1 STATE OF NEW HAMPSHIRE 2 SITE EVALUATION COMMITTEE 3 DAY 5 **September 23, 2016** - 9:05 A.M. Public Utilities Commission. 4 21 South Fruit Street, Suite 10 Morning Session 5 Concord, New Hampshire ONLY 6 7 SEC DOCKET NO. 2015-02. IN RE: ANTRIM WIND ENERGY, LLC; Application of Antrim Wind 8 Energy, LLC for a Certificate of Site and Facility. 9 (Hearing on the merits) 10 11 PRESENT FOR 12 SUBCOMMITTEE: SITE EVALUATION COMMITTEE: 13 Cmsr. Robert R. Scott Public Utilities Commission (Presiding as Presiding Officer) 14 Cmsr. Jeffery Rose Dept. of Resources & 15 Economic Development Dr. Richard Boisvert Dept. of Cultural Resources/ Div. of Historical Resources 16 (Designee) John S. Clifford Public Utilities Commission 17 (Designee) Dir. Eugene Forbes Dept. of Environmental 18 Services/Water Division (Designee) Patricia Weathersby Public Member 19 20 Also Present for the SEC: Michael J. Iacopino, Esq. (Brennan... 21 Pamela G. Monroe, SEC Administrator 22 Marissa Schuetz, SEC Program Specialist 23 COURT REPORTER: Cynthia Foster, LCR No. 014 24

| 1 | APPEARANCES: (as noted by the court reporter) |
|----------|-----------------------------------------------------------------------------------------------------------------|
| 2 | Reptg. Antrim Wind Energy (Applicant): Barry Needleman, Esq. (McLane) |
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| 16 | Reptg. Allen/Levesque Group: |
| 17 | Charles Levesque, pro se Mary Allen, pro se |
| 18 | Rept. Meteorologists Group: Dr. Fred Ward |
| 19 | Reptg. Wind Action Group: |
| 20 | Lisa Linowes |
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| 22 | Reptg. Non-Abutting Landowners Group: |
| 23 | Richard Block, pro se Annie Law, pro se Robert Cloland, pro so |
| 24 | Robert Cleland, pro se Elsa Voelcker, pro se |
| | |

INDEX WITNESS DAVID RAPHAEL PAGE NO. (Resumed) Cross-Examination by Mr. Ward Cross-Examination by Mr. Reimers EXHIBITS ASNH 12 NHDES Official List of Public Waters ASNH 13 The Clean Energy Alliance Guide *{SEC 2015-2}* [Day 5/Morning Session Only] *{09-23-16}* Γ

| 1 | PRESIDING OFFICER SCOTT: Good morning. I |
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| 2 | think we're on Day 5 of the SEC hearings for the |
| 3 | Antrim Wind Farm application. If memory serves, |
| 4 | we are still on Mr. Raphael, and Mr. Ward, we |
| 5 | were with you and you had asked for some time. |
| 6 | Now you've had it so, you had your time, rather, |
| 7 | so we'll start with you. |
| 8 | MR. WARD: I would ask that you leave me, |
| 9 | if I promise to speak up loudly, that you'll |
| 10 | give me leave to talk from various places in the |
| 11 | room and even approach the witness. |
| 12 | PRESIDING OFFICER SCOTT: Right. Again, |
| 13 | just, as you said, as long as you are loud |
| 14 | enough. |
| 15 | MR. WARD: I will be loud. |
| 16 | BY MR. WARD: |
| 17 | Q Mr. Raphael, I'm a meteorologist, and we're |
| 18 | different, I think, from your profession in that |
| 19 | we like to think big, we talk about data from |
| 20 | the entire world. Even when we have a local |
| 21 | weather station we're still talking about |
| 22 | visibility out a mile, sky cover out to a |
| 23 | hundred miles and things like that. So we've |
| 24 | been talking about and you've been talking about |
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| 1 | | and the discussion has been about the visual |
|----|---|--------------------------------------------------|
| 2 | | impact of this facility, but we're all doing it |
| 3 | | from little pictures 8 and a half by 11 and some |
| 4 | | site visits. Some people have actually gone |
| 5 | | there. So I'd like to ask you a couple of |
| 6 | | questions, just general questions. I'm not a |
| 7 | | visual impact expert, but I'd like to start by |
| 8 | | saying if I do this |
| 9 | | PRESIDING OFFICER SCOTT: Mr. Ward, it's |
| 10 | | going to be hard to get that on the |
| 11 | | transcription so maybe you could describe it. |
| 12 | Q | I've drawn a little A and a big A. Is this |
| 13 | | likely to have more visual, all things being |
| 14 | | equal, would this likely have more visual impact |
| 15 | | than this? |
| 16 | А | I would say that it's more likely to be more |
| 17 | | visible. I can't comment on impact. It depends |
| 18 | | on what it is, where it is, and other factors as |
| 19 | | regards impact, but it certainly would be more |
| 20 | | visible. |
| 21 | Q | So we're just having a question about impact as |
| 22 | | well as impact or not. This would be more |
| 23 | | easily seen than this. |
| 24 | А | Yes. |
| | | |

| 1 | Q | If somebody were looking for it, would they more |
|----|---|-----------------------------------------------------------------------------------|
| 2 | | likely see this than this? |
| 3 | A | Most likely. |
| 4 | | PRESIDING OFFICER SCOTT: For the record, |
| 5 | | Mr. Ward, you're pointing at two different |
| 6 | | letter As, one much bigger than the other. This |
| 7 | | is for the transcription. Correct? |
| 8 | Q | We have a little A and a big A, and I'm asking |
| 9 | | him about the little one versus the big one. |
| 10 | | Whether this has more. I'm asking the impact, |
| 11 | | but all we've gotten to is whether this is more |
| 12 | | visible than this. |
| 13 | | In general, the point of all this is that |
| 14 | | things that are larger are easier to see than |
| 15 | | smaller. Would you agree? |
| 16 | А | Generally speaking, certainly. |
| 17 | Q | So as a general rule, all things being equal, |
| 18 | | larger would be more easily seen than smaller. |
| 19 | A | I think that's fair to say. |
| 20 | Q | Would this hold true as we keep going from this |
| 21 | | size to this size to that size, is there any |
| 22 | | limit on size versus visibility? |
| 23 | | PRESIDING OFFICER SCOTT: Mr. Raphael, is |
| 24 | | your microphone on? |
| | | $\int GEC 2015-2 \int Dev 5 / Morning Session Only 1 \int 09-22-16 \end{bmatrix}$ |

WITNESS - DAVID RAPHAEL

| 1 | A | Goodness. Yeah, it's on. Sorry. I'll to try |
|----|---|--------------------------------------------------|
| 2 | | to speak closer. You know, that's a, I would |
| 3 | | just say that, you know, size isn't the only |
| 4 | | determinant. I mean, something very large can |
| 5 | | be very well screened and not visible at all |
| 6 | | where something small might not have screening |
| 7 | | or may not be visible from certain locations, |
| 8 | | and, therefore, you know, might be more visible |
| 9 | | from certain locations, and therefore would |
| 10 | | be more visible so it depends on context. |
| 11 | Q | I agree with you completely. That's why I |
| 12 | | started it off, all other things being equal, if |
| 13 | | it's the same thing, would large, generally be |
| 14 | | more visible than small, and very large more |
| 15 | | visible than large up to some point at which you |
| 16 | | can't even take it in, but up to the point where |
| 17 | | you can comprehend it, then large would tend to |
| 18 | | be in most cases, all things being equal, more |
| 19 | | visible than small? |
| 20 | A | Yes. |
| 21 | Q | And I'm extending this up to the view that I |
| 22 | | would have if I were driving along Route 9 and |
| 23 | | looking at Tuttle Hill and Willard Mountain |
| 24 | | where I would see nine windmills; in other |
| | | |

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|----|---|-------------------------------------------------------------|
| 1 | | words, I could comprehend, I can actually see |
| 2 | | the nine windmills. Would it also hold true up |
| 3 | | to that size? |
| 4 | А | Well, I think, again, there are factors which |
| 5 | | would affect to what extent you would see it, |
| 6 | | record it and find it visible, large or small, |
| 7 | | and that would depend on your orientation, you |
| 8 | | know, be different if the view was to the side |
| 9 | | of the car, out the side window versus your |
| 10 | | windshield. It might look or feel different |
| 11 | | depending on the speed you were going. So there |
| 12 | | are a lot of factors that go into an analysis |
| 13 | | and those factors have a lot to do with the |
| 14 | | context within which you are viewing something. |
| 15 | Q | You can rest assured we will get to those other |
| 16 | | factors, but the question was all other things |
| 17 | | being equal. Would that generally hold true? |
| 18 | A | You know, I would say yes. I mean, I think if |
| 19 | | there's more to a feature in the landscape than |
| 20 | | is likely it would be more visible. |
| 21 | Q | Okay. Would the impact of this, and may I have |
| 22 | | those held up now, be more or less visible than |
| 23 | | this? In other words, multiple things? |
| 24 | | PRESIDING OFFICER SCOTT: Mr. Ward, you |
| | | |
| | t | <i>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</i> |

| 1 | | need to describe for the written record what |
|----|---|-------------------------------------------------|
| 2 | | you're doing. |
| 3 | Q | Some of the audience are holding up the exact |
| 4 | | same picture that I'm holding, but we have more |
| 5 | | pictures of the same thing. |
| б | | Now, the question is, does this have more |
| 7 | | or less impact than that? |
| 8 | А | Again, you know |
| 9 | Q | All things being equal. |
| 10 | А | Not necessarily. Not necessarily. I mean, if |
| 11 | | that was a pleasing view or a pleasing element |
| 12 | | to look at, it actually, I mean, impact implies |
| 13 | | something negative, and so, you know, a taller |
| 14 | | mountain or several mountains if they were in |
| 15 | | the shape of an A, might actually be more |
| 16 | | pleasing and enjoyable to look at than a single |
| 17 | | mountain, for example. |
| 18 | Q | You said that impact implies negative. I don't |
| 19 | | see that in the context of the outline and the |
| 20 | | definitions for this proceeding that impact was |
| 21 | | necessarily positive or negative, was it? |
| 22 | А | I certainly don't see it that way, no, but I |
| 23 | | think there's a tendency to view it in that |
| 24 | | sense. |
| | | |

| 1 | Q | But you were asked about impact. I don't recall |
|----|---|--------------------------------------------------|
| 2 | | anything in your testimony or anything, |
| 3 | | questions or anything here which suggested that |
| 4 | | impact was either positive or negative. It was |
| 5 | | a question is are you likely to, more likely see |
| 6 | | it and be aware of it. That's my understanding |
| 7 | | of impact unless you have a different |
| 8 | | definition, and if you do you'd like to hear it. |
| 9 | А | Well, there's not a simple definition to impact |
| 10 | | in the sense that you're talking about. You |
| 11 | | know, in our visual assessment, we go through a |
| 12 | | multi-step process that begins with an |
| 13 | | inventory, assesses landscape sensitivity and |
| 14 | | scenic quality of that landscape, and then we |
| 15 | | look at visual effect and use a number of |
| 16 | | criteria to do that, you know, objective |
| 17 | | criteria that literally anybody could fill out a |
| 18 | | form with and then we finally take another look |
| 19 | | at a separate piece which I think is what you're |
| 20 | | getting at which is viewer effect. How does it |
| 21 | | affect the viewer. And that's a critical last |
| 22 | | piece, and I think that's what you're asking me |
| 23 | | about. So that's why I, you know, I refer to |
| 24 | | affect versus impact. I don't know if you saw |
| | | |

| | | WIINESS - DAVID RAPHAEL |
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| 1 | | one large A-shaped mountain, to use your |
| 2 | | example, versus three large A-shaped or |
| 3 | | conical-shape mountains whether you would find |
| | | - |
| 4 | | the impact greater or less. I think you'd find |
| 5 | | the effect certainly greater, and perhaps more |
| 6 | | positive. |
| 7 | Q | What effect? |
| 8 | A | The effect of having several summits or conical |
| 9 | | shapes to look at. |
| 10 | Q | Effect implies on something. What is the effect |
| 11 | | on? |
| 12 | А | On you and how you see it and how you view it. |
| 13 | Q | So multiple does have some effect. We won't get |
| 14 | | into the details of it, but you're willing to |
| 15 | | concede that multiples of the same thing, |
| 16 | | whether they're beautiful or ugly, we've leave |
| 17 | | that aside, but more of them are likely to have |
| 18 | | more effect. |
| 19 | A | A different effect. I wouldn't say more. I |
| 20 | | mean more, again, is a quantitative, and I think |
| 21 | | we're talking about, you know, how a viewer |
| 22 | | responds to a landscape and, you know, that can |
| 23 | | be a positive or a negative and so I wouldn't |
| 24 | | call it more or less. I would call it |

