether it's the 25 percent or not -- when you have a road that does go through the -- the setback to a significant vernal pool, even though it's just existing, it's not expanded, could you talk about what the impact -- describe what those impacts are and is there any mitigation potential or not or --?

MR. BARD: Sure. The roads as they exist right now are being used at some level. We don't have any data from the applicant or anywhere else to show what the current level of use of those roads is. But we would expect that with this change in use as it becomes a part of the wind facility, there's going to be increased usage to some extent. And, again, we don't know what that would be, how many trips per week or month or year or some other figure. But as a percentage of the baseline use, there's going to be probably some increase. And to the extent that that traffic increases, you're increasing the impacts to the resource.

Somebody earlier brought up the issue of dust coming up from the dirt roads into the -- you know, silting into the
pool or covering up the habitat, there's direct mortality
from road collisions when the animals are crossing, things
of that nature. As repairs are done over the course of the
20-year life of the project, changes can creep in that can
make the road impassible to amphibians, et cetera, things
like that.

So the truth is that we don't know what the impacts are
from this change, but we know that it's a change and that
it properly needs to be accounted for.

MR. MURPHY: If the applicant came forward -- I mean,
it's always -- moving a road is always -- you know, we
might as well say what the opportunity is, moving a road is
a -- is a minimize or a void. In this particular case, in
terms of construction you have the longer -- part of their
whole analysis of their road system is the long beds that
have the German blades on them and parts and/or the crane
paths that have, you know, the longer -- you know, it's not
like a little Volkswagen and able to do S corners.

Is there a way to -- would you weigh in a little bit on
how you -- their position has been moving an existing road
causes more impact, one. And, two, is there a way to
mitigate for the exist -- leaving it in the more closer
proximity to the SVP? Is there something acceptable there
or possible?

MR. BARD: I guess we haven't given a whole lot of
thought to what exactly they could -- do leaving the road
in place, what exactly they could do to make it less of an
impact. I'm not too sure about that. We might be able to
talk about ways to increase permeability to amphibians.

From the long-term prospective, you know, in general I
think we do agree that it's good to co-locate resources and
use existing resources. However, if there was a
possibility -- a feasible possibility to move that road and
put that other road to bed, it probably would increase the
value of that vernal pool for amphibian breeding.

MR. MURPHY: Okay. Thank you. I'm all set.

MS. HILTON: Okay. Questioning of all of the folks or
just that person?

MR. MURPHY: Just on that topic.

MS. HILTON: All right. Good. I'm with you. Any
other questions about vernal pools from anyone?

So I guess I'm just a little confused. So your final
-- when you said a little earlier on that you didn't have
an issue with -- because of the percentage impact, what
exactly did you mean when you said that?

MR. BARD: I'm sorry if it was a little confusing, this
is -- I'm still trying to digest it. It just came from
Bangor a half hour ago.

MS. HILTON: That's okay, it's probably me.

MR. BARD: So there's various impacts within that
250-foot buffer that's around the vernal pool. And a certain percentage of that comes from the power line itself and the power line corridor, which is cleared, a certain percentage comes from the existing roadway. So for the purposes of our calculation of the impacts as a result of this project, we should only be calculating the impact that's a result of the project. Now, we do include the road because of the change of use.

However, if the power line is in existence and it's under a different management entity and they have no say over how that's managed, then we would not consider that as part of the impact -- or that area as part of their -- the area that they're responsible for accounting for impacts.

MS. HILTON: Okay. So then -- and then using that thinking, then you just -- what do you -- what's your conclusion then that --

MR. BARD: Well, we don't have the data. I guess we would like to get that from the applicant probably as a follow-up of how much of that particular vernal pool buffer is under their management authority --

MS. HILTON: Oh, I see. Okay.

MR. BARD: -- and what the impact is. I believe Steve Timpano would like to chime in.

MR. TIMPANO: No, I --.

MR. BARD: Steve was thinking that you were asking
about the other vernal pools that had less than 25 percent cumulative impacts. Were you asking about that one or the -- those or the one that has more than 39 percent?

MS. HILTON: I'm asking -- I think there's two -- there was a graphic -- I don't know that you were here -- that showed two vernal pools. One of them we drove by in the field trip and -- and then there was another one that was not too far away.

MS. HORN OLSEN: Gwen, I think the applicant is going to put it up.

MS. HILTON: Oh, really? Okay. I think, you know, there was some correspondence back and forth and some of this just came in, you know, yesterday. And I'm -- I know personally I'm just trying to kind of grapple with all this information and where we're at and where we're going. And I'd have to tell you that being out on the site makes a big difference and, actually, when you see things it helps a lot in understanding. But this particular situation -- and the power line is on this, right -- or those are just roads, right?

MR. BARD: I'm not sure. I haven't seen this yet.

MS. HILTON: I think somebody has an answer to my question in the back there.

UNIDENTIFIED SPEAKER: The east/west line right in front of you there, is the power line corridor.
MS. HILTON: Okay. So it is the power --. Okay.

MR. BARD: And then the road curves through like that?

UNIDENTIFIED SPEAKER: Yep. So the road that's in use is where that red-dashed line runs north to south. The power line corridor and that other road are not part of this project. And 34 CF, that vernal pool to the east, is the one that breaks the 39 percent threshold.

MR. BARD: Okay. So, I'm sorry, what was the question then? Now that I understand the diagram.