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| 1 | | different. |
|----|---|--------------------------------------------------|
| 2 | Q | Well, we weren't getting into, at least unless I |
| 3 | | missed something, into whether the windmills |
| 4 | | were beautiful or ugly. I don't recall any |
| 5 | | comments in your testimony or any of the |
| 6 | | questioning that got into that question. I've |
| 7 | | heard comments about they're beautiful, they're |
| 8 | | ugly, but hasn't happened here as far as I know |
| 9 | | unless you can recall something that I missed. |
| 10 | | Is that true? |
| 11 | A | I think you did miss something. I think in the |
| 12 | | narratives and the review in our VIA we discuss, |
| 13 | | you know, different reactions that people have |
| 14 | | to wind energy, and I think it's clear that |
| 15 | | there are reactions that are both positive and |
| 16 | | negative, and there is some reference here in |
| 17 | | quotations about whether people felt wind energy |
| 18 | | and the view of turbines is a positive or a |
| 19 | | negative. |
| 20 | Q | We're talking about visual impact. We're not |
| 21 | | talking about whether we believe the science, |
| 22 | | whether this is clean or anything like that. I |
| 23 | | think we're talking about the visual impact and |
| 24 | | I'm trying to stay on that and I'm not arguing |
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| 1 | | whether impact is plus or minus. I'm just |
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| 2 | | saying was there and is there more. And so the |
| 3 | | question to go back again to, is this or that |
| 4 | | more impact. |
| 5 | А | It's a different impact. Again, more? I'm not |
| 6 | | comfortable with agreeing with you on more. I |
| 7 | | think its different. |
| 8 | Q | Okay. So if we back up, then this is different |
| 9 | | from that, and I'm now pointing to the large and |
| 10 | | small As, and more is extras are different from |
| 11 | | this one. |
| 12 | А | Yes. |
| 13 | Q | We're agreeing on that, but we're not agreeing |
| 14 | | on what the word more means. |
| 15 | А | I'm just saying that I think, I'm not |
| 16 | | necessarily disagreeing with what the word more |
| 17 | | means. I'm basically saying that, you know, |
| 18 | | size or numbers don't, I mean have a different |
| 19 | | effect on a viewer and how they respond to it, |
| 20 | | and that effect could be positive or negative, |
| 21 | | not more or less. |
| 22 | Q | I would agree with you on the could be positive |
| 23 | | or negative, but the point of this proceeding |
| 24 | | and the point of this discussion is to determine |
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| 1 | | visual impact. That's more or less. It isn't a |
|----|---|--------------------------------------------------|
| 2 | | question of good or bad. The point of this |
| 3 | | thing and the whole question here is what is the |
| 4 | | visual impact on the surroundings. So we're |
| 5 | | talking about it either has more or less visual |
| 6 | | impact. We cannot avoid that. Now, is it |
| 7 | | likely to have more or less visual impact, for |
| 8 | | better or for worse, is the size and the number |
| 9 | | likely to have more or less visual impact? |
| 10 | А | Forgive me. I just don't want to just answer |
| 11 | | that yes or no because I think that's a question |
| 12 | | in isolation, and as a visual expert, we are |
| 13 | | trained to look at that question in a context |
| 14 | | with other factors that weigh into whether it's |
| 15 | | more or less or positive or negative, to use |
| 16 | | your terminology. |
| 17 | Q | I understand all of that. That's why I keep |
| 18 | | starting with everything else being equal. You |
| 19 | | are the expert, and who else can I ask? I'll go |
| 20 | | back to the chairman. Who else can I ask? Does |
| 21 | | that factor account more or less, and if your |
| 22 | | answer is you don't know, that's a fine answer. |
| 23 | | That will go into the record. So I need a yes, |
| 24 | | a no, or I don't know. |

| 1 | A | I can't assess, I can't connect your large A and |
|----|---|--------------------------------------------------|
| 2 | | your small A directly to the process we go |
| 3 | | through which is very comprehensive to review |
| 4 | | the effect of a project, and I understand that |
| 5 | | you're trying to provide a stark contrast or |
| 6 | | difference between one or more, but I'm trying |
| 7 | | to tell you that I believe that when you make |
| 8 | | that kind of an analysis, you need to understand |
| 9 | | the context. |
| 10 | | Now, in the context of this room, and maybe |
| 11 | | this will help you, I would agree that large As |
| 12 | | are more visible than small As, and if you had |
| 13 | | four large As versus one A, there would be more |
| 14 | | As to look at, if that's helpful to you. |
| 15 | Q | Let me ask it slightly differently. You're here |
| 16 | | testifying about the visual impact. Isn't that |
| 17 | | true? |
| 18 | А | Yes. I'm here |
| 19 | Q | Visual impact. |
| 20 | А | I'm here to testify about my visual assessment, |
| 21 | | and part of that visual assessment is to assess |
| 22 | | whether the project is reasonable or |
| 23 | | unreasonable within the rules of the SEC, and |
| 24 | | the review of the project. |
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| 1 | Q | The terminology, you seem to be afraid of the |
|----|---|-------------------------------------------------|
| 2 | | terminology. Is the word "impact" a problem? |
| 3 | A | No. |
| 4 | Q | If not, then we need to change the whole point |
| 5 | | of this proceeding. It's on visual impact |
| 6 | | unless I misread. Are we not talking about |
| 7 | | visual impact? Isn't that why you're here? |
| 8 | А | In part, yes. |
| 9 | Q | You are the expert for Antrim Wind on visual |
| 10 | | impact. Are you not? |
| 11 | A | I am the expert not on visual impact. On visual |
| 12 | | quality and scenic quality. I don't call myself |
| 13 | | a visual impact expert. I'm a landscape |
| 14 | | architect. I'm here to review the aesthetics |
| 15 | | and the quality of the project and to assess |
| 16 | | whether there is an unreasonable effect or not |
| 17 | | from the project. That's the language of the |
| 18 | | rules. |
| 19 | Q | I have to confess I'm having a problem, |
| 20 | | Mr. Raphael, because the title of this session |
| 21 | | and your participation in it was about visual |
| 22 | | impacts. |
| 23 | А | The title of my report is Visual Assessment of |
| 24 | | the Antrim Wind Project, but I'll grant you, if |
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| 1 | | you want to refer to it as impact, I'm happy to |
|----|---|--------------------------------------------------|
| 2 | | discuss that in that vein with you. |
| 3 | Q | We are not going to see anybody else that I can |
| 4 | | question about visual impact, are we? |
| 5 | A | Absolutely. |
| 6 | Q | Maybe I'll ask Mr. Needleman. Are we going to |
| 7 | | have any witness here who is going to be able to |
| 8 | | discuss visual impact other than Mr. Raphael? |
| 9 | | MR. NEEDLEMAN: I think, Dr. Ward, we get |
| 10 | | your point. |
| 11 | | MR. WARD: I asked a question. I will ask |
| 12 | | the Chairman. |
| 13 | | MR. IACOPINO: He's not the witness. |
| 14 | | PRESIDING OFFICER SCOTT: Mr. Raphael |
| 15 | | already answered your question, and he said he's |
| 16 | | the guy. |
| 17 | A | Did you say that? I didn't hear it. |
| 18 | Q | On visual impact, you are the guy. |
| 19 | A | Today I am here to address visual impact. |
| 20 | Q | So you are the guy for now. Okay. So let's go |
| 21 | | back to visual impact. Is there anything in |
| 22 | | your written or oral testimony that discusses |
| 23 | | the effect on visual impact, all other things |
| 24 | | being equal, of the size of this facility? |
| | | |

| 1 | А | Yes. |
|----|---|--------------------------------------------------|
| 2 | Q | Can you point me to some place where you said |
| 3 | | the size either does or doesn't or whatever? |
| 4 | А | Certainly. In our methodology under visual |
| 5 | | effect, let me get to the proper I'll just |
| б | | use my short form. |
| 7 | Q | Take your time. In our methodology, one of the |
| 8 | | steps is to determine visual effect, and under |
| 9 | | that step, there are six criteria which we use. |
| 10 | | Three of them have to do with, you know, how |
| 11 | | large or small the turbines are or how visible |
| 12 | | they will be due to their numbers. One is |
| 13 | | number of turbines visible so that would speak |
| 14 | | to your discussion about more or less. The |
| 15 | | second one is percent of visibility. In other |
| 16 | | words, given the size and scale of the project, |
| 17 | | and, you know, to your point, if you have more |
| 18 | | turbines, the chances are there's going to be |
| 19 | | more visibility, and that's what's covered under |
| 20 | | number 2 which is percent of visibility. |
| 21 | | Number 4 which is angle of view also refers |
| 22 | | in part to how many turbines will you see from |
| 23 | | that particular vantage point that we're |
| 24 | | analyzing, and again, if you have more turbines |
| | | |

| 1 | | visible, you know, your angle of view will be |
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| 2 | | wider, and, therefore, the presence or the |
| 3 | | visibility of the project would be corresponding |
| 4 | | to that. If there are fewer turbines visible, |
| 5 | | your angle of view would be narrower. So there |
| 6 | | are three criteria there in that step which is |
| 7 | | an important step in our analysis that speak to |
| 8 | | size in some respect. |
| 9 | Q | Perhaps I didn't ask the question quite the way |
| 10 | | I wanted it. My question is, is there anything |
| 11 | | in any of your written or oral testimony that |
| 12 | | discusses whether the size is better or worse, |
| 13 | | has more or less visual impact? |
| 14 | А | Yes. There are certain elements in a number of |
| 15 | | locations. You know, determining the scale of |
| 16 | | the project overall, you know, again, is a |
| 17 | | determination based in part on size, and I think |
| 18 | | if you read through the analysis, I'm sure |
| 19 | | you'll find a number of references that speak |
| 20 | | to |
| 21 | Q | I'm sorry, Mr. Raphael. Let me try it again. |
| 22 | | Did you ever say I know you considered |
| 23 | | the world. I won't take that from you. Did you |
| 24 | | in any of your testimony, oral or written, ever |
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| 1 | | say that the, and I'll use the term "huge" size |
|----|---|--------------------------------------------------|
| 2 | | of this facility is a significant visual impact, |
| 3 | | and now I'll talk impact in the negative sense. |
| 4 | | MR. NEEDLEMAN: I'm going to object to that |
| 5 | | characterization. |
| 6 | | PRESIDING OFFICER SCOTT: Understood. |
| 7 | Q | Should I try it again? |
| 8 | | PRESIDING OFFICER SCOTT: Maybe take the |
| 9 | | adjectives out. How's that? |
| 10 | | MR. WARD: Are you objecting to huge? |
| 11 | | MR. NEEDLEMAN: Yes. |
| 12 | | MR. WARD: I will take that out. |
| 13 | Q | The large size of this facility and we're |
| 14 | | talking about two miles long and a 10th of a |
| 15 | | mile high, did you ever in there in any of your |
| 16 | | things say that this was a negative for visual |
| 17 | | impact? Anywhere? |
| 18 | А | I don't recall specifically saying that in the |
| 19 | | way in which you've characterized it. We |
| 20 | | certainly discuss, again, the size and scale of |
| 21 | | the project throughout the analysis and, again, |
| 22 | | part of the conclusion that we came to was that |
| 23 | | the size of the project actually is relatively |
| 24 | | modest. As we discussed yesterday in terms of |
| | | |

| 1 | | overall numbers compared to other projects here |
|----|---|------------------------------------------------------|
| 2 | | in New Hampshire, and certainly other projects |
| 3 | | throughout New England, a nine-turbine array is |
| 4 | | a relatively small scale wind energy project. |
| 5 | Q | Excuse me. |
| 6 | A | And that's what we did say. We didn't perhaps |
| 7 | | say exactly what you're looking for me to quote |
| 8 | | or reference. |
| 9 | Q | I have not, I think, disagreed with the |
| 10 | | characterization that you have discussed. |
| 11 | | Politicians have a habit of discussing and |
| 12 | | discussing and discussing and trying as hard as |
| 13 | | they can never to come to a conclusion, so I'm |
| 14 | | not talking about whether we've discussed it. |
| 15 | | We've discussed it in disgusting detail. I'm |
| 16 | | asking did you ever make a statement anywhere in |
| 17 | | your thing that the size of the project, however |
| 18 | | you want to judge it against, that that could |
| 19 | | have a negative, that would be a negative visual |
| 20 | | impact. |
| 21 | A | I don't believe I presented it in that manner in |
| 22 | | the assessment, no. |
| 23 | Q | Okay. Did you ever in any of your written or |
| 24 | | oral testimony say that nine of something is |
| | | |
| | { | [SEC 2015-2} [Day 5/Morning Session Only] {09-23-16} |

| 1 | | likely, all other things being equal, to have a |
|----|---|--------------------------------------------------|
| 2 | | stronger negative visual impact than one? |
| 3 | А | I don't believe so. |
| 4 | Q | Okay. I'll apologize having to go through each |
| 5 | | of these separately, but I think we're going to |
| 6 | | have to. If I were to take, again, my A, and I |
| 7 | | would hold it like this, and then I were going |
| 8 | | to compare it to this, would this have more |
| 9 | | virtual impact than this? All other things |
| 10 | | being equal? |
| 11 | | MR. NEEDLEMAN: Can we clarify the record? |
| 12 | Q | I'm swinging the A back and forth above my head |
| 13 | | versus holding it in front of me. So the |
| 14 | | comparison is between the holding it, moving it, |
| 15 | | and holding it still in front of me. |
| 16 | | The question then is, is there a difference |
| 17 | | in visual impact between this, which is the |
| 18 | | swinging, and this, which is holding it steady? |
| 19 | | All other things being equal. |
| 20 | А | What would be helpful to me is if you describe |
| 21 | | what you mean by visual impact. Could you do |
| 22 | | that for me? In terms of how you're, in what |
| 23 | | sense do you want me to answer that question |
| 24 | | with regard to impact? More visible? I mean, |
| | | |

WITNESS - DAVID RAPHAEL

| 1 | | I'm not, you know, my answer will be the same as |
|----|---|--------------------------------------------------|
| 2 | | the previous answer to a similar question. It |
| 3 | | may have a different visual effect. Again, more |
| 4 | | or less, it depends on what it is, the purpose |
| 5 | | it it's serving, the context it's in. Will it |
| 6 | | catch the eye more? Yes. Maybe that's what |
| 7 | | you're |
| 8 | Q | No. I'm not trying to frame your opinion. I'm |
| 9 | | asking visual impact in the context of this |
| 10 | | proceeding, and as I understand it, and I might |
| 11 | | be wrong, and I could stand corrected, the |
| 12 | | question here is that we don't want something |
| 13 | | that has enormous visual impact. That should |
| 14 | | then work for turning it down. So the visual |
| 15 | | impact in the context of what we're talking |
| 16 | | about here is the question of if it's negative, |
| 17 | | is it negative enough to make a difference. So |
| 18 | | visual impact in the context of these |
| 19 | | proceedings is always negative. It needn't be, |
| 20 | | I'll agree with you, but it is. So when I ask |
| 21 | | the question, I'm asking it in the context of is |
| 22 | | it negative. So when I do motion, and I think |
| 23 | | we can all agree, that these things not only are |
| 24 | | rotating constantly, but they're turning around |
| | | |

| 1 | | and so every time you see them you'll see a |
|----|---|--------------------------------------------------|
| 2 | | different view. So what I'm saying is, is this |
| 3 | | motion, both this and this motion, I'm sorry. |
| 4 | | The motion circular of the blades and the motion |
| 5 | | rotating of the facility, the turbine itself, |
| 6 | | we'll take both of those as motions, does the |
| 7 | | fact that it has motion, substantial motion, |
| 8 | | make it have more visual impact than if they |
| 9 | | were still? |
| 10 | A | Not necessarily. |
| 11 | Q | That's a fine answer. In other words, it could |
| 12 | | or it couldn't or it might not. |
| 13 | | Have you in any of your oral or written |
| 14 | | testimony made any comments, one way or the |
| 15 | | other about whether it's good, bad or |
| 16 | | indifferent as far as visual impact is |
| 17 | | concerned? |
| 18 | A | I'm not sure I've spoken to that specifically, |
| 19 | | no. |
| 20 | Q | Thank you. We have seen in this proceeding lots |
| 21 | | of pictures and you have them and people have |
| 22 | | gone to places, there have been site visits and |
| 23 | | we've looked at it. Would you agree that no |
| 24 | | matter how many times you go over there you're |
| | | |

| 1 | | never going to see the same thing? Let's assume |
|----|---|-----------------------------------------------------|
| 2 | | it's up there. Will we ever see the same thing? |
| 3 | | Rotation, the churning, the cloudiness, all of |
| 4 | | these, the sunshine? We'd have to visit it a |
| 5 | | hell of a lot of times, wouldn't we, to get the |
| 6 | | same thing? |
| 7 | A | I think you're right. As a meteorologist, I'm |
| 8 | | sure you know that atmospheric conditions alter |
| 9 | | the view. |
| 10 | Q | So if you were designing something to have |
| 11 | | visual impact, would you, if you wanted to make |
| 12 | | the impact so people would see it and know it |
| 13 | | and say oh, I see that thing, would you prefer, |
| 14 | | all things being equal, to have things that were |
| 15 | | different every day versus the same thing day in |
| 16 | | and day out? |
| 17 | А | Hum. |
| 18 | Q | I'll take the humph. |
| 19 | А | I have to think about it. Maybe yes, maybe no. |
| 20 | | I mean, maybe one, you might draw more attention |
| 21 | | on by using color or different effects, but I |
| 22 | | think |
| 23 | Q | I'm getting to those. |
| 24 | A | I'm thinking of the Burma Shave signs. |
| | | |
| | { | SEC 2015-2} [Day 5/Morning Session Only] {09-23-16} |

25

| 1 | Q | Classic example. |
|----|---|--------------------------------------------------|
| 2 | A | Where as you walk along the highway or drive |
| 3 | | along the highway you get a different message so |
| 4 | | that might attract your interest, yes. |
| 5 | Q | I am not going to get to the humor of the Burma |
| 6 | | Shave signs, but that's something you might |
| 7 | | consider for these things if you want people to |
| 8 | | see them. |
| 9 | A | No graphics or insignias on the turbines. |
| 10 | Q | Okay. Now, if I were trying to have maximum, |
| 11 | | I'll call it impact if that's what we're talking |
| 12 | | about, if I were to, let's say, add Christmas |
| 13 | | music to it, would that likely to get more |
| 14 | | attention? |
| 15 | A | Possibly, yes. |
| 16 | Q | So the fact that they make noise could or could |
| 17 | | not increase or decrease the visual impact? |
| 18 | A | Noise is a separate category. I wouldn't add |
| 19 | | noise into an assessment of visual because it's |
| 20 | | a separate consideration. |
| 21 | Q | I tried to get this thing changed from visual |
| 22 | | impact to sensory impact and I had no success so |
| 23 | | I understand your answer, but from what you |
| 24 | | know, from your testimony, oral or written, is |
| | | |

| 1 | | |
|----|---|--------------------------------------------------|
| 1 | | there anything in that that acknowledges that |
| 2 | | noise will be a factor in this facility. It |
| 3 | | will make noise. And I'm not arguing just |
| 4 | | noise. |
| 5 | А | That was not my charge in this docket to address |
| 6 | | noise. It's not a part of the visual |
| 7 | | assessment, and the rules do not ask the visual |
| 8 | | assessment to cover that. That is covered by |
| 9 | | other experts, and I think you heard them |
| 10 | | yesterday. |
| 11 | Q | I know. I'm not, I'm not criticizing you for |
| 12 | | what you did or didn't do. I'm just trying to |
| 13 | | find out what you did and what you did about it. |
| 14 | | We're back again, Mr. Chairman, to who do I ask, |
| 15 | | okay? I won't beat that to death, however. |
| 16 | | PRESIDING OFFICER SCOTT: Thank you. |
| 17 | Q | If you were set up, and you can argue that you |
| 18 | | don't have expertise in the answer to my |
| 19 | | question, but I'm going to ask it anyway. If |
| 20 | | you were setting something up, your charge was |
| 21 | | to design something, and you had a choice |
| 22 | | between having it play music, noise, Christmas |
| 23 | | lights, whatever it be, and the idea was to get, |
| 24 | | it was an advertising billboard and you wanted |
| | | |

| 1 | | people to watch it, would you think that if you |
|----|---|-------------------------------------------------------------------------------------------|
| 2 | | could put a little music or noise that you might |
| 3 | | get more people watching it? You can say you |
| 4 | | don't consider it. |
| 5 | А | You know, again, I think it would just depend on |
| 6 | | what it is. I mean, in some ways, yes, noise |
| 7 | | could attract more attention. In other ways |
| 8 | | noise might actually be a deterrent or a |
| 9 | | turnoff. |
| 10 | Q | A deterrent to? |
| 11 | A | It really depends on what your intent is in |
| 12 | | terms of the information you're trying to |
| 13 | | attract people's attention to. |
| 14 | Q | Well, I'm trying in my thing to attract |
| 15 | | attention so I'm asking you in your, you're in |
| 16 | | the business if somebody asks you to get the |
| 17 | | maximum attention, maximum visual shots of it or |
| 18 | | however they call it in advertising, would |
| 19 | | noise, music or otherwise, be likely to increase |
| 20 | | that attention? |
| 21 | A | I think that potential exists. |
| 22 | Q | Okay. If I shine this light |
| 23 | | PRESIDING OFFICER SCOTT: Remember you have |
| 24 | | to describe what you're doing for the record. |
| | | $\left\{ SEC 2015_2 \right\}$ [Day 5/Morning Session Only] $\left\{ 09_2 2_2 16 \right\}$ |

Γ

| 1 | Q | If I shine this light, and I'm now shining a |
|----|---|--------------------------------------------------|
| 2 | | flashlight on the A, the exhibit, is that likely |
| 3 | | to make it more visually, more easily visible |
| 4 | | than if I don't? |
| 5 | А | Sure. |
| 6 | Q | Okay. And if I was to flash a flashing light on |
| 7 | | it, would that have more likely and visible |
| 8 | | attention than if I don't? |
| 9 | А | Sure. |
| 10 | Q | Thank you. Now, in my Prefiled Testimony, MI-2, |
| 11 | | and you may or may not have a copy. You may |
| 12 | | borrow mine for now. You should have it. |
| 13 | А | Thank you. |
| 14 | Q | The other day, I guess yesterday, I guess it |
| 15 | | was. We had an Antrim Wind witness who made |
| 16 | | quite a point that the best way to determine |
| 17 | | value and changes of value in things was the |
| 18 | | assessment. That was always the best measure of |
| 19 | | whether putting windmills in was going to raise |
| 20 | | or lower the value of property and so forth. So |
| 21 | | I have here, MI-2 is a study or a report by the |
| 22 | | North Carolina |
| 23 | А | Department of Revenue Local Government Division |
| 24 | | Property Tax Section. |
| | | |

1 Q Thank you.

2 A My pleasure.

3 Q Okay.

4

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MR. RICHARDSON: I don't know if this witness was here when that testimony occurred, when the testimony that he referred to has occurred so I don't know if he can agree more or less that was said. I wouldn't have agreed with Dr. Ward's characterization of it, but I don't know whether this witness has any opinion about what was said before, and I just think that should be --

MR. WARD: I will withdraw that comment.PRESIDING OFFICER SCOTT: Okay.

Leaving aside whatever this other witness said, 15 0 16 let's concentrate on the document. You would 17 agree, I hope, that if the town or the state or 18 the district, whatever it is, assesses a 19 facility, what it's meant to do is to say its value, isn't that correct? Your understanding 20 21 of assessed value is that it's putting a value on a structure or whatever, in this case signs. 22 23 MR. NEEDLEMAN: I'm just going to object to 24 the question. I'm not sure the witness

1 necessarily has experience with this, and I'm 2 not sure it's relevant at all to any testimony he's filed here. 3 The whole point of this thing is whether this 4 0 5 thing is worth more or less. The worth more or 6 less is a pretty easy measure of how much people think about it, and a billboard which is what 7 this is about, evaluating billboards is how much 8 9 attention do they get. The proposed facility 10 here is a, and I won't use huge, I'll say a 11 large billboard, it's laid out there and we're 12 going to look at it. It is intentionally the same as a billboard, hence the reason for using 13 14 that, and the point of all of this is we're trying to determine its value which is 15 16 determined by how much people look at it. A 17 billboard has no intrinsic value except for 18 people looking at it and having a message. So 19 it's a great surrogate for the question of the 20 visual impact of this facility on the people 21 going around, hence its use. 22 MR. NEEDLEMAN: I have the same objection.

24

23

I'm looking at this document in light of what Dr. Ward just said, and I don't think there's

| 1 | | |
|----|---|--------------------------------------------------|
| 1 | | any relevance in the context of what |
| 2 | | Mr. Raphael's testified to. |
| 3 | | PRESIDING OFFICER SCOTT: Mr. Ward, why |
| 4 | | don't you keep your questions if you're going to |
| 5 | | stay on this to the visual aesthetics, the |
| 6 | | visual impact and we'll draw our substance from |
| 7 | | that. |
| 8 | | MR. WARD: I'm not conceding |
| 9 | | Mr. Needleman's point. |
| 10 | | PRESIDING OFFICER SCOTT: I understand. |
| 11 | | MR. WARD: But I will skip through. |
| 12 | Q | On page 13 of that MI-2 is a discussion of the |
| 13 | | value that has to do with the, well, actually, |
| 14 | | 11, 12 and 13, the value of this sign strictly |
| 15 | | in terms of its size, and as the numbers in |
| 16 | | there show, size is almost a direct measure of |
| 17 | | value, and in the case of an advertising |
| 18 | | billboard, its visual effect. |
| 19 | | MR. NEEDLEMAN: I'm going to disagree with |
| 20 | | the characterization. You could have a 10,000 |
| 21 | | or hundred thousand square foot warehouse that's |
| 22 | | one story high. I just don't think there's any |
| 23 | | correlation, and I don't understand the |
| 24 | | relevance. |
| | | |

| | | WIINESS - DAVID RAPHAEL |
|----|---|--------------------------------------------------|
| 1 | | PRESIDING OFFICER SCOTT: So again, |
| 2 | | Mr. Ward, I did not hear a question in that |
| 3 | | either so |
| 4 | Q | I apologize. Would you agree on page 11 there |
| 5 | | is a correlation in the value, the assessed |
| б | | value, of its size? |
| 7 | А | You know, I can't, you've just, I don't feel |
| 8 | | comfortable or able to comment on that, having |
| 9 | | just had this shown to me, and in terms of |
| 10 | | valuation, it's not an area that I have |
| 11 | | particular expertise in with regard to taxes and |
| 12 | | property assessment. |
| 13 | | MR. RICHARDSON: Is this a premarked |
| 14 | | exhibit? I'm not clear what we're looking at |
| 15 | | here. |
| 16 | | PRESIDING OFFICER SCOTT: Yes. It's MI-2. |
| 17 | | MR. WARD: MI-2 of my Prefiled Testimony. |
| 18 | Q | Okay. I'm going to ask you just a short set of |
| 19 | | questions, and I'll be done, and you can answer |
| 20 | | yes, no or you don't have an opinion on it. |
| 21 | | All other things being equal, does a larger |
| 22 | | facility, as the one we're talking about here, |
| 23 | | have more visual impact than a smaller one? |
| 24 | А | Not necessarily. No. |
| | | |

WITNESS - DAVID RAPHAEL

| 1 | Q | Does the height and the isolation of this on a |
|----|---|--------------------------------------------------|
| 2 | | ridge, does that have more visual impact than if |
| 3 | | it were sitting down in a valley, all things |
| 4 | | being equal, including its size? |
| 5 | А | Not necessarily. No. |
| 6 | Q | Does the number of turbines that are up there, |
| 7 | | would twice as many have more visual impact? |
| 8 | А | Again, it all depends on the context, and you |
| 9 | | know, where you're seeing them from, you know, |
| 10 | | how many of them are visible at one time, what |
| 11 | | your distance is from them, you know, a single, |
| 12 | | if this is helpful to you, a single turbine |
| 13 | | that's, you know, closer to you might have more |
| 14 | | effect or impact than multiple turbines that are |
| 15 | | many miles away. |
| 16 | Q | I said all things being equal so distance I |
| 17 | | can't change. Same distance, everything else |
| 18 | | being equal, do multiples have more impact? |
| 19 | А | But, again, you're asking me to come to a |
| 20 | | conclusion on a hypothetical without any context |
| 21 | | to it, and that's very difficult for me to do. |
| 22 | Q | What context would you like? |
| 23 | А | Give me an example of a project or compare a |
| 24 | | project. |
| | | |

| 1 | Q | Well, this is all hypothetical. There's nothing |
|----|---|--------------------------------------------------|
| 2 | | on top of the hill now. Only thing we're |
| 3 | | talking about is hypothetical. |
| 4 | | MR. NEEDLEMAN: I'm going to object. I |
| 5 | | think he's arguing with the witness. |
| 6 | | PRESIDING OFFICER SCOTT: He tried to |
| 7 | | answer your question, Dr. Ward. |
| 8 | Q | Let me just be sure I phrase it properly. |
| 9 | | Do you have an opinion as to the visual |
| 10 | | impact of a facility, all of the characteristics |
| 11 | | which were exactly the same except one had twice |
| 12 | | the number of turbines on it as the other one. |
| 13 | | Do you have an opinion? |
| 14 | A | I mean, it certainly might mean the project's |
| 15 | | more visible. |
| 16 | Q | And do you have an opinion as to whether it were |
| 17 | | higher or lower that it would have more or less |
| 18 | | impact? |
| 19 | А | You know, again, it depends on the project, and |
| 20 | | the context. I mean, if you ask me specifically |
| 21 | | about this project and visibility from certain |
| 22 | | locations, perhaps I could answer that better |
| 23 | | for you, but in absence of that it's very hard |
| 24 | | for me to make a definitive conclusion because, |
| | | |

| 1 | | you know, again, there are a number of factors |
|----|---|--------------------------------------------------|
| 2 | | that weigh into whether you would determine if |
| 3 | | something has more or less impact, and, you |
| 4 | | know, those factors are all, you know, in the |
| 5 | | methodology. You know, as I said earlier, you |
| б | | know, if you are an ardent supporter of |
| 7 | | renewable energy you might actually find the |
| 8 | | view of more turbines more exciting and a |
| 9 | | positive. Okay? |
| 10 | Q | Good point. |
| 11 | А | So that's why I'm saying, I'm not trying to |
| 12 | | avoid your questioning, I'm trying to be |
| 13 | | responsive, but recognize that I need to have a |
| 14 | | context within which to come to the conclusion. |
| 15 | Q | Okay. Is there anything in your oral or written |
| 16 | | testimony that says one way or the other that |
| 17 | | size has more or less visual impact, height has |
| 18 | | more or less visual impact, the number of |
| 19 | | turbines has more or less impact, the fact that |
| 20 | | these things rotate and change has more or less |
| 21 | | impact, the fact that it has flashing lights on |
| 22 | | it have more or less impact, the noise has more |
| 23 | | or less impact, is there anything in any of your |
| 24 | | testimony where you can point to that you said, |
| | | |