MS. HILTON: Just in -- so at this point in time you're trying to determine what the impact and how much of that impact the applicant is responsible for, correct?

MR. BARD: Yes.

MS. HILTON: Okay. And that's what -- so you're waiting on more data to make that determination?

MR. BARD: Well, we haven't had a chance to make a request from the applicant because this, like I said, just happened an hour ago that we sort of realized that it should have been broken out this way and we didn't ask for it that way.

MS. HILTON: Okay. Based on what you -- the information that you have already, is there, do you feel, any justification for asking for any kind of mitigation?

MR. BARD: If our understanding is correct, that the impacts as a result of the road will be less than 25
percent, then I would say that we don't feel that we need
to ask for mitigation on that.

MS. HILTON: Okay. All right.

MS. HORN OLSEN: Can I ask a clarifying question?

MS. HILTON: Yes.

MS. HORN OLSEN: Just to be clear, so the guidelines
that you're citing, the 25-ercent guidelines, those are the
combination of DEP rule and the guidance that's been
created by IF & W; is that correct? Is that where that
comes from?

MR. BARD: That's right. Basically this change is sort
of a catch up. Our people in Bangor have been in
communication with DEP to make sure that our response to
this question is in keeping with how we would respond to a
similar question that DEP would be handling.

MS. HORN OLSEN: Okay.

MR. FARRAND: Can -- you're going to be -- you're going
to be evaluating this throughout the process, correct?

MR. BARD: Yes.

MR. FARRAND: Because it seems to me that we continue
to be forging ahead into areas about which we don't have a
lot of science and a lot of data to be sure beyond that we
anticipate no undue effect. So I would like the
reassurance to know that as this -- if we were to approve
this application, you would be able to study this and say
18 months out, oh, in fact, there was significant impact on these vernal pools and we would like not to do it this way again for -- just as a case in point.

MR. TIMPANO: Steve Timpano. There are no studies post-construction or during construction proposed for the, you know, follow up on the vernal pools themselves. That's -- unless I'm misunderstanding it. So I'm not sure how your question would be answered. There would not be a follow-up.

MR. FARRAND: I realize it's not in the -- I'm just -- I would like to see us collect this data so that -- on any future project so we could begin to build data.

MR. BARD: I guess the only thing I could offer here is that these recommendations were based on a long history of watching these kind of projects and they're -- they're a good faith attempt to set standards that won't result in significant impacts. But, no, we don't have any --

MR. FARRAND: And I understand what you're saying and I disagree with the premise that we don't have -- you know.

MS. KURTZ: There was discussion this morning about whether or not the road should actually be moved. And the applicant stated, no, that the impact was zero and so there really was no reason to move the road.

So, first of all, would you agree with the assessment that the impact is zero? And, second, what would your
response be to moving the road?

MR. BARD: I guess the -- our answer to the first part would be that we disagree that it was zero impact. The change in the use, the additional traffic, the additional mortality of amphibians, et cetera, are an impact. To what extent, we don't know. However, the impact to the habitat is less than 25 percent.

Moving the road would probably be beneficial to the vernal pool. But as I said, with these figures that appear to be playing out, we probably wouldn't ask very firmly for it.

MS. KURTZ: When you say the figures that are playing out, it's because it's primarily due to the power line as opposed to the road itself?

MR. BARD: That's right.

MS. HILTON: Two things. With respect to -- the applicant also made a statement that it's better to use existing infrastructure as opposed to building new infrastructure, new roads that disturb more land. And -- and that one of things he cautioned was that, you know, when you set up a policy to start moving roads for specific vernal pools and then we, I think, start maybe impacting more -- more resources that way. So there's, I guess, sort of a balancing act from a policy standpoint. Does that make sense to you?
MR. BARD: Yes, it does. I mean, the -- in an ideal world, if we could pick up this road and move it outside of that vernal pool buffer, it would be better from our standpoint. Over the course of the -- you know, the 20 years of the project, it probably would be very beneficial, but --.

MS. HILTON: Okay. And my other question is that -- I don't know whether you were here for -- there was some exchange that I had with the applicant having to do with whether it was -- this was a change in use for the use of the road. And I notice that you -- you're calling it that, a change in use.

MR. BARD: Yes.

MS. HILTON: And, I guess, what -- why are you using that term? So I'm focusing on the fact that you used that term.

MR. BARD: I think -- again, without knowing the exact patterns of use of the road right now, a forestry road is probably used sporadically, perhaps, regularly, but there's some level of use that it's having. And then this new addition of the wind turbines will result in, you know, additional use. There will be different kinds of vehicles driving, different patterns of use versus -- you know, day versus night, seasonal. And so in our minds it is a different use of the road versus hauling wood.
MS. HILTON: And does that figure in to your interpretation of any rules or laws when you're making -- when you were evaluating vernal pools?

MR. BARD: I think only that it triggers potential recommendations based on that use. I guess I'm not quite sure what -- what you mean.

MS. HILTON: Okay. All right. That's good. That's fine. Thank you. Where were you going to go with your questions next?

MR. MURPHY: I was going to make sure that we had covered -- as Ed had asked earlier, that we take particularly -- while we have Charlie Todd here that we get into the birds and bats topics and cover that.

MS. HILTON: Okay. Just let me see if there's any commissioners that want to start off that questioning. I guess, go ahead.