| 1 | | either more or less, better or worse, however it |
|----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | | is you want to describe it? |
| 3 | A | Well, first of all, nothing to do with sound or |
| 4 | | noise because that's not, again, my area of |
| 5 | | expertise directly, but yes, I mean, throughout |
| б | | the methodology, there are a number of places |
| 7 | | where we say, you know, if you have more |
| 8 | | turbines visible that might end up in a high |
| 9 | | rating in terms of a visual effect. If you have |
| 10 | | turbines closer so they appear larger to you and |
| 11 | | to your eye, that might result in a higher |
| 12 | | visual effect. So that type of determination |
| 13 | | now that we're getting to the specifics of the |
| 14 | | project is something that is embedded throughout |
| 15 | | the analysis and is clearly outlined in that |
| 16 | | multi-step methodology that I've been referring |
| 17 | | to. |
| 18 | Q | I'm not suggesting that it wasn't mentioned. I |
| 19 | | was asking is there any point there where you |
| 20 | | say this is, this factor or these set of factors |
| 21 | | will, pardon the pun, impact the visual impact? |
| 22 | A | Yes. |
| 23 | Q | I know you discussed them. |
| 24 | А | For the ten resources that we analyzed for |
| | | $(\mathbf{F}_{\mathbf{G}}, \mathbf{G}_{\mathbf{G}}, \mathbf{G}_{\mathbf{G}}) = [\mathbf{G}_{\mathbf{G}}, \mathbf{G}_{\mathbf{G}}, \mathbf{G}, $ |

| 1 | | visual effect, each of them are addressed in the |
|----|---|--------------------------------------------------|
| 2 | | methodology under visual effect with regard to |
| 3 | | number of turbines visible, you know, low, |
| 4 | | medium or high, you know, percent of visibility, |
| 5 | | and that percentage does translate into a low, |
| 6 | | medium or high. So if you were to look at that |
| 7 | | section of my assessment of our assessment, you |
| 8 | | would see that discussion and those |
| 9 | | determinations, yes. They are there. |
| 10 | Q | So I could find in your testimony a statement, |
| 11 | | one way or the other, but not about whether you |
| 12 | | considered them or not, not whether they might |
| 13 | | be this or that, a statement, conclusion, |
| 14 | | something like that that would say that the more |
| 15 | | turbines that were there, all things being |
| 16 | | equal, the higher the visual impact. |
| 17 | А | Well, it isn't phrased that way. It is a high |
| 18 | | visual effect. How that translates into impact, |
| 19 | | if you will, is based on a multi-step analysis |
| 20 | | that then goes through a determination of viewer |
| 21 | | effect before we come to the overall conclusion |
| 22 | | about impact, but, yes, as I said a moment ago, |
| 23 | | there are ten resources with which we analyzed |
| 24 | | and provided documentation as to whether there |
| | | |

| 1 | | was a, you know, low, medium or high effect due |
|----|---|--------------------------------------------------------|
| 2 | | to things like proximity, and number of turbines |
| 3 | | visible, you know, scale, which we also address |
| 4 | | with several categories, angle of view, visual |
| 5 | | dominance, things of that nature which are, |
| 6 | | again, outlined in the six categories that we |
| 7 | | used to analyze the visual effect of the project |
| 8 | | and that, you know, those categories are |
| 9 | | standard determinations and analysis tools that |
| 10 | | most visual if not all visual experts use to |
| 11 | | find, to come to that type of determination that |
| 12 | | you're asking me about. |
| 13 | | Do you have any data when you were |
| 14 | | evaluating these that, for example, the size and |
| 15 | | how much effect that might have or the number of |
| 16 | | any of these things? Are there any data in |
| 17 | | there any place? |
| 18 | A | I'm not, in what sense? I'm not sure what type |
| 19 | | of data you're referring to. |
| 20 | Q | Well, I have, and Mr. Needleman objected to |
| 21 | | this. Maybe I took it back. |
| 22 | A | You took it back. |
| 23 | Q | I looked at the assessments of these things. |
| 24 | | Professionals look at the assessments of those |
| | | SEC 2015-2 [Day 5/Morning Session Only] $\{09-23-16\}$ |
| | | |

| 1 | | things and determined that no matter what, high |
|----|---|--------------------------------------------------|
| 2 | | was better than low in getting visual things and |
| 3 | | more was better than less and lights were better |
| 4 | | than non-things. |
| 5 | | PRESIDING OFFICER SCOTT: Mr. Ward, are you |
| б | | talking about the billboard assessment that you |
| 7 | | were just talking about? |
| 8 | | MR. WARD: Yes. |
| 9 | Q | And I'm looking for some place, I've read a lot |
| 10 | | of your stuff, I haven't read all of it, I have |
| 11 | | to confess. I cannot read all the stuff. I |
| 12 | | can't find any place in that and I guess I'm |
| 13 | | asking you where in it could I find any |
| 14 | | statements about the effect, visual impact, not |
| 15 | | compared to other wind facilities, talking about |
| 16 | | things on the horizon, all the things we view, |
| 17 | | that would compare, for example, the thing with |
| 18 | | two miles long and a tenth of a mile high versus |
| 19 | | anything else we see. Is there any place in |
| 20 | | that where you would compare those? |
| 21 | А | Well, again, in the methodology and analysis of |
| 22 | | visual effect there is quite a bit of discussion |
| 23 | | about those types of considerations. |
| 24 | Q | What can you compare it with other than other |
| | | |

| | | WIINESS - DAVID RAPHAEL |
|----|---|-------------------------------------------------|
| 1 | | industrial wind facilities? |
| 2 | A | What do you mean what you can compare it with? |
| 3 | | I'm not sure what the question is asking. |
| 4 | Q | If you're going to make a judgment, you have to |
| 5 | | say something to judge it against, isn't that |
| 6 | | true? |
| 7 | А | You judge it on its own merits in the context |
| 8 | | that it's in. |
| 9 | Q | That's not what the rules say. This is supposed |
| 10 | | to being judged on its effect on the landscape |
| 11 | | in New Hampshire. |
| 12 | A | Right, and its own merits are discussed, |
| 13 | | assessed, and evaluated, rated, in that |
| 14 | | determination of visual effect section so that |
| 15 | | is the place where we look at those questions. |
| 16 | | Number of turbines visible, percent of |
| 17 | | visibility, proximity or distance, angle of |
| 18 | | view, visual dominance and visual clutter. |
| 19 | | Those are six tools that we use to come to a |
| 20 | | conclusion as to whether the effect or the |
| 21 | | impact, if you will, is moderate, high or low |
| 22 | | relative to those qualities of the project. |
| 23 | Q | You use the term visual dominance. Okay. That |
| 24 | | implies with respect to something. What does |
| | | |

WITNESS - DAVID RAPHAEL

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| 1 | | that imply with respect to? |
|----|---|--------------------------------------------------|
| 2 | A | It responds to how the project looks and feels |
| 3 | | from the perspective of the viewer from a |
| 4 | | selected viewpoint. |
| 5 | Q | Compared to? |
| 6 | A | You have to analyze a project in place or with |
| 7 | | the proposal in place we analyze the project |
| 8 | | based on its effect in that landscape. |
| 9 | Q | Well, let me just finish with one question and |
| 10 | | make it easy. Is there some place in your |
| 11 | | testimony that you can refer me to so I don't |
| 12 | | have to read thousands of pages? |
| 13 | A | Sure. |
| 14 | Q | Which would answer, which was one of my original |
| 15 | | questions, how much, if any, impact does size |
| 16 | | have? The number, the motion, the noise, the |
| 17 | | lighting, all of these things, is there some |
| 18 | | place I don't have to read more than a hundred |
| 19 | | pages that would give me that? |
| 20 | А | Absolutely. I think if you read Section F in |
| 21 | | the methodology, determinations of visual effect |
| 22 | | from sensitive scenic resources, that's on page |
| 23 | | 16, I think, through page 29. |
| 24 | Q | I have read those, and it just says that it does |
| | | |

| 1 | | or doesn't. It doesn't ever say if this thing |
|----|---|-------------------------------------------------------|
| 2 | | were half the size or twice the size it would be |
| 3 | | more or less. |
| 4 | A | That's not the charge of the analysis. The |
| 5 | | analysis is to review this project and not |
| 6 | | compare it necessarily in the review process to |
| 7 | | some other project. You have to review this |
| 8 | | project and its characteristics in the landscape |
| 9 | | and from the vantage points that are selected |
| 10 | | for that review, and we use multiple vantage |
| 11 | | points for many of the resources to understand |
| 12 | | those considerations that you're talking about. |
| 13 | | You know, how close, how high, how many. So |
| 14 | | that's there. |
| 15 | Q | On the pages that you I guess I can't read |
| 16 | | English very well, but I don't see it in there. |
| 17 | | I'm finished with my questioning. Thank you |
| 18 | | very much. |
| 19 | | PRESIDING OFFICER SCOTT: Thank you. For |
| 20 | | the record, WindAction would be next. I don't |
| 21 | | see Ms. Lenowes here. So the Audubon Society? |
| 22 | | MR. REIMERS: Yes. Can we go off record so |
| 23 | | I can hand out some documents? |
| 24 | | PRESIDING OFFICER SCOTT: Yes, let's go off |
| | , | SEC 2015-2} [Day 5/Morning Session Only] {09-23-16} |
| | ĩ | SEC 2013-2; [Day 3/ MOLINING SESSION ONLY] {03-23-10} |

| 1 | | the record. |
|----|------|-----------------------------------------------------------------|
| 2 | | MR. REIMERS: Before we do, just to orient |
| 3 | | you |
| 4 | | PRESIDING OFFICER SCOTT: Back on the |
| 5 | | record. |
| 6 | | MR. REIMERS: I'll be referring to his |
| 7 | | Prefiled Testimony, his Visual Assessment, but |
| 8 | | also Ms. Connelly's photo simulations which are |
| 9 | | Appendix F of her report as well as New |
| 10 | | Hampshire Audubon's exhibits. |
| 11 | | PRESIDING OFFICER SCOTT: Off the record. |
| 12 | | (Off-the-record discussion) |
| 13 | | PRESIDING OFFICER SCOTT: I think we're |
| 14 | | ready from the bench. So we can go back on the |
| 15 | | record now. |
| 16 | | CROSS-EXAMINATION |
| 17 | BY N | MR. REIMERS: |
| 18 | Q | Good morning, Mr. Raphael. My name is Jason |
| 19 | | Reimers. I represent the Audubon Society of New |
| 20 | | Hampshire. |
| 21 | A | Good morning. |
| 22 | Q | I want to begin by following up on a few items |
| 23 | | of your testimony yesterday. The Town of |
| 24 | | Antrim's attorney asked you in the context of |
| | | |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| 1 | | conservation easements a question about the |
|----|---|-----------------------------------------------------------------|
| 2 | | conservation benefits of those conservation |
| 3 | | easements, and your answer was that all evidence |
| 4 | | of the project will have effectively gone away |
| 5 | | in 50 years. Do you remember that? |
| 6 | A | Yes. |
| 7 | Q | Did you analyze the temporary or permanent |
| 8 | | impacts of the proposed roads? |
| 9 | A | Yes. |
| 10 | Q | Did you determine how much cut and fill needs to |
| 11 | | be done to create those roads? |
| 12 | A | I think I reviewed that very early on, yes. |
| 13 | Q | Did you determine how much of that would be |
| 14 | | restored or not restored at the end of the |
| 15 | | project? |
| 16 | A | No. I did not do that analysis. |
| 17 | Q | Do you know how much blasting will be done? |
| 18 | A | I do not know the extent of blasting. I know |
| 19 | | there will be some blasting. |
| 20 | Q | Do you know which glacial erratics will be |
| 21 | | demolished? |
| 22 | A | No, I do not. |
| 23 | Q | Are you an expert in invasive species? |
| 24 | A | I'm aware of invasive species. I'm not, I |
| | | |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| 1 | | wouldn't call myself an expert. I'm not a |
|----|---|-------------------------------------------------|
| 2 | | botanist or a horticulturist. |
| 3 | Q | What exactly will be done to remove the |
| 4 | | foundations when the project is decommissioned? |
| 5 | A | I imagine they will be ground down and removed |
| 6 | | in that manner. |
| 7 | Q | Will anything be left underground? |
| 8 | A | I don't know that. |
| 9 | | MR. NEEDLEMAN: I'm going to object. I |
| 10 | | think Mr. Raphael was, I'm not going to put |
| 11 | | words in his mouth, but I think his testimony |
| 12 | | was with respect to visual impacts. I don't |
| 13 | | think he was claiming all impacts. |
| 14 | | MR. REIMERS: I don't recall him |
| 15 | | referencing visual and his statement that I |
| 16 | | nearly quoted verbatim was that all evidence of |
| 17 | | the project will have effectively gone away in |
| 18 | | 50 years, and I'm trying to understand the |
| 19 | | support for that statement and what that |
| 20 | | statement entails. |
| 21 | | MR. NEEDLEMAN: Then I'm going to object |
| 22 | | because I don't think that was his statement. |
| 23 | | He's a visual witness, and I think he was |
| 24 | | speaking from a visual perspective. |
| | | |

| 1 | | MR. REIMERS: The transcript will speak for |
|----|---|--------------------------------------------------|
| 2 | | itself. |
| 3 | Q | This is just point of information. For turbines |
| 4 | | 1 through 8, how much shorter are the hub |
| 5 | | heights between the current project and the 2012 |
| 6 | | project? |
| 7 | A | I'd have to look that up. I believe they're |
| 8 | | maybe 4 feet shorter, but if you give me a |
| 9 | | moment, I'd be happy to check that. |
| 10 | Q | Okay. |
| 11 | | PRESIDING OFFICER SCOTT: Make sure you use |
| 12 | | the microphone, please. |
| 13 | A | I know that the total height reduction is 4 |
| 14 | | feet. I do not have right before me, I'd have |
| 15 | | to find that information in terms of the hub |
| 16 | | height differential. I don't have it right in |
| 17 | | front of me. |
| 18 | Q | Okay. Maybe you could tell us later after you |
| 19 | | have a chance to look at it. |
| 20 | А | Certainly. |
| 21 | Q | Yesterday Mr. Block asked you about Rule 301-05 |
| 22 | | (e(a)(8). Do you remember he was asking you |
| 23 | | about photo simulations showing some of the |
| 24 | | blades in a 12 o'clock position? |
| | | |

| 1 | А | Yes, I do. |
|----|---|--------------------------------------------------|
| 2 | Q | And he showed you several of your photo |
| 3 | | simulations and asked you about showing those |
| 4 | | blades in the 12 o'clock position, and I don't |
| 5 | | know if we nailed down the number, but I think |
| 6 | | you agreed with him when he pointed out that in |
| 7 | | approximately 3 to 4 simulations out of 20 |
| 8 | | something you showed the blades in a 12 o'clock |
| 9 | | position. Is that right? |
| 10 | A | I believe that was what the discussion and |
| 11 | | testimony was about, yes. |
| 12 | Q | Do you disagree with that right now? |
| 13 | А | I will take it as a fact at this point. Yes. |
| 14 | Q | Okay. And your response was that you complied |
| 15 | | with the rule. Is that right? |
| 16 | A | That's right. |
| 17 | Q | Because you did some, you did have some turbines |
| 18 | | with blades in the 12 o'clock position, and |
| 19 | | that's the reason why you complied with the |
| 20 | | rule? |
| 21 | A | Yes. |
| 22 | Q | So based on your answer, it must be your |
| 23 | | position that the requirements of subsection E |
| 24 | | do not apply to each simulation that you do. Is |
| | | |