MR. MURPHY: Okay. Welcome, Charlie. I know you've gotten some comments back probably just recently as well from the applicant and haven't had time to fully process those, but I'm looking at your May 9th -- the comments particularly -- I'll sum them up here. We're trying to -- for the commissioners, the staff and everyone here sort of summarize what -- what some of the issues are. And as I see it -- I'll just list them out briefly and then if you can elaborate, you know, on those.
The -- the mortality search schedule that First Wind would like -- you know, has their own schedule that they'd like to maintain. And IF & W has their -- their plan. And part of that is whether or not to -- to settle that before the application is issued or before construction commences. And that -- that would be one of the items to comment on.

The other is the -- there's a period with the monitoring in the spring and fall and whether adding the months May and September --.

And then, finally, the -- the bat mortality for one and two years and really do that study first before having curtailment kick in, or taking what seems to be a proactive role that IF & W is asserting to -- to begin that right off and then possibly analyze it and adjust it.

So if the both of you or, you know, all three of you can just talk about that, I'm sure the applicant will -- they've made an extensive study and filed that with you as well. I don't know if you've had time to also add some comments in about that. Thank you.

MR. TODD: Well, you have got one -- thank you for that. You have a technical expert here, but it's a little bit off -- off of my wheelhouse. And I think, Rich, do you have some comments that reflect overall on the -- the bird and bat mortality, at least? I think that's something you're more aware of.
MR. BARD: Yeah, actually, there was some disagreement about -- well, first I should say that we're in agreement that adaptive management is probably the way to go with mortality searches, but as new evidence comes up, we're willing to modify the plan. However, our sort of out-of-the-gate estimates of what should happen were different than First Wind's.

However, what I heard this morning was, basically, that they've agreed with the dates that we've suggested, at least as a starting point for the mortality searches. So we're happy with that.

MR. TODD: And then I think you had a comment about adding September in --

MR. MURPHY: That was in regard to the continuous monitoring from, let's see, April 15th to October 30th. And then it -- it suggested that there were gaps, gaps were in May and September. There were two time periods that IF & W considers critical to understanding the impacts of birds and bats and just resolving -- it seemed like just adding a month -- and I didn't know how -- how critical that was or how that's going as far as discussing that with the applicant.

MR. BARD: Sure. I think that's covered with this new agreement that I was talking about. What we've recommended is searching from -- weekly from April 15th to June 7th and
from July 7th to October 15th. And I think that's what I heard the applicant say this morning.

MR. MURPHY: Okay. And then, finally, the -- the issue of curtailment based on doing it right from the get-go or -- or doing a study first and then implementing it.

MR. BARD: Yeah. What hasn't been discussed here yet is -- and I won't hang on it for very long, but white-nose syndrome is really a growing threat that's very dire for bat populations for the northeast. It's been documented in all of the states and provinces surrounding Maine. We don't have proof of it yet here in Maine, but I can almost guarantee it will be here.

And -- so, basically, as a result of that, we've got plummeting bat populations. And we just -- we're really in favor of a very conservative approach as we go forward with anything that can cause bat mortality right now. This project will be around for 20 years and, you know, that's a very long time if we don't -- if we're not protecting the bats properly.

There have been studies at other places that looked at curtailment and it seems to be a very effective way; in fact, Stantec has acknowledged that it's very effective at reducing bat -- bat mortality. Excuse me one second. We also think that using the 5-meter per second cutting speed is actually a fairly conservative recommendation. There
are other sources that say we should be recommending 6, 7 or 8 meters per second as a cutting speed. 5 percent seems to be quite effective and so that's what we're recommending. And we -- we still stand by our recommendation that that's the way to go right from the beginning.


MS. KURTZ: I'm not sure if I remember all of this stuff completely. So it sounds like you'd be suggesting with this white-nose syndrome that we may not have it yet, but there's a very good chance of getting it. And once it arrives, the species -- the bats are in greater and greater danger of extra -- a threat of being eliminated.

Would you -- and I don't remember if the application has this in it or not, but would you recommend that we revisit the protocol, or at regular intervals do surveys to see how the -- the populations are doing? I mean, because 20 years is a long time and a lot could happened. Does that seem like a reasonable way to approach this?

MR. BARD: Are you suggesting that if at some point there, basically, are no bats to worry about, then curtailment obviously wouldn't be --

MS. KURTZ: Oh, no. No. No, no, no.

MR. BARD: Okay.
MS. KURTZ: What I'm thinking is that -- that the turbines themselves represent a threat -- a certain amount of threat to the bats, we've got this other potentially devastating syndrome or disease out there. Knowing that it probably is going to arrive, it would seem to me that if we were really concerned about the population of the bats that we would be able to at regular intervals go in and see how they're doing.

You know, if not only the turbines, but the white -- the white-nose syndrome is starting to wipe them out, then maybe we need to stop doing something or we need to adopt a new strategy. And to say, okay, let's do this now for one or two years and then we'll just see what we end up with in 20 years doesn't seem like a reasonable way to approach this.

So I'm wondering if it is reasonable to put in some kind of protocol that would allow regular assessment of the population and the impacts? And I'm not sure if it's in the application. I have to be honest with you, I can't remember.

MR. BARD: So something like conditional mortality searches every so often?

MS. KURTZ: That's something that you would recommend. Let's say white-nose syndrome arrives in three years and it has -- based on what happens in other parts of the country
or around the surrounding area you say, jeez, we need to
start assessing on a two-year basis, or every three years,
or whatever it is, that that would be, perhaps, in
consultation with other experts. But does that seem like a
reasonable strategy?