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| 1 | | that right? |
|----|---|--------------------------------------------------|
| 2 | A | Let me read what it says before I answer that |
| 3 | | question, if I may. If I might, it states under |
| 4 | | number 7 (b)(3), turbine blades shall be set at |
| 5 | | random angles with some turbines showing a blade |
| 6 | | in the 12 o'clock position. It does not state |
| 7 | | that every simulation needs to do that. It says |
| 8 | | some. |
| 9 | Q | And the lead-in to that though, when simulating |
| 10 | | the presence of proposed wind turbines, the |
| 11 | | following shall apply. Is that right? |
| 12 | А | Correct. |
| 13 | Q | And what is the first criterion under that? |
| 14 | А | Please refer me to the number. |
| 15 | Q | Turbines shall be placed with full frontal views |
| 16 | | and no haze or fog effect applied. |
| 17 | А | Okay. |
| 18 | Q | So would that have, does that apply to every |
| 19 | | simulation? |
| 20 | А | Yes, it would. |
| 21 | Q | So that criterion applies to every situation. |
| 22 | | Number two, turbines shall reasonably represent |
| 23 | | the shape of the intended turbines for a project |
| 24 | | including the correct hub height and rotor |
| | | |

| 1 | | |
|----|---|--------------------------------------------------|
| 1 | | diameter. |
| 2 | | Does that apply to every photo simulation? |
| 3 | A | Yes. |
| 4 | Q | Turbine blades, the next one, turbine blades |
| 5 | | shall be set at random angles with some turbines |
| 6 | | showing a blade in the 12 o'clock position. |
| 7 | | That doesn't apply to every photo simulation? |
| 8 | A | The overarching requirement does, but it doesn't |
| 9 | | say that every simulation itself has to have a |
| 10 | | turbine at 12, I mean, at 12 o'clock. |
| 11 | Q | And the next one is the lighting model used to |
| 12 | | render wind turbine elements shall correspond to |
| 13 | | the lighting visible on the base photograph. |
| 14 | | Does that apply to every simulation? |
| 15 | A | I believe so. Yes. |
| 16 | Q | So just the one about the 12 o'clock position, |
| 17 | | that doesn't apply to every photo simulation? |
| 18 | A | Correct. That's how we interpreted that. |
| 19 | Q | But that's not stated. Your interpretation is |
| 20 | | not stated explicitly in here, is it? |
| 21 | | MR. RICHARDSON: Objection. The rule is |
| 22 | | pretty clear. I mean, I'm looking at it, and I |
| 23 | | don't understand why there's any ambiguity. |
| 24 | | MR. REIMERS: I don't see that the rule is |
| | | |

WITNESS - DAVID RAPHAEL

| 1 | | clear if only one of them doesn't apply to all |
|----|---|-------------------------------------------------|
| 2 | | photo simulations. I think that that is a far |
| 3 | | from clear interpretation of that rule. |
| 4 | | MR. NEEDLEMAN: If I may, to me we're at |
| 5 | | the point of legal argument, and I don't |
| 6 | | necessarily think this is appropriate, but if |
| 7 | | we're doing that, number 8 which leads |
| 8 | | everything off says photo simulation shall meet |
| 9 | | the following additional requirements. It |
| 10 | | doesn't say each one. So I don't think it's |
| 11 | | fair for me to engage in legal argument nor is |
| 12 | | it fair for Jason to engage in that. We will |
| 13 | | have the time to do that. |
| 14 | | MR. REIMERS: Okay. |
| 15 | | PRESIDING OFFICER SCOTT: You except that? |
| 16 | | MR. REIMERS: Yes. |
| 17 | Q | One more question about the rules. Rule |
| 18 | | 301.05b)(8). Sorry. It's (b)(9), regarding |
| 19 | | lights. |
| 20 | A | I'm sorry. (b)(9). Okay. Beginning with a |
| 21 | | description? The word a description? |
| 22 | Q | No. You know, I'll come back to that. Let me |
| 23 | | make sure I'm looking at the right rule. I'll |
| 24 | | ask you that later on. |
| | | |

| 1 | | All right. I want to ask you some |
|----|---|-------------------------------------------------|
| 2 | | questions about Audubon's Willard Pond, |
| 3 | | dePierrefeu-Willard Pond Wildlife Sanctuary and |
| 4 | | Willard Pond. You're aware that Willard Pond is |
| 5 | | within that sanctuary, aren't you? |
| 6 | A | It's bordered by the sanctuary, I believe. |
| 7 | Q | And are you aware that the sanctuary is |
| 8 | | approximately 1671 acres in size? |
| 9 | A | Yes, I am. |
| 10 | Q | And would you agree that Willard Pond is |
| 11 | | approximately 96 acres in size? |
| 12 | A | Yes. |
| 13 | Q | Page 11 of your Prefiled Testimony, you |
| 14 | | acknowledge that in 2012 the SEC found that the |
| 15 | | facility as proposed is simply out of scale in |
| 16 | | context of its size. Is that right? |
| 17 | А | Give me a moment to get to that reference, |
| 18 | | please. |
| 19 | Q | Sure. It's your Prefiled Testimony, not the |
| 20 | | Supplemental. |
| 21 | A | And, again, the line you're referring me to, |
| 22 | | please? |
| 23 | Q | 11 and 12. |
| 24 | А | Yes. I see that. |
| | | |

WITNESS - DAVID RAPHAEL

| 1 | Q | And on page 13, on line 17, you state that the |
|----|---|--------------------------------------------------|
| 2 | | current project will not be out of scale with |
| 3 | | the setting of Willard Pond. That's your |
| 4 | | opinion? |
| 5 | A | That is my opinion. |
| 6 | Q | And you stated that this opinion is based on |
| 7 | | three factors, and I want to ask you about |
| 8 | | those. The first factor to support your opinion |
| 9 | | is the immediacy of the pond experience. Is |
| 10 | | that right? |
| 11 | А | That's correct. |
| 12 | Q | And we're looking on, you described this |
| 13 | | beginning on page 13. You stated that paddling |
| 14 | | and fishing do not typically focus on or revolve |
| 15 | | around one distinct view or focal point. The |
| 16 | | nature of the activity typically precludes that. |
| 17 | | Is that still your opinion? |
| 18 | A | Yes, it is. |
| 19 | Q | Are you saying that paddlers do not typically |
| 20 | | look around? |
| 21 | А | Not at all. In fact, that's exactly what I'm |
| 22 | | saying, that paddlers look around at many |
| 23 | | elements in the landscape. You know, I'll give |
| 24 | | you an example. When we did the pre, the visual |
| | | |

assessment for Sheffield Wind there was 1 2 certainly similar concerns about the view of a large project that was 16 turbines from Crystal 3 Lake and Crystal Lake Beach. We actually did a 4 5 simulation of that project and evaluated it and 6 went back after the project was constructed and found that, first of all, our simulation was 7 exactly what the turbines looked like in 8 9 realtime when they were built, and secondly, I 10 was really taken by the fact, and I'm an ardent 11 lifelong paddler, that I was there to look at 12 the visual presence and effect of the turbines on the paddling experience, and I could not 13 14 focus on the turbines for any great length of 15 time. I think if you're a paddler you know that 16 water conditions change, shoreline attracts your 17 interest, the experience of paddling is 18 preeminent in the overall experience of that 19 water body, and so very quickly the presence of 20 those turbines from that experience faded into 21 the background. It did not alter or affect the 22 joy and the fun of paddling that lake. And I think that is certainly the case with 23 24 Willard Pond, that for the area where you might

| 1 | | have a view of the project, you might look at |
|----|---|-------------------------------------------------|
| 2 | | it, but you're also paddling for a number of |
| 3 | | other reasons and experiences, not just to take |
| 4 | | a distant view of a hilltop or a ridgeline. |
| 5 | Q | So my question was whether you think that |
| 6 | | paddlers look around. And your answer is? |
| 7 | A | Yes. Of course. |
| 8 | Q | All right. Thank you. And do fishermen look |
| 9 | | around? |
| 10 | A | Certainly. |
| 11 | Q | And could one reason that people paddle is to |
| 12 | | see parts of the landscape from a new |
| 13 | | perspective that they normally don't get to see |
| 14 | | from? |
| 15 | A | Sure. |
| 16 | Q | And paddlers and fishermen pursue their |
| 17 | | activities in part to enjoy the setting, don't |
| 18 | | they? |
| 19 | А | In part. It's secondary. I think there's a lot |
| 20 | | of evidence that it's secondary so in part. |
| 21 | | Yes. |
| 22 | Q | Okay. Yesterday you mentioned that if someone |
| 23 | | didn't want to see the turbines, they could go |
| 24 | | elsewhere, and you mentioned, I think, in state |
| | | |

| 1 | | and in New England. Where in southern New |
|----|---|--------------------------------------------------|
| 2 | | Hampshire could paddlers or fishermen go to |
| 3 | | paddle or fish on a 96-acre pond devoid of human |
| 4 | | structures other than Willard Pond? |
| 5 | А | I'd have to go back. I know that we looked at |
| 6 | | that, and there were several other places that |
| 7 | | came up. I can't, I'd have to get back to you |
| 8 | | on that. |
| 9 | Q | Several other 96-acre or larger ponds in |
| 10 | | southern New Hampshire without development? |
| 11 | А | Well, this lake is not without development. |
| 12 | | This lake has development as well. It has |
| 13 | | infrastructure. I've been at the lake when |
| 14 | | there are cars parked right at the water's edge |
| 15 | | so that's a form of development and |
| 16 | | infrastructure. So, you know, I'd have to get, |
| 17 | | I'd have to look at our research in that regard, |
| 18 | | but I do believe we looked at other possible |
| 19 | | locations. |
| 20 | Q | You mentioned that there are other, do you know |
| 21 | | of any other 96-acre or larger or let me remove |
| 22 | | the word other. Do you know of any 96-acre |
| 23 | | ponds or 96-acre-or-larger ponds or lakes in |
| 24 | | southern New Hampshire that are undeveloped? |
| | | |

| 1 | A | I don't know specifically. I'd have to get back |
|----|---|-----------------------------------------------------------------|
| 2 | | to you on that with an answer. |
| 3 | Q | Multiple turbines would be visible from multiple |
| 4 | | areas of Willard Pond, is that right? |
| 5 | A | Excuse me. Could you say that again? |
| 6 | Q | Would you see multiple turbines from multiple |
| 7 | | parts of Willard Pond? Yes or no? |
| 8 | A | I can't answer that yes or no because of the way |
| 9 | | you phrased it. I will characterize it that you |
| 10 | | will see a number of turbines from portions of |
| 11 | | the pond. |
| 12 | Q | So Exhibit 12 to your report is your photo |
| 13 | | simulation from the boat launch area. |
| 14 | A | Correct. |
| 15 | Q | How many turbines would be visible from the boat |
| 16 | | launch area? |
| 17 | A | In the simulation? |
| 18 | Q | Yes. |
| 19 | A | You can see |
| 20 | | MR. IACOPINO: Do you have a page for that? |
| 21 | | MR. REIMERS: The witnesses's report, it's |
| 22 | | Exhibit 12. I'm not sure that there are page |
| 23 | | numbers. |
| 24 | | MR. RICHARDSON: Attachment 5. |
| | | |
| | | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| | | WITNESS - DAVID RAPHAEL |
|----|---|-------------------------------------------------|
| 1 | | MR. REIMERS: They're not sequentially |
| 2 | | numbered through the exhibit. |
| 3 | | MR. IACOPINO: Approximately 169. |
| 4 | | PRESIDING OFFICER SCOTT: So, again, that's |
| 5 | | Exhibit 12? |
| 6 | | MR. REIMERS: Yes. Exhibit 12, and it's |
| 7 | | called Visual Simulation of Proposed Conditions |
| 8 | | from Willard Pond boat launch, Antrim, and |
| 9 | | there's Sheet 1 of 2 and Sheet 2 of 2. |
| 10 | | PRESIDING OFFICER SCOTT: So I'm showing on |
| 11 | | the PDF, that's if you go to 166 on the PDF. |
| 12 | | Correct? Thank you. |
| 13 | | MR. REIMERS: We're all there? |
| 14 | Q | So my question was how many, in your photo |
| 15 | | simulation, how many turbines are visible? |
| 16 | A | There are two turbines visible, and two blades |
| 17 | | or rotors, portion of blades or rotors visible. |
| 18 | Q | Are blades part of a turbine? |
| 19 | А | They're part of a turbine, but they're not the |
| 20 | | turbine. |
| 21 | Q | They're part of the turbine. |
| 22 | A | Yes. They're part of the overall structure, but |
| 23 | | they're not a turbine. They're the blades. |
| 24 | Q | They're part of a turbine. You answered that |
| | | |

| 1 | | yes, right? |
|----|---|-----------------------------------------------------------------|
| 2 | A | Yes. |
| 3 | Q | So parts of four turbines would be visible from |
| 4 | | the boat launch, according to your visual |
| 5 | | simulation? |
| 6 | A | Two turbines, two blades. Yes. |
| 7 | Q | Is the answer |
| 8 | A | Two turbines and parts of two other turbines. |
| 9 | Q | Why do you call, why are you reluctant to call |
| 10 | | the blades part of a turbine? |
| 11 | A | I was just making a distinction about the |
| 12 | | structure of the turbine overall. |
| 13 | Q | Okay. But if you responded in the affirmative |
| 14 | | that the blades are part of a turbine, so why is |
| 15 | | it incorrect to say that four turbines are |
| 16 | | visible from the Willard Pond boat launch area? |
| 17 | A | Well, we may be splitting hairs here. I guess |
| 18 | | when I look at the simulation I see two turbines |
| 19 | | with blades and rotors and then a portions of |
| 20 | | two other turbines. Parts. So just making that |
| 21 | | distinction. |
| 22 | Q | And the blades are moving parts of the turbine, |
| 23 | | right? |
| 24 | A | Correct. |
| | | |
| | ť | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| 1 | Q | And even the partial views of the turbines where |
|----|---|--------------------------------------------------|
| 2 | | you just see the blades, the viewer would see |
| 3 | | the moving parts from the boat launch, right? |
| 4 | А | That's correct. |
| 5 | Q | Movement catches the eye, doesn't it? |
| 6 | А | It can, yes. |
| 7 | Q | And this area of the boat launch, this is where |
| 8 | | a paddler or fishermen would put in their boat? |
| 9 | А | Yes. |
| 10 | Q | So any paddler or fishermen will see those |
| 11 | | turbines as they approach and put in their boat, |
| 12 | | won't they? |
| 13 | А | Potentially, yes. |
| 14 | Q | As long as they're not looking down the whole |
| 15 | | time? |
| 16 | А | No, as long as the weather conditions permit, |
| 17 | | and they're looking around. I mean, you know, |
| 18 | | when I was there one day there was a gentlemen |
| 19 | | who was going under water, I think looking for |
| 20 | | metals. I'm not sure he'd be looking at the |
| 21 | | turbines. |
| 22 | Q | Do you think he'd even notice that they were |
| 23 | | ever there? |
| 24 | А | He probably would notice. |
| | | |