MR. BARD: It seems like it would certainly be useful.
I mean, our hope is that using this curtailment strategy
would significantly reduce bat mortality and so there
probably -- you know, hopefully there won't be many bats to
find at the bottom of the turbines no matter what because
they'll -- the idea is don't operate the turbines when bats
are most active. So with this we hope there won't be much
bat mortality.

MS. KURTZ: I'm trying to be clear. And I agree, we'd
hope that there wouldn't be. But knowing that there's
something else out there, there's an additional threat,
that even if all we do is collect more information that can
be used elsewhere, that it would seem to me if you've got
this double threat that collecting that information, either
to adopt new strategies or to use in a future application,
seems to have merit.

And does it seem like it would be an effective strategy
and a reasonable one to expect -- or to ask the applicant
to do mortality studies in an ongoing fashion at intervals
that you would recommend?
MR. BARD: Yeah, that does seem reasonable to continue to look at the threats to the bats, sure.

MS. HILTON: I have a question. We heard some testimony earlier on an expert for the intervenors on birds. And I was just wondering what your reaction was or response would be to that? And it had to do with impacts on migratory neotropical birds and other migrating species in this area -- in Down East Maine in particular. Is that -- do you have any, I guess, opinions about that?

MR. BARD: Well, it was very interesting to hear Mr. Good's testimony. And it struck me that things like radar surveys and acoustic surveys -- not so much the acoustic surveys for the birds, but particularly the radar studies treat all blips on the radar equally, essentially. And his point is well taken that some of them may be an endangered warbler, some of them may be starlings, which are not protected at all. And it's not something that we've gotten at.

Basically, the idea has wholesale, try to minimize disturbance or minimize impacts to birds without putting that fine a point on the individual species of warblers.

MS. HILTON: So we don't have a whole lot of information on that. We know the numbers, but we don't know the species?

MR. BARD: I would say that's probably true.
MS. HILTON: Yeah. Okay. And then there was also some discussion about impacts to birds from lighting on the turbines.

MR. BARD: I guess the only comment I would have on that is echoing exactly what the applicant has committed to do, which is make sure there's no steady lighting. We've seen what one mistake at -- I believe it was Stetson did. And so there -- you know, hopefully there are fail-safes in place to keep that from happening.

MS. HILTON: Okay. All right. And you're satisfied with that?

MR. BARD: Yes, the plan, I think, addresses that.

MS. HILTON: Okay. Thank you. All right.

MR. MURPHY: Okay. We're ready to move on to another topic here. And Warren Brown works for LURC. Thank you, by the way, the three of you for handling that for us.

Warren Brown, you've been our sound consultant reviewing Scott Bodwell's work that was submitted by the applicant. And when -- in the event that during this -- January that took place of this year where the Town of Eastbrook put a wind ordinance facility together. Scott recounted that the Commission can consider that in their -- it's not a shall or it's not a may, it's a consider. So we proceeded to have the applicant submit an analysis based on that, what you heard this morning, and then Warren reviewed
Could you comment on Scott's comments today? You know, could you review Scott's comments today and also discuss your own input on how you looked at the -- looked at that data as well and considered the Eastbrook ordinance in -- and its similarities and differences with the DEP 37510 regulations for sound?

MR. BROWN: Certainly. I was in agreement with the presentation that Scott made this morning. The -- the sound impact, as would be measured under the DEP Chapter 375.10 Regulations, actually would be considered -- if it were not a wind project, would be considered a minor impact and it would be sort of a you-named it, it just goes away, you don't have to do much else with it because of it's -- it's below the 40 DBA threshold.

In the event of application of the Eastbrook ordinance, where the measurement location now extends in some cases well beyond the property line, the 660-foot distance that was portrayed this morning, in one case the -- the sound level does exceed 40 when calculated using the conservative factors that were part of the calculation method for the Blue Sky East project.

And I did run a simulation on that. I don't use a three-dimensional simulation, I just use a two-dimensional. And so my values were, perhaps, a few tenths of a DB lower
than what Scott might calculate, but less than 42 DBA.

There was mention of the fact that -- that the compliance points would be west of the lower string of turbines, that would be west of Turbine 1. And the predominant winds are from the northwest. And as was pointed out earlier, perhaps during the fall and winter from the northwest and during the spring and summer from the southwest, which would put the receptors at Position 1 and Position 2 in a rather upwind condition. I might say that that would be an exception to our May weather this year, which -- which we've had predominantly northeast winds.

An interesting point that I would like to raise that Scott did not mention is that the -- the safety or the uncertainty factors that are built into the model that he used and have been required, essentially, in wind turbine projects now since the Rawlings project incorporate not only wind direction, but very specific conditions where there is adequate wind at the turbine level to produce maximum sound power output, which occurs, I believe if my recollection serves me correctly, with a particular wind turbine, the Vestas V100 at about 8 or 9 meters per second. And then at the measurement location on the ground where surface wind speeds are measured, which is 10 meters off the ground, that they be no greater than 6 miles per hour.
And so there's enormous disparity or difference between what has to be happening at the hub level for wind speed and what has to be happening at the ground level. And so in my quip about the May weather that we had this year, you know just from your site visit yesterday that wind speeds were probably not in the 6-mile-per-hour range. At least in Old Town they were more like 20 miles per hour. And that's often the case with northeast wind, is that you don't get that, what we call, a stable atmospheric condition.