| 1 | Q | Based on your visual simulation of the wind farm |
|----|---|--------------------------------------------------|
| 2 | | from the boat ramp, would the wind turbines be a |
| 3 | | predominant sight if the project was approved? |
| 4 | А | No. |
| 5 | Q | What are the predominant sites for the boat |
| б | | ramp? |
| 7 | А | Well, one thing that I was struck by when I was |
| 8 | | there in winter was the face of Bald Mountain. |
| 9 | | Bald Mountain is really right to your left as |
| 10 | | you're at the boat launch and that really does |
| 11 | | catch the eye and kind of is a focal point, and |
| 12 | | I think just the overall shoreline would also be |
| 13 | | of interest and capture the view along with |
| 14 | | these elements once built. |
| 15 | Q | Okay. If you are looking at Bald Mountain from |
| 16 | | the boat launch, and the project were approved, |
| 17 | | you'd be seeing parts of the moving blades when |
| 18 | | you're looking at bald mountain, wouldn't you? |
| 19 | | PRESIDING OFFICER SCOTT: Mr. Reimers, can |
| 20 | | you get your microphone between you and |
| 21 | | MR. REIMERS: Sorry. |
| 22 | | PRESIDING OFFICER SCOTT: Thank you. |
| 23 | A | I guess it depends in what direction, you know, |
| 24 | | if you're looking fully at Bald Mountain, you |
| | | |

| 1 | | would probably see the blades in your broader |
|----------------------------|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | | view, but not directly. You wouldn't be looking |
| 3 | | directly at them. |
| 4 | Q | Unless you wanted to look at all of Bald |
| 5 | | Mountain. |
| 6 | A | No. I mean, if you were looking at Bald |
| 7 | | Mountain, you would not be looking directly at |
| 8 | | the turbines. Bald Mountain, as you can see in |
| 9 | | this simulation, is a bit off to the left. |
| 10 | Q | Well, doesn't that, the last turbine blade on |
| 11 | | the left, isn't that poking up over the |
| 12 | | descending slope of Bald Mountain? |
| 13 | A | Yes. |
| 14 | Q | So if I were to look at, you said that Bald |
| 15 | | Mountain is a predominant site. If I am a |
| 16 | | |
| | | typical viewer from the boat launch, trying to |
| 17 | | typical viewer from the boat launch, trying to get a view of Bald Mountain, I would see those |
| 17 18 | | |
| | А | get a view of Bald Mountain, I would see those |
| 18 | A | get a view of Bald Mountain, I would see those turbines, wouldn't I? |
| 18 19 | А | get a view of Bald Mountain, I would see those turbines, wouldn't I? No, because, I mean, you would, as I said |
| 18 19 20 | A | get a view of Bald Mountain, I would see those turbines, wouldn't I? No, because, I mean, you would, as I said earlier, you would see them over in your |
| 18 19 20 21 | A | get a view of Bald Mountain, I would see those turbines, wouldn't I? No, because, I mean, you would, as I said earlier, you would see them over in your peripheral view, but where the turbines poke up |
| 18 19 20 21 22 | A | get a view of Bald Mountain, I would see those turbines, wouldn't I? No, because, I mean, you would, as I said earlier, you would see them over in your peripheral view, but where the turbines poke up on Bald Mountain is the very lowest portion of |

| | | WIINESS - DAVID RAFHAEL |
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| 1 | | more to the south than to the left in the view. |
| 2 | | So if you're looking at the ledges and at the |
| 3 | | summit, that blade would not be in your direct |
| 4 | | view. |
| 5 | Q | I understand that there's portions of Bald |
| 6 | | Mountain I can look at away from turbines. |
| 7 | | With regard to your Exhibit 12, your photo |
| 8 | | simulation, those turbines would be more visible |
| 9 | | against a blue sky, wouldn't they? |
| 10 | A | Not necessarily. |
| 11 | Q | Not necessarily? |
| 12 | A | No. I mean, I think you can see that sometimes |
| 13 | | in a very blue sky there's often off in the |
| 14 | | distance and on the skyline a white haze or |
| 15 | | background that's in several of the simulations, |
| 16 | | and in that situation, they might not be as |
| 17 | | visible. It also might depend on the angle of |
| 18 | | the light, you know, the time of the day in |
| 19 | | terms of visibility. |
| 20 | Q | When you were at Willard Pond, did you see any |
| 21 | | loons? |
| 22 | A | I did. |
| 23 | Q | Do you know where the loons are nesting? |
| 24 | A | They are nesting in the northwest corner, I |
| | | |
| | 1 | <i>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</i> |

| | 1 | |
|----|---|--------------------------------------------------|
| 1 | | believe. |
| 2 | Q | So looking at your, Exhibit 12, do you see those |
| 3 | | rocks out in the distance? |
| 4 | A | Yes. |
| 5 | Q | Is it generally in that vicinity that the loons |
| 6 | | are nesting? |
| 7 | А | I think that's approximate, yes. |
| 8 | Q | So if a person came to Willard Pond with their |
| 9 | | binoculars or not to look for the loons, would |
| 10 | | you expect them to see the turbines? |
| 11 | A | They probably would. |
| 12 | Q | Under what circumstances would someone looking |
| 13 | | out toward the loon nesting area not see the |
| 14 | | turbines? |
| 15 | A | If it were overcast or the weather conditions |
| 16 | | precluded a view in that direction. |
| 17 | Q | Putting those kind of weather conditions aside, |
| 18 | | anyone coming to look at the loon nesting area |
| 19 | | would see those turbines on any day when they |
| 20 | | would be visible to anyone standing there. |
| 21 | A | If they had binoculars, and they were there, |
| 22 | | they might see them, yes, but they also might be |
| 23 | | out of view, they could be behind the rock, they |
| 24 | | could be tucked into the cove there. I mean, I |
| | | |

| 1 | | saw them actually tucked in when I was there |
|----|---|--------------------------------------------------|
| 2 | Q | You're talking about the loons themselves, |
| 3 | | right? |
| 4 | A | Well, that's what you were asking about. |
| 5 | Q | I was asking about the loon nesting area. |
| 6 | А | Oh, I'm sorry. |
| 7 | Q | No, I understand. I wouldn't expect you to |
| 8 | | pinpoint where the loons would be. |
| 9 | | So Exhibit 13 of your report which is the |
| 10 | | next photo simulation, this is from the |
| 11 | | northeast corner of Willard Pond. |
| 12 | А | That's correct. |
| 13 | Q | This was another cloudy day? |
| 14 | А | There are clouds, yes, in the photo, but it's |
| 15 | | clear and there's a clear view of the turbines |
| 16 | | obviously for the simulation. |
| 17 | Q | Right. I'm asking about whether it was a cloudy |
| 18 | | day or not. |
| 19 | А | Clouds. Yes. Cloudy. Partially. Partly |
| 20 | | cloudy. I guess. We'd have to ask Dr. Ward |
| 21 | | about that. Yes. |
| 22 | Q | So this simulation shows 7 turbines visible from |
| 23 | | that area of Willard Pond, doesn't it? |
| 24 | A | Correct. |
| | | |

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| | r | |
|----|---|-------------------------------------------------------------|
| 1 | Q | Is there any reason that a paddler or fishermen |
| 2 | | wouldn't go to that part of the pond? |
| 3 | A | Not necessarily, no. I mean, certainly would |
| 4 | | have the opportunity to do that. |
| 5 | Q | Now I want to look at Terraink's, one of her |
| 6 | | photo simulations from Willard Pond. So it's in |
| 7 | | front of you, I think I labeled it number 1, |
| 8 | | Willard Pond. |
| 9 | A | Yes, I have it here. |
| 10 | Q | You only need to look at the first two pages. |
| 11 | | PRESIDING OFFICER SCOTT: Can you tell us |
| 12 | | what you're looking at? |
| 13 | Q | This is the document we were looking for during |
| 14 | | that time, and so it's Appendix F of that |
| 15 | | document, and I'm looking at viewpoint number 1. |
| 16 | | And it's a blue sky photograph. |
| 17 | A | Yes. With that, if you can see to my point, |
| 18 | | there is that sort of white cast to the sky |
| 19 | | closer to the horizon. |
| 20 | Q | Okay. I just want to make sure that the |
| 21 | | committee is following me. |
| 22 | | PRESIDING OFFICER SCOTT: So that be would |
| 23 | | be the second page of the PDF file? |
| 24 | Q | Right. First one doesn't show turbines. The |
| | | |
| | 1 | <i>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</i> |

| | | WIINESS - DAVID RAPHAED |
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| 1 | | second one does. |
| 2 | | So according to this simulation, Terraink's |
| 3 | | simulation was taken from a boat on the pond? |
| 4 | A | I believe so. |
| 5 | Q | And this simulation shows 7 turbines and the met |
| б | | tower visible? |
| 7 | A | Yes. |
| 8 | Q | Would you say that this simulation was done |
| 9 | | under blue skies? |
| 10 | A | Yes. |
| 11 | Q | And is there any reason a paddler or fishermen |
| 12 | | wouldn't go to that location? |
| 13 | A | I can't think of any reason in particular they |
| 14 | | would go to, they might paddle, as I did, they |
| 15 | | might paddle around the pond. They might follow |
| 16 | | a shoreline. You know, follow their interest |
| 17 | | perhaps. |
| 18 | Q | Okay. I guess I can't show the witness this |
| 19 | | exhibit, but I want to look at Audubon's Exhibit |
| 20 | | number 7 which is the photo simulation by T.J. |
| 21 | | Boyle Associates. You don't have that in front |
| 22 | | of you. I can pull it up on the computer and |
| 23 | | show it to you. |
| 24 | | PRESIDING OFFICER SCOTT: Why don't we go |
| | | |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

WITNESS - DAVID RAPHAEL

1 off the record while we're doing that. 2 MR. REIMERS: If the committee is there, I 3 can do that right now. PRESIDING OFFICER SCOTT: Okay. Back on 4 5 the record. 6 I'm showing the witness Audubon Exhibit 7 which 0 is video simulation. How many turbines -- have 7 you seen this before? 8 9 Α Yes, I have. 10 Okay. How many turbines are visible in this 0 simulation? Feel free to move it closer. 11 12 А There are --13 PRESIDING OFFICER SCOTT: Mr. Reimers, just 14 to clarify, so you're not talking the visual simulation, you're talk about the video? 15 16 MR. REIMERS: Right, the animated 17 simulation. 18 There are, you know, five full views of turbines А 19 and one blade visible. I think I'm right. 20 So 6 turbines are visible, is that right? 0 21 А Yes. 22 Is the met tower visible? Q 23 А Barely. Maybe. Yeah. I think it may be very, 24 barely visible.

| 1 | Q | So going |
|----|---|--------------------------------------------------|
| 2 | A | Hardly visible. |
| 3 | Q | Going from the right, is the met tower, would it |
| 4 | | be the, you have your first turbine, second |
| 5 | | turbine and then the met tower is back there? |
| 6 | A | I see it very faintly, yes. |
| 7 | Q | Just for the Committee's sake, I'm trying to |
| 8 | | describe where that would be visible, and this |
| 9 | | simulation was done under blue skies, right? |
| 10 | A | Yes. |
| 11 | Q | And you don't know of any reason that a paddler |
| 12 | | or fishermen wouldn't go to that area of the |
| 13 | | pond, do you? |
| 14 | А | Actually, now that I thought about it, I do, and |
| 15 | | that comes from my paddling experience. That |
| 16 | | portion of the pond actually has some very |
| 17 | | shallow ledge, and I ran aground in a couple of |
| 18 | | places. So it's not an area that is ideal for |
| 19 | | paddling or fishing perhaps because of those |
| 20 | | very shallow ledges in that particular area. So |
| 21 | | I think yes, they would certainly potentially go |
| 22 | | there. I'm not sure they would stay there or |
| 23 | | and those who maybe know the pond better might |
| 24 | | avoid it at low water times. |
| | | |

| 1 | Q | Okay. So this area where that animated |
|----|---|--------------------------------------------------|
| 2 | | simulation was taken is near the dam, is that |
| 3 | | right? |
| 4 | А | Simulation. |
| 5 | Q | Actually take my word for it. It is. |
| 6 | А | Yeah. I will have to take your word for it. |
| 7 | Q | It's not in your papers. It's the one I just |
| 8 | | showed you that T.J. Boyle Associates did. |
| 9 | А | I will take your word for it certainly. |
| 10 | Q | Do you know whether people go and stand on the |
| 11 | | dam? |
| 12 | А | I do not actually. |
| 13 | Q | Do you know that there's a rope swing beyond the |
| 14 | | dam? |
| 15 | А | I do not, I don't think I saw that, no. |
| 16 | Q | In Exhibit 18 of your report, from going back to |
| 17 | | you've visual simulation, in 18 there are three |
| 18 | | sheets. |
| 19 | А | Getting there. Okay. Yes. I've got it. |
| 20 | Q | So in Exhibit 18, Sheet 2 is your visual |
| 21 | | simulation of what it would look like from |
| 22 | | Willard Pond if the 2012 project were |
| 23 | | constructed, is that right? |
| 24 | А | That's correct. |
| | | |