And the -- the compliance measurement conditions, meteorologically speaking, are a relatively rare phenomena. And it's hard to say how rare because it depends very much on location. This being a -- a somewhat coastal project, it may be in the neighborhood of 10 percent or less of the time when nighttime measurements are possible, or less. And -- and so under what I expect to be relatively rare occasions, that model predicting 42, even using the Eastbrook ordinance, 660 feet from the property line for P-1 would measure 42. If someone could actually document that, I would be -- I would be amazed or surprised at least.

So I would expect that even at that compliance point, sound level measurements will indicate lower levels.

MR. MURPHY: Okay. Thank you. I wanted to cover the
sound issue.

MS. HILTON: Okay. Anybody else? It looks like we're all set. Thank you. What is our next issue?

MR. MURPHY: We've actually covered the items that we -- that we wanted to. And so we're a bit ahead of schedule and I'm sure we can pass on to the -- or reserve --.

MS. HILTON: Okay. All right. Let me just think for a second whether I have any questions.

I guess, Dave Rocque, I just need to say that I think this is the first project we have -- wind project we have reviewed where you didn't recommend the toolbox. And when I -- I just remember reading that and I was thinking, whoa, you know this is different. Anyway, so I -- it was nice to see that there's a situation where a different approach is applicable here.

And as I understand it, that -- could you just tell me why that is?

MR. ROCQUE: Sure. The toolbox approach was for hydrology features, not soil erosion, sediment control. Because the mountains being steep with long watersheds have hidden features where water comes down that can cause lots of problems and you can't predict where they are. This is just regular ground. It has -- should have none of those hidden features.

So it doesn't require you to say if we encounter this
thing, we need to do this sort of thing. You should be able to predict what's wherever it is and plan it that way. So it made it a much simpler, easier project for me to review and should be the same to build.

MS. HILTON: Okay. All right. Good. I think -- I think that's all I have. Anybody else? So at this point --

MS. CARROLL: We're right on schedule.

MS. HILTON: -- we're on schedule.

MS. CARROLL: So I think you got your 45 minutes of questions and now the applicant has 25 minutes to ask questions of the panel.

MS. HILTON: Okay. All right. I assume they're going to have questions.

MS. BROWNE: Yes.

MS. HILTON: Yes. Okay.

MS. BROWNE: Thank you. For agency folks who may not know me, I'm Juliet Browne from Verrill Dana. And thank you all for being here today. Please bear with me, some of these topics -- or probably most of the topics are not a particular area of expertise. And I'll try to be logical in my questioning. But, please, if the question doesn't make sense, let me know and I'll try to rephrase it.

I'm going to begin probably with you, Mr. Bard. I think with -- most of my questions are probably IF & W
related and I think probably you, but feel free to turn to
your colleagues if that makes sense.

EXAMINATION OF RICHARD BARD

BY MS. BROWNE:

Q On the vernal pools -- and I appreciate the back and forth
and trying to make sure all the I's are dotted and T's are
crossed and understanding that you haven't had a chance to
review everything that was filed yesterday.

But just as a preliminary, the IF & W agrees that --
with respect to the vernal pool surveys, that they've been
done in, you know, seasonally appropriate conditions to
determine significance, right?

A Actually, the folks in Bangor who review the individual
data sheets, I believe they did flag several of them as
being done at inappropriate times. And they listed those
vernal pools as potential vernal pools rather than
nonsignificant.

Q Right. And part of the information that's been submitted
now is the evaluation of those PVPs to determine whether
any of them are actually significant. And you probably
haven't had a chance to digest that information?

A No, I haven't.

Q And as I understand it, there's one location, which is the
significant vernal pool on the schematic that's up there,
where IF & W had flagged the potential for mitigation,
right? It's just that one pool we're talking about?

A I believe so, yes.

Q And if -- I'm going to -- is this on? Just because it's a little bit confusing, the road here is the road that's the -- being used for the project, this is the transmission corridor, this is an existing road that's not being used by the project.

So I know you haven't done the calculations here, but the impact that IF & W is concerned about is the impact of the applicant using this road, which just cuts the edge of the critical terrestrial habitat, right?

A I guess maybe I'm confused. Is it the -- I can't read the letters there, but the one object on the left or the one on the right that we're -- said was 39 percent --

Q 34-CF, which is on my right, is the one that you have flagged as an issue. And the road that is on the southern part of the critical terrestrial habitat -- I'm sorry, Rebecca -- is not a project road, although it's an existing clearing. On the north is the transmission line corridor. And the project road just clips a little piece on the western side of that pool.

A Okay. Then I think what you initially said is correct, that just that little piece is the one we'd be concerned with as long as those other roads play no part in the development.
Right. So, I mean, just eyeballing it, it's pretty clear that doesn't reach the 25 percent threshold, right?

A I agree.

Q Great. Okay. So we've had this policy discussion today about whether the applicant should be assigned the impact associated with use of an existing road. Is it fair to say that we can probably put that policy discussion off for another day because it's not implicated by this vernal pool?

A I suppose so.

Q Okay. Great. Thank you. I guess there was also a question about putting the -- whether it would be a benefit to put in a new road and put that existing road sort of back to -- you know, re-vegetate it and let it -- put it to bed, so to speak.

When an applicant comes in and proposes a project, typically they're faced with a question, do we use an existing road that's out there or do we build a new road, right?

A Yep.

Q And -- and you understand that the applicant, oftentimes, doesn't have any ability to get rid of an existing road that may be in use by the landowner, right?

A Yes.

Q So it's -- and I assume that IF & W would prefer to have
the applicant use that existing road even if it's at the
edge of a vernal pool, as opposed to building a new road
that might not have any impact to a vernal pool?
A If the alternative is leaving the other road in place,
then, yes, we would rather have them use that one.
Q Okay. Great. And you don't have any reason to believe
that the applicant could require the landowner to put that
road back to bed, right?
A I'm not aware of that.
Q Okay. And it's a road that -- your understanding -- you
saw the pictures of the roads?
A Yes.
Q So you would agree it's a well-used, well-traveled road?
A Yes.
Q Okay. Thank you. I'm going to shift to bats for a minute.
I think that's probably you.
A Yes.
Q Okay. There has been some discussion today about the
pre-construction surveys that were done. And I just wanted
to be clear that the methodologies and protocols that the
applicant used here, in your view, are consistent with the
protocols and methodologies used at other sites and other
projects?
A As far as I know, yes.
Q Okay. And are consistent with what IF & W wanted to see?
A Yeah. We wish we had better science, but that -- this seems to be the state of science right now.

Q It's state of the art and it's what we have, right?

A Yeah.

Q And you had requested an additional season of radar surveys which are being done, right?

A Yes.

Q Okay. And then in the post-construction mortality surveys, I don't -- I think you flagged the only -- putting aside the question of curtailment, the only aspect of the post-construction monitoring protocol that there was some back and forth on at this point was the dates for the -- when they were going to do the post-construction monitoring, right?

A Yes.

Q And I just -- you know, for the benefit of the Commission and the interested parties, in our submission yesterday, which was the revised post-construction monitoring plan, on Page 3 of that submission we discussed the monitoring during the three distinct seasons, which includes the periods of time that had been requested by IF & W.

A Okay.

Q And so as long as those time periods that were reflected in the earlier Tom Hodgman memo were incorporated, than IF & W is happy with the post-construction monitoring plan that's
been proposed?
A Yes.
Q Great. And the post-construction monitoring protocols that are being used here are consistent with the post-construction monitoring protocols that are used throughout the northeast and the other areas that are -- where they do post-construction wind power monitoring right?
A I think so. The dates may have been evolving a little bit as the science evolves, but the principle is the same.
Q And, in fact, one of the things that's happened here with the data that's been gathered in the state of Maine is that the plans have been evolving here to reflect the additional data that's been gathered in Maine, right?
A Yes.
Q And it's -- Ed Arnett, I believe, is sort of one of the sort of recognized experts with respect to developing post-construction monitoring plans?
A As far as I know, yeah.
Q Okay. And as far as you know, these plans are consistent with the methodology that he has been proposing and advocating?
A I think so. I should say -- I'm sorry, I'm not the bat expect. He's away at a conference for white-nose syndrome and so --.
That makes two of us. And, I guess, let me just turn for a minute to the white-nose syndrome and the bat data generally.

Just so I'm clear and everybody else is, there are two basic kinds of bats that we've sort of been talking about in -- that we have concerns about potential mortality. There's the myotis species, which includes the brown-nosed bat, right?

Q Yeah. Sorry. The little brown bat that suffers from the white-nose syndrome.

A Right.

Q And then there are the long-distance migrating bats, right?

A Yes.

Q And the mortality is higher with the long-distance migrating bats than with the myotis species, right?

A For white-nose syndrome or --?

Q Sorry. For collision with wind turbines.

A I think that's correct, they tend to be flying higher through the site.

Q So there's a lower risk of collision for the myotis species as compared to the long-distant species?

A On a per bat species, yes, but I believe at this site something like 50 percent of the calls that were detected at the bat acoustic monitoring sites were myotis species.
So we felt it had a slightly higher potential for those species.

Q But the risk to the species in terms of the -- as compared to the long-distance one is lower because, I think, as you said, they tend to fly at lower --

A That's correct.

Q -- distances?

Okay. When IF & W first recommended curtailment, I believe it's based on three studies of curtailment, right?

A I think so, yes.

Q And it's fair to say that curtailment and it's effectiveness has not been particularly well studied?

A Probably not exhaustively studied, but the indications are clear that it reduces bat mortality.

Q And the principal studies, as I understand it, are two in the mid-Atlantic states, both again by -- involving Mr. Arnett, right?

A Yes.

Q And just sort of for context for people to understand, the bat populations in the mid-Atlantic states are considerably higher than the bat populations in Maine, right?

A I'm not sure, but that seems correct.

Q Well, certainly the bat mortality in the mid-Atlantic states is order -- from collisions with wind turbines is orders of magnitudes higher than any bat mortality we've
Q And just -- and these questions are not meant to suggest that the applicant is not very concerned about taking all reasonable measures to reduce bat mortality; they are. And I think the only area of divergence with IF & W is what's the best post-construction curtailment protocol to develop good science.

A Yeah.

Q But to understand some of the differences in numbers, are you familiar with what the mortality rates were in those mid-Atlantic states?

A Not offhand.

Q Okay. Would it surprise you to hear that, for example, in the -- at the Castleman site the mortality rate was at about just over 32 bats per turbine per year?

A Okay. I guess it doesn't surprise me.