| | | WINESS DAVID RALIADD |
|----|---|-----------------------------------------------------------------|
| 1 | Q | And that's the ten turbine layout? |
| 2 | A | Correct. |
| 3 | Q | And if you go to Sheet 3, that is your visual |
| 4 | | simulation of the current project. Is that |
| 5 | | right? |
| б | A | That's correct. |
| 7 | Q | And in your Prefiled Testimony, you describe |
| 8 | | this as a quote unquote, dramatic change. Is |
| 9 | | that still your opinion? |
| 10 | A | Yes, it is. |
| 11 | Q | So you can put those down. I started this line |
| 12 | | of questioning by asking you about your three |
| 13 | | reasons that you used to support why this |
| 14 | | project wouldn't be out of scale in the context |
| 15 | | of Willard Pond. So the second reason you give |
| 16 | | is actually, if you could go to your Prefiled |
| 17 | | Testimony, page 13, line 20. That's where you |
| 18 | | list 1, 2, so on and so forth. |
| 19 | A | Yes. |
| 20 | Q | Are you there? |
| 21 | A | Yes. I am. |
| 22 | Q | Please read your reason number 2. That begins |
| 23 | | on line 20 and continues to the next page. |
| 24 | A | The predominant sites, the slopes of Bald |
| | | |
| | | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| 1 | | Mountain, the coves at the northern end, the |
|----|---|-------------------------------------------------------|
| 2 | | qualities of the shoreline, the sounds and |
| 3 | | smells of the lake and particularly the feel of |
| 4 | | the water on the shoreline draw the eye and |
| 5 | | dominate the experience, not a view off in one |
| 6 | | direction from a portion of the lake that does |
| 7 | | not necessarily invite pausing or floating as |
| 8 | | reaffirmed from observations of user patterns on |
| 9 | | the lake. |
| 10 | Q | Please continue. |
| 11 | A | I'm sorry? |
| 12 | Q | Please continue. |
| 13 | A | Okay. |
| 14 | Q | There's a little bit more before number 3. |
| 15 | A | These sights and sounds and sensations will not |
| 16 | | be affected by the project whatsoever. And do |
| 17 | | you want me to continue? |
| 18 | Q | No. Thanks. |
| 19 | A | Okay. |
| 20 | Q | So are you saying that the coves at the north |
| 21 | | end of the pond would be more of a predominant |
| 22 | | site than the turbines? |
| 23 | А | I think that the coves is what obviously |
| 24 | | attracts people and Pine Point attracts |
| | | [GEG 2015 2] [Dev 5/Norming Geggier Only [[00 22 16] |

| 1 | | people |
|----|---|--------------------------------------------------|
| 2 | Q | But my question is |
| 3 | A | which is sort of related to that whole |
| 4 | | geography of that position of the lake. |
| 5 | Q | You list the predominant sites as the slopes of |
| 6 | | Bald Mountain, the coves at the northern end and |
| 7 | | the qualities of the shoreline, and my question |
| 8 | | is is it your opinion that the coves at the |
| 9 | | northern end of the pond would be more of a |
| 10 | | predominant site than the turbines? |
| 11 | A | What I am stating is not that. I am stating |
| 12 | | that the combination when taken as a whole of |
| 13 | | all the various elements on the lake that are |
| 14 | | there for both the recreational experience and |
| 15 | | the visual experience would reduce the presence |
| 16 | | and the dominance, if you will, of the turbines |
| 17 | | in the project. |
| 18 | Q | So if people were taking in all three of those |
| 19 | | predominant sites. |
| 20 | A | Well, more than that. I mean, the shoreline |
| 21 | | itself is always I think a very important |
| 22 | | attraction for paddlers. |
| 23 | Q | If you were looking at the shoreline, and then |
| 24 | | you looked at the coves, and then you looked at |
| | | |

| | | WIINESS - DAVID RAFHAEL |
|----|---|-------------------------------------------------------|
| 1 | | Bald Mountain, in between would be the turbines, |
| 2 | | right? |
| 3 | A | Correct. |
| 4 | Q | So it would be difficult to take in and enjoy, |
| 5 | | well, strike the word enjoy. It would be |
| б | | difficult to take in the three predominant sites |
| 7 | | that you mention without seeing the turbines. |
| 8 | A | You will see the turbines. I don't think I've |
| 9 | | ever denied that. I mean, the turbines will be |
| 10 | | visible and they'll be part of the sights you |
| 11 | | take in. |
| 12 | Q | Okay. So it sounds like the answer is yes. |
| 13 | A | Yes. |
| 14 | Q | Now, you mentioned the sites and sounds and |
| 15 | | sensations. As a paddler, you experience the |
| 16 | | pond with those senses? |
| 17 | A | Yes, I do. |
| 18 | Q | Those are, enjoying those senses would be some |
| 19 | | of the reasons that people seek a recreational |
| 20 | | area? |
| 21 | А | Certainly, but they are part of maybe the |
| 22 | | primary experience which might be to fish or to |
| 23 | | paddle or that type of thing. |
| 24 | Q | Those people would also use their sense of |
| | | {SEC 2015-2} [Day 5/Morning Session Only] {09-23-16} |
| | 1 | [BEC 2013-2] [Day 3/MOLINING SESSION ONLY] {09-23-10} |

| 1 | | sight, too? |
|----|---|-------------------------------------------------|
| 2 | A | Certainly. |
| 3 | Q | Okay. Going back to what you were just reading |
| 4 | | on page 14, you get, you have your third reason |
| 5 | | why this project would not be out of context at |
| 6 | | Willard Pond. Can you read what your third |
| 7 | | reason is? The entirety of it? |
| 8 | A | Based on my circumnavigation of the pond I came |
| 9 | | to the distinct conclusion that the visibility |
| 10 | | of the project and/or exposure to that |
| 11 | | visibility would be limited. As one follows the |
| 12 | | pond shoreline in a boat in a clockwise |
| 13 | | direction, it is possible that one would not |
| 14 | | even notice or even see the project. Where it |
| 15 | | is most visible on the pond would be in a |
| 16 | | location that is behind the paddler's or |
| 17 | | boater's back and over their shoulder, not in |
| 18 | | the direction they would typically be looking. |
| 19 | | When traveling counterclockwise around the pond |
| 20 | | from the body launch, those in boats may have |
| 21 | | potential project visibility for about 35 to 40 |
| 22 | | percent of the time on the water, and the |
| 23 | | context of that potential visibility would be |
| 24 | | continually changing. |
| | 1 | |

WITNESS - DAVID RAPHAEL

| 1 | Q | Okay. Could you imagine Fish & Game or the |
|----|---|--------------------------------------------------|
| 2 | | Audubon Society posting instructions at the pond |
| 3 | | saying paddle clockwise if you want a more |
| 4 | | natural experience and paddle counterclockwise |
| 5 | | if you would like to view 8 wind turbines? |
| 6 | A | Certainly not in the manner that you phrased it. |
| 7 | | You know, actually I think that Audubon could |
| 8 | | post at the pond, observe the wind turbines |
| 9 | | which are contributing to our battle against |
| 10 | | climate change. So you could also do that as |
| 11 | | well, but I wouldn't imagine a sign of the type |
| 12 | | that you're referring to specifically worded in |
| 13 | | the manner that you suggest. |
| 14 | Q | Okay. Have you ever been I gather that you |
| 15 | | are, that you paddle a lot. You mentioned |
| 16 | | yesterday going to Lake George; is that right? |
| 17 | A | Yes. |
| 18 | Q | Have you ever been some place where there was a |
| 19 | | sign indicating what direction you might paddle |
| 20 | | to avoid looking at something? |
| 21 | A | I don't recall that, no. |
| 22 | Q | It might be kind of memorable had you seen one, |
| 23 | | would you say that? |
| 24 | A | Yeah. I have not, yeah. I would probably |

| 1 | | remember that, certainly. |
|----|---|--------------------------------------------------|
| 2 | Q | People don't just paddle in a circle following a |
| 3 | | shoreline, do they? |
| 4 | A | Oh, sure they do. |
| 5 | Q | They just |
| 6 | А | Well, no. That's one way they paddle. I mean, |
| 7 | | I think |
| 8 | Q | Let me rephrase my question. |
| 9 | А | Okay. Please. |
| 10 | Q | Do all paddlers paddle in a circle following the |
| 11 | | shoreline? |
| 12 | А | Not necessarily. No. |
| 13 | Q | Some people go straight out to the middle of the |
| 14 | | pond, don't they? |
| 15 | A | Yes. I would imagine. |
| 16 | Q | Have you ever? |
| 17 | A | Certainly. |
| 18 | Q | Okay. Some people would go out to Pine Point |
| 19 | | that you mentioned. Is that right? |
| 20 | А | That's right. |
| 21 | Q | And Pine Point is out in the vicinity of where |
| 22 | | the loons are, the northern end? |
| 23 | А | It's a little bit to the east, right. That's |
| 24 | | right. |
| | | |

| 1 | Q | So some people might paddle straight out to Pine |
|----|---|-----------------------------------------------------------------|
| 2 | | Point? |
| 3 | A | Right. |
| 4 | Q | And would those people view turbines? Would |
| 5 | | they see them? |
| б | A | Yes. They would. |
| 7 | Q | And for the people who want to check out the |
| 8 | | coves at the northern end that you described as |
| 9 | | a predominant site, would those people see the |
| 10 | | turbines? |
| 11 | A | If they're right in towards the cove, the trees |
| 12 | | are high enough to block views of the project. |
| 13 | Q | But to get to the cove you've got to paddle |
| 14 | | basically the entire length from the boat launch |
| 15 | | of the pond, right? |
| 16 | A | Pretty much but if you're hanging out in the |
| 17 | | cove and you're observing, the turbines would be |
| 18 | | out of view at that point. |
| 19 | Q | Okay. But on the way to |
| 20 | A | Yes. They would. They would see them on the |
| 21 | | way. |
| 22 | Q | They would see them. |
| 23 | A | Yes. |
| 24 | Q | So do some people paddle and try to stay in the |
| | | |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| | | WITNESS - DAVID RAPHAEL |
|----|---|------------------------------------------------------|
| 1 | | sun? |
| 2 | А | Hmm. |
| 3 | Q | My wife would if she paddled. |
| 4 | A | I assume so. Yes. That would be one, I mean I |
| 5 | | never think of it that way to be honest with you |
| 6 | | myself. |
| 7 | Q | Me either. |
| 8 | A | But I won't refute that somebody would like to |
| 9 | | be out in the sun and enjoy that, yes. |
| 10 | Q | For some parts of the day, the sunniest spots |
| 11 | | would not be along the shore, would they? |
| 12 | A | For some parts of the day, that's correct. |
| 13 | Q | Because the trees and Bald Mountain would block |
| 14 | | it? |
| 15 | A | That's correct. Yes. |
| 16 | Q | So the sunnier spots for those parts of the day |
| 17 | | would be away from the shoreline. |
| 18 | А | Or they could be on the opposite side. |
| 19 | Q | Correct. |
| 20 | А | Or they are could be on the north or the end. |
| 21 | | So, you know, there could be any number of |
| 22 | | places where you could find sun if you were |
| 23 | | looking for it at a particular time of day or |
| 24 | | year. |
| | | {SEC 2015-2} [Day 5/Morning Session Only] {09-23-16} |

| 1 | Q | There's nothing blocking the sun from the middle |
|----|---|--------------------------------------------------|
| 2 | | of the pond, is there? |
| 3 | A | In the winter, I think Bald Mountain probably |
| 4 | | would block the sun actually. |
| 5 | Q | Okay. But during the summer. |
| 6 | A | No. In the summer the sun would be overhead and |
| 7 | | would certainly be accessible in the middle of |
| 8 | | the pond. |
| 9 | Q | Okay. And would you see turbines from the |
| 10 | | middle of the pond? |
| 11 | A | Depends what direction you're floating. |
| 12 | Q | Good point. If you're looking towards the |
| 13 | | project, would you see turbines from the middle |
| 14 | | of the pond? |
| 15 | A | I believe so. Yes. |
| 16 | Q | All right. On page 14 where we're at of your |
| 17 | | testimony, you state, let me find the place, on |
| 18 | | line 17, 16 and 17, you state that the present |
| 19 | | configuration and size of Willard Pond is the |
| 20 | | result of human manipulation via damming. Is |
| 21 | | that still your factual opinion? |
| 22 | A | Well, I would say the dam was put there by |
| 23 | | humans. Yes. |
| 24 | Q | How would the configuration and size of Willard |
| | | |

| | r | |
|----|---|--------------------------------------------------|
| 1 | | Pond be different absent the dam? |
| 2 | A | I don't know. If you, I'd have to sort of look |
| 3 | | at the height of the dam and if you took the dam |
| 4 | | down what the resulting drop in the water would |
| 5 | | be. I would imagine it would be slightly |
| 6 | | smaller in size. |
| 7 | Q | Is that your area of expertise? |
| 8 | A | In terms of what? |
| 9 | Q | Measuring the effects of dams and the |
| 10 | | differences, hydrology and issues related to |
| 11 | | dams? |
| 12 | A | I certainly can read topographic maps and could |
| 13 | | gauge the current height of the dam and if it |
| 14 | | were removed, what effect, if any, I mean to |
| 15 | | what effect the lake would drop. |
| 16 | Q | But you haven't made any such determinations, |
| 17 | | have you? |
| 18 | A | No. I have not. |
| 19 | Q | So you don't know that the dam affects the size |
| 20 | | and configuration, do you? |
| 21 | A | Well, I think the dam certainly does affect, I |
| 22 | | mean, it's there so it must have some effect on |
| 23 | | the size and configuration because without it I |
| 24 | | would imagine the water body would be slightly |
| | | |

| 1 | | different. |
|----|---|--------------------------------------------------|
| 2 | Q | But you don't know of the effects. You think |
| 3 | | and you presume there are effects, is that what |
| 4 | | I'm hearing? |
| 5 | A | I would, yes. I presume there would be effects. |
| 6 | Q | You didn't undertake any analysis to determine |
| 7 | | that the present configuration and size would be |
| 8 | | different or has been changed based on the dam. |
| 9 | | Is that right? |
| 10 | A | No. I have not. |
| 11 | Q | You didn't do any of that to support that |
| 12 | | statement, correct? |
| 13 | A | Again, the statement is based on what I saw and |
| 14 | | what I observed and the fact that there is a dam |
| 15 | | there now. So I think it's common sense, most |
| 16 | | people would agree if you would ask, that the |
| 17 | | dam has some effect on the water body and its |
| 18 | | size. |
| 19 | Q | In front of you is Audubon's witness and exhibit |
| 20 | | list, and there's a couple of documents attached |
| 21 | | to that? |
| 22 | А | Yes. I see it. |
| 23 | Q | Let me find my copy. Okay. If you look at the |
| 24 | | upper right, it says ASNH 12. It's the second |
| | | |

| 1 | | attached document called Official List of Public |
|----|---|--------------------------------------------------|
| 2 | | Waters. |
| 3 | А | Yes, I see that. |
| 4 | Q | And do you see that this is put out by the New |
| 5 | | Hampshire Department of Environmental Services |
| 6 | | Water Division? |
| 7 | А | Yes, I do. |
| 8 | Q | Okay. Turn a few pages to actually the last |
| 9 | | page at the top where it says part one, Public |
| 10 | | Lakes and Ponds? |
| 11 | A | Yes. I see that. |
| 12 | Q | Okay. In the middle is, actually, hold on one |
| 13 | | second. Are you aware that DES categorizes |
| 14 | | water bodies as either artificial, raised by dam |
| 15 | | or natural? |
| 16 | A | Yes. I'm aware of this particular |
| 17 | | classification. |
| 18 | Q | Okay. And are you aware that Willard Pond is |
| 19 | | categorized as raised by dam? |
| 20 | A | Yes, I am. |
| 21 | Q | Are you aware that the water levels of water |
| 22 | | bodies categorized as raised by the dam are not |
| 23 | | necessarily raised by the dam but they simply |
| 24 | | have a dam? |
| | | |