Q And the -- have you had a chance to look at any of the mortality data from the Maine operating farms, the Mars Hill, Stetson 1, Stetson 2?

A I'm not terribly familiar with it.

Q Okay. So just bear with me. Would it surprise you to learn that the mortality rates in Maine are, as I said, orders of magnitude below what's been observed in the mid-Atlantic states?
Q And I assume the -- the purpose of the curtailment is to implement curtailment when it would be most effective in reducing bat mortality, right?

A Yes.

Q And bat mortality is highest when bat activity peaks, right?

A Yes.

Q And in Maine at the sites that have been studied so far, doesn't that typically occur in the July to September time period?

A I would say that's the peak of the activity, but they were detected at this site between April and October.

Q But in terms of implementing a plan that is sort of -- you get the greatest effectiveness, you agree that you would want to curtail during periods of peak activity?

A I would probably agree with you if we weren't so concerned about bats at this moment. You know, we're basically not willing to throw away any bats that we can avoid.

Q But you agree that we should curtail when it's effective?

A Yes.

Q Okay. And are you aware that the three studies where they've looked at curtailment, they've done curtailment generally from the July to September time period as opposed to the April to October time period?
A I guess that doesn't surprise me, again, just because we're admittedly being more conservative in our recommendation in this case because of this emerging threat of white-nose syndrome.

Q I appreciate that. And, again, you probably haven't had a chance to read the study that was -- the proposal that was submitted yesterday.

A No.

Q But what the applicant is proposing is to actually implement a curtailment program during the period that IF & W has requested, which is that more conservative April to October time period, but is proposing to curtail 50 percent of the turbines and have 50 percent of the turbines operating in their normal mode. And the purpose of that is to develop, really, a baseline for evaluating both the effectiveness of curtailment and in particular the effective of curtailment over time periods to determine when it's most effective.

Is that an approach that you think makes sense?

A As you acknowledge, we haven't seen the study, we don't know the particulars of the study. In a phone conversation with Jeff West from First Wind, he approached me with that idea and I ran it by many of the principals at IF & W. And the general consensus was that given the scale, we just didn't see the possibility of having a study that would
come out with statistically significant results that really
pointed to an answer to the questions that they're trying
to get at. We're certainly willing to read through a
proposal and consider it and work with First Wind, but at
the moment we don't think that it would be an effective
strategy.

Q And I suppose -- just so we're clear on this, the irony is
that we don't have high enough fatality numbers to get a --
you know, statistically significant comfort level between
the curtailed and the non-curtailed?

A That is probably part of the irony, yes.

Q But it's possible it could provide some meaningful data in
terms of understanding what would be most effective?

A It may, but at the cost of bats that we, frankly, don't
feel should be expended right now.

Q IF & W's request -- and just -- I just want to make sure
that people are not confused by this. But IF & W's request
for curtailment represents a shift in IF & W's policy as
opposed to a concern about this particular site, right?

A I would say yes. I mean, it's both. We're certainly
concerned about the site, but, yes, it is IF & W's policy
that this will be our standard recommendation.

Q Going forward on projects?

A Yes.

Q And, actually, there's not a single project in Maine to
date that's been asked to implement curtailment -- or that
has been issued a permit that requires curtailment?

A No, not yet.

Q And this is probably the first plan -- I was going to say
that you've seen, but you haven't seen it yet -- that's
been submitted to IF & W to evaluate curtailment and
effectiveness of curtailment?

A That's probably true.

Q And are you aware that Ed Arnett that the -- each of the
three studies, actually, that evaluated the effectiveness
of curtailment implemented a similar methodology of
evaluating turbines either in full operational mode or at
some varying level of increasing the cutting speed to do
just what we've talked about, which is evaluate the
effectiveness of curtailment and -- and the most effective
time periods?

A I think that would be -- a vital element of it would be all
of the studies that are going on interacting and can
combine data rather than being specific to just Bull Hill,
for example.

Q I think there were some questions about -- I'm going to
shift topics here. I think I'm done with bats. There were
some questions on the surveys done on -- whether there were
any breeding bird surveys done at the site. And isn't it
true that the applicant and IF & W discussed whether there
was a need for breeding bird surveys and IF & W concluded there wasn't a need for breeding bird surveys at this site?

A Are you referring to passerines?

Q Yes. That's my understanding.

A I'm not aware of those discussions. It probably would have happened with Tom Hodgman. So I'm not sure -- I don't think it is our standard policy to ask for those at this point.

Q Okay. So there weren't any pre-construction surveys that you're aware of that have been requested and that haven't been done?

A That's correct.

Q Okay. And, in fact, actually, doesn't Maine have somewhat of a benefit in terms of understanding, consistent with what the science of technology allows, some of the -- some of the patterns of birds based on the number of wind tower projects, the number of pre-construction radar and other surveys that have been done and now post-construction surveys? Don't you feel that there's sort of a growing body of information that helps inform IF & W and applicants of what's happening with birds in this area?

A I would say that's correct. Yep.

MS. BROWNE: Okay. Let me just take a minute to look at my notes and I think I may almost be done. That's all I have. Thanks again for everybody being here.
MS. HILTON: Okay. Lynn, do you want to --?

MS. WILLIAMS: I have no -- I have no questions.

MS. HILTON: And how about the Hancock County Commissioners?

MR. BROWN: No questions.

MS. HILTON: No questions. All right. I have -- I guess I have a clarification. And it has to do with this graph here. Is the lower of the -- there's two vernal pools shown on that. And it has been very clear that the one -- the one to the right is a significant vernal pool, right?

MR. BARD: Yes.

MR. HILTON: What is the status of the other one?

MR. BARD: I'm not familiar with the data, but I can read that -- the label is SVP, which indicates significant vernal pool. I'm assuming that the calculations were that the total impact was less than 25 percent on that one, only because I know there was only one that was calculated to be more than 25 percent, which is the one on the right.

MS. HILTON: And that is why when the applicant was just questioning you, she was focusing on the one to the right?

MR. BARD: Yes.

MR. NADEAU: Which one is the one that we stopped at yesterday?
MS. HILTON: The one on the left.
MR. NADEAU: That's what I thought. I've been confused, too, Gwen.
MS. HILTON: Yeah. Well, and I think -- so just as clearly as you can state what the distinction is between those two and -- and why -- why as a result of that distinction how they are -- how we deal with them might be differently -- different.
MR. BARD: Okay. If I understand the color coding correctly, the reddish or whatever color that is -- is the non-forested habitat within the 250-foot buffer of those vernal pools. The one on the right has what amounts to 39 percent of that circle is filled with that red color, which rises above the 25 percent threshold that is in the statute and regulation that triggers our concern.
MS. HILTON: Okay. And the other does not?
MR. BARD: The other, I'm assuming, is somewhere below 25 percent.
MS. HILTON: Below the 25 percent?
MR. BARD: Yeah.
MS. HILTON: All right. I think I've got it. Does everybody have it?
I guess -- I know that some of you folks drove up here -- were asked to come and I know that we have not asked all of you -- or each of you questions. Somebody just
mentioned, Lynn, that you'd asked Mitch to come up from the PUC. Did -- are you sure you don't have any questions for him?

MS. WILLIAMS: No. I'm sorry. I clarified -- I clarified my question. I did some research and -- yeah. Sorry.

MS. HILTON: All right. Good enough. I want to thank you all for your --

MS. KURTZ: Wait. Can I ask Mr. Tannenbaum a question and, actually, Mr. Bard so that your drive wasn't totally in vain?

I'm thinking about this notion of curtailment, 50 percent of turbines at a reduced speed. And I'm assuming that that is going to reduce the output of energy; is that correct? Does curtailment reduce --

MR. TANNENBAUM: I really don't know that, but it seems like a logical assumption.

MR. KURTZ: Okay. Well, maybe we can get that information going forward, perhaps, with the reduction in output?

MR. MURPHY: Yes.

MS. KURTZ: And then, Mr. Bard, I was listening to Ms. Browne's questions and I was thinking about the numbers -- the numbers that she was providing us with in terms of differences in the mid-Atlantic states and up here, raw
numbers of birds or bats being killed by the turbines.

And on the one hand it sounds like, yes, there's a lot more birds dying in the mid-Atlantic states. But I'm curious as to whether these -- how those numbers stack up as percentages of the population that's in the area? I mean, if it's 32 birds out of 3 million that's not terribly high; and if it's only one bird per 100 flying around Bull Hill, you have an entirely different situation.

Do you have a sense of how the percentages of the mortality versus the population in those two different mid-Atlantic -- or is there a way to get a better handle on just how significant or how big a portion of the population that might be for each of those two areas, so that we're not comparing apples to oranges because it does seem that it's not a -- it's not a -- on the surface it might appear to be useful information, but it's really not to me if it's not calculated as a percentage, particularly if they're breeding -- breeding populations.

MR. TODD: Charlie Todd. I'll try to help Rich through this one. We can't quantify bat populations in terms of abundance. We simply don't have that data. However, several of the species are near the edge of their range and presumably at lower density than in the mid-Atlantic states.

MS. KURTZ: So does that suggest that even though it
may be a smaller number that are getting killed up here, that it's still a significant -- it may be as significant as 32 in the mid-Atlantic states? We can't really say that it's not that big a deal or not as big an issue up here as it might be --?

MR. TODD: But to insulate that would be the case, especially if there's other risk factors evolving.

MS. KURTZ: Okay. Thank you.

MS. HILTON: Good questions. Anybody else before I read my closing statement? I thank you, everyone, for your participation today. It -- I think we've built a good record to make a decision on. And there's still more time to submit things to the record, which I'll outline here.

I wish to remind everyone that the record of this hearing will remain open for a period of 14 days until Tuesday, May 31st, to receive written statements from the interested public and for an additional seven days until Tuesday, June 7th, 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 that the Second 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.

We will now recess this hearing for dinner and then we
have a public session for public testimony tonight that
begins at 6 o'clock. So thank you all.

(Concluded this hearing at 4:08 p.m. this date.)
CERTIFICATE

I, Angella D. Clukey, a Notary Public in and for the State of Maine, hereby certify that on May 17, 2011, a hearing was held regarding Pending Development Permit Application DP 4886; and that this hearing was stenographically reported by me and later reduced to typewritten form with the aid of computer-aided transcription; and the foregoing is a full and true record of the testimony given by the witnesses.

I further certify that I am a disinterested person in the event or outcome of the above-named cause of action.

IN WITNESS WHEREOF, I subscribe my hand and affix my seal this 3rd day of June 2011.

______________________________
ANGELLA D. CLUKEY, NOTARY PUBLIC
Court Reporter

My commission expires: March 17, 2017