| 1 | A | Certainly some are, some are not. |
|----|---|--------------------------------------------------|
| 2 | Q | So are you aware |
| 3 | A | It says although it is most often the case that |
| 4 | | the installation of a dam raises the water level |
| 5 | | of an impoundment, so I think most often the |
| 6 | | case would indicate that the today dam does |
| 7 | | indeed raise the water level. |
| 8 | Q | I would agree, and what does the rest of that |
| 9 | | sentence you just started reading say? |
| 10 | A | And technically speaking could be less than ten |
| 11 | | acres after damming. No known examples. |
| 12 | Q | Actually, I believe it would be, you said |
| 13 | | although, you read the part although it is most |
| 14 | | often the case |
| 15 | A | I'm sorry. I missed a section. |
| 16 | Q | Could you read the whole sentence? |
| 17 | A | Certainly. Although it is most often the case |
| 18 | | that the installation of a dam raises the water |
| 19 | | level of an impoundment, RDs are not necessarily |
| 20 | | quote, raised, end quote, and technically |
| 21 | | speaking could be less than ten acres after |
| 22 | | damming. No known examples. |
| 23 | Q | You can put that exhibit down. Pardon me, |
| 24 | | Mr. Chair. I went a little bit out of order and |
| | | |

| 1 | | I'm just trying to find my way back. |
|----|---|--------------------------------------------------|
| 2 | | Okay. On page 19 of your Prefiled |
| 3 | | Testimony, on the top, it would be line 2, and |
| 4 | | I'm sorry. Line 14. You state that the hub and |
| 5 | | the rotor have a greater effect than turbine |
| 6 | | blades and portions thereof. Is that right? |
| 7 | А | Correct. |
| 8 | Q | Doesn't this depend on the distance from the |
| 9 | | viewer? |
| 10 | А | It depends on a number of things, but, you know, |
| 11 | | generally speaking I think most experts agree |
| 12 | | that, you know the primary focal point of a |
| 13 | | turbine and visibility is predominantly taken |
| 14 | | from and seen with the nacelle, the turbine hub, |
| 15 | | if you will. |
| 16 | Q | But your statement that the hub and the rotor |
| 17 | | have a greater effect than the turbine blades |
| 18 | | and portions of the blades, my question is does |
| 19 | | that depend on the distance or does that change |
| 20 | | with the distance that you're viewing it from? |
| 21 | А | Well, certainly distance has an effect on |
| 22 | | visibility and visual effect. |
| 23 | Q | So the same turbine when viewed from, say, five |
| 24 | | to ten miles, the tower and the hub are the most |
| | | |

| 1 | | noticeable elements, aren't they? |
|----|---|--------------------------------------------------|
| 2 | A | Yes. |
| 3 | Q | From that distance, the blades wouldn't be as |
| 4 | | prominent, would they? |
| 5 | А | Typically, no. |
| 6 | Q | Even if moving? |
| 7 | А | Even if moving. |
| 8 | Q | However, at a closer distance, the movement of |
| 9 | | the blade becomes more noticeable, doesn't it? |
| 10 | А | It may, it depends on, again, the context, but |
| 11 | | generally speaking, yes. |
| 12 | Q | And it would be kind of counterintuitive, |
| 13 | | wouldn't it, to say that as you get closer to a |
| 14 | | moving blade, a turbine with a moving blade that |
| 15 | | you wouldn't notice the movement more as you got |
| 16 | | closer? |
| 17 | A | I don't know if it would be counterintuitive. I |
| 18 | | mean, I think, yes, at face value, but again, |
| 19 | | that's sort of out of context, and when you |
| 20 | | review these projects you really do have to look |
| 21 | | at each of those kind of questions within a |
| 22 | | particular context. |
| 23 | Q | Can you I don't know what you mean by that. |
| 24 | | You used the term context a couple times, and |
| | | |

| | 1 | |
|----|---|--------------------------------------------------|
| 1 | | I'm not sure what you're referring to. |
| 2 | А | You know, context refers to the setting, the |
| 3 | | landscape around you, the vantage point that |
| 4 | | you're seeing it from, you know, the other |
| 5 | | physical elements. You know, for example on a |
| 6 | | very windy day when the turbines might be |
| 7 | | spinning certainly you might actually be more |
| 8 | | likely to notice trees moving dramatically right |
| 9 | | next to you, to your point, than a turbine |
| 10 | | blade, you know, a mile and three quarters from |
| 11 | | where you're standing. |
| 12 | Q | Right. That makes sense. On that same windy |
| 13 | | day with the same turbine moving at the same |
| 14 | | speed if I'm five miles away versus one mile |
| 15 | | away, looking at the turbine, I will probably |
| 16 | | notice the movement of the turbine much more at |
| 17 | | that closer distance? |
| 18 | А | You would notice it more at a closer distance, |
| 19 | | yes. |
| 20 | Q | Moving to page 21 of your testimony. On line |
| 21 | | 10, you state that the elimination, this isn't a |
| 22 | | quote, but, essentially, you state that the |
| 23 | | elimination of turbine 10 and the reduction of |
| 24 | | turbine 9 has reduced effect on Willard Pond |
| | | |

| 1 | | dramatically. |
|----|---|--------------------------------------------------|
| 2 | A | Yes. |
| 3 | Q | Yet 8 turbines would still be visible from parts |
| 4 | | of Willard Pond. |
| 5 | A | From parts. Yes. |
| 6 | Q | And up to 7 turbines would be visible from other |
| 7 | | parts of Willard Pond? |
| 8 | A | Yes, and then there are other parts where no |
| 9 | | turbines would be visible at well. |
| 10 | Q | Right, and that would be true with regard to the |
| 11 | | 2012 project as well? |
| 12 | A | That would be true. |
| 13 | Q | Right. So that hasn't changed? |
| 14 | A | Although less likely, but, again, the prominence |
| 15 | | and presence of turbine 10 was quite noticeable. |
| 16 | Q | Right, but there were, like you said, there's |
| 17 | | parts of the pond where even that turbine |
| 18 | | wouldn't have been visible? |
| 19 | A | That's correct. |
| 20 | Q | And I'm sure that's true of just about any |
| 21 | | project, would you agree? |
| 22 | A | Yes. |
| 23 | Q | And you state that the, I think it's on the next |
| 24 | | page, that the overall percentage change in |
| | | |

| 1 | | potential visibility area at Willard Pond is |
|----|---|--------------------------------------------------|
| 2 | | nearly five percent from the 2012 project that |
| 3 | | was denied. Is that right? |
| 4 | A | That's correct. |
| 5 | Q | So there's been a reduction of nearly five |
| 6 | | percent in the area of the pond from which |
| 7 | | turbines are visible? |
| 8 | A | That's correct. |
| 9 | Q | And it's that five percent that you find |
| 10 | | dramatic? |
| 11 | A | No. It's the, it's taking all of these factors |
| 12 | | into account that I found dramatic, and that was |
| 13 | | really driven home actually when I paddled, |
| 14 | | going back to the paddling experience, I went |
| 15 | | out there with both simulations in hand, and |
| 16 | | from the vantage point that the simulation was |
| 17 | | taken from, I compared the before and after, the |
| 18 | | ten turbine project versus the nine turbine |
| 19 | | project, turbine 9 reduced, and I found that |
| 20 | | change to be dramatic. |
| 21 | Q | Okay. |
| 22 | A | Overall. And then this testimony breaks down |
| 23 | | all of the contributing elements which went into |
| 24 | | that material change that, that significant |
| | | |

1 change in the visual effect. 2 Okay. Put down your Prefiled Testimony and pick Q 3 up your Visual Assessment. 4 Α Okay. 5 Please. And turn to page 85 once you do. 0 Τf 6 the Committee could just let me know once you --7 Α I'm there. Sorry. I just want to make sure --8 Q 9 PRESIDING OFFICER SCOTT: I'm showing that 10 as the PDF page 91. I think we're there. On the bottom right it says page 85 which is 11 Q 12 Mr. Raphael's testimony. 13 Mr. Raphael, on page 85 of your report, 14 where you, in the visual dominance table, when 15 you discuss Willard Pond, you state that the 16 project will be quote, unquote, a substantial 17 element within some views. Is that still your 18 opinion? 19 Yes, it is. Α 20 Is that why you rated visual dominance of the 0 21 project at Willard Pond to be high? 22 Α The basis for the rating is explained in the 23 little paragraph there which I think it has to 24 do with proximity, and, you know, in certain

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| 1 | | portions of the pond from which you would view |
|----|---|--------------------------------------------------|
| 2 | | the project. |
| 3 | Q | In your explanation of visible dominance in that |
| 4 | | paragraph you state that much of the 360 degree |
| 5 | | preview does not include the project; is that |
| 6 | | right? |
| 7 | А | That is correct. |
| 8 | Q | Have you ever evaluated a wind project that |
| 9 | | dominated a 360 degree view from a sensitive |
| 10 | | resource? |
| 11 | А | I'd have to go and review various, you know, |
| 12 | | I've done a number of these assessments so I'd |
| 13 | | have to review it. I can certainly, you know |
| 14 | | there are several wind projects that I have |
| 15 | | experience firsthand that certainly would take |
| 16 | | in a 360 degree view. There are several in New |
| 17 | | York State in particular that depending on where |
| 18 | | your viewpoint, you are actually surrounded by |
| 19 | | them. So there are places where that can occur. |
| 20 | Q | Okay. In your chart on page 89, this is your |
| 21 | | chart on Extent Of Use, and you describe, I'm |
| 22 | | sorry. Duration of View. You begin your |
| 23 | | Duration of View discussion, and you explain the |
| 24 | | threshold ratings, low, moderate and high. A |
| | | |

| 1 | | rating of low would be for activities whose |
|----|---|--------------------------------------------------|
| 2 | | focus would be away from a project or would be |
| 3 | | constrained due to limited viewing |
| 4 | | opportunities. Is that right? |
| 5 | A | That's right. |
| 6 | Q | You describe ice fishing in a shanty as one such |
| 7 | | activity. Is that right? |
| 8 | A | That's right. |
| 9 | Q | I agree with you, but I think you're saying is |
| 10 | | that the someone sitting in a shanty wouldn't be |
| 11 | | viewing the project. Is that right? |
| 12 | A | Correct. Or, you know, sitting by a hole in the |
| 13 | | ice in the winter probably. |
| 14 | Q | You mentioned a shanty. |
| 15 | A | I did, yes. |
| 16 | Q | Have you ever seen a fishing shanty on Willard |
| 17 | | Pond? |
| 18 | A | No, I didn't see a fishing shanty. I was there |
| 19 | | in the winter when it was frozen, and I did not |
| 20 | | see a fishing shanty. |
| 21 | Q | Because you do state in your report that access |
| 22 | | to Willard Pond is not plowed in the winter. Is |
| 23 | | that right? |
| 24 | A | I believe. Yeah. I was there when the plow |
| | | |

| 1 | | ended at the parking lot. |
|----|---|-------------------------------------------------|
| 2 | Q | Right. So what I meant is from the parking lot |
| 3 | | to the boat launch, that part is not plowed? |
| 4 | A | Correct. |
| 5 | Q | And about how far away from the parking lot |
| 6 | | would you estimate that the pond is? |
| 7 | A | I really want to look at a map. You know, I'm |
| 8 | | not good at saying that off the top of my head. |
| 9 | Q | Do you remember how long it took you to walk |
| 10 | | there? |
| 11 | A | A few minutes, couple minutes. |
| 12 | Q | Circling back to something you said earlier |
| 13 | | about a car being parked at the boat launch |
| 14 | | being a form of development, the parking lot is |
| 15 | | not at the boat launch, is it? |
| 16 | A | No, the parking lot is not. |
| 17 | Q | So if someone were bringing their boat there, |
| 18 | | they would, for one example, back the trailer |
| 19 | | up, boat comes off, oh, no, they can't bring a |
| 20 | | trailer. You would bring your paddle. You |
| 21 | | would bring your kayak, drop off your kayak? |
| 22 | A | I'm sorry? |
| 23 | Q | You'd drop off your kayak maybe with your car, |
| 24 | | and then but you return your car to the parking |
| | | |

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| 1 | | lot, right? |
|----|---|--------------------------------------------------|
| 2 | A | Actually, it was interesting. Several of the |
| 3 | | times I've been there the cars have been parked |
| | | |
| 4 | | right at the lake, interestingly enough, so not |
| 5 | | everybody uses the parking lot. I know they |
| б | | should, and I'm sure that's the intent, but |
| 7 | | there is actually a kind of a de facto parking |
| 8 | | space just to the right of the parking, I mean |
| 9 | | just to the right of the boat launch, and I've |
| 10 | | seen cars there, I think, on all but one of the |
| 11 | | occasions I've been there. |
| 12 | Q | Have you ever heard of the caretaker asking |
| 13 | | people to move their cars that are parked there? |
| 14 | A | I'm not aware of that. No. |
| 15 | Q | Going back to page 89 of your report, we were |
| 16 | | discussing fishing shanties. Did you see ice |
| 17 | | fishing happening at Willard Pond when you were |
| 18 | | there in the winter? |
| 19 | A | I did not. I saw, you know, evidence that |
| 20 | | people went out on to the frozen lake, but I |
| 21 | | didn't see a fishing shanty, no. |
| 22 | Q | Going back to your explanation of the threshold |
| 23 | | ratings getting to moderate, moderate would be |
| 24 | | when views are tempered by focusing on the |
| | | |

| 1 | | |
|----|---|--------------------------------------------------|
| 1 | | activities such as fishing and the shifting |
| 2 | | context and viewpoint? |
| 3 | A | Yes. That's how we framed it. |
| 4 | Q | You state, quote, although the views would be |
| 5 | | present, they would be everchanging and |
| 6 | | mitigated by the activity. Is that right? |
| 7 | A | That's right. |
| 8 | Q | So although a fishermen drifting around the pond |
| 9 | | would not have the same view of the turbines all |
| 10 | | the time, the fishermen would likely experience |
| 11 | | multiple different views of the project. Is |
| 12 | | that right? |
| 13 | A | I suppose that's possible. |
| 14 | Q | And a rating of high would be for activities |
| 15 | | whose primary focus would be toward the project, |
| 16 | | is that right? |
| 17 | А | Yes. |
| 18 | Q | So that would include someone visiting the pond |
| 19 | | to look at the project? |
| 20 | A | Certainly could. |
| 21 | Q | Would that include people viewing the loon |
| 22 | | nesting area because I believe you said |
| 23 | A | No, because again, in that regard, the primary |
| 24 | | interest and the primary view is of the wildlife |
| | | |

| 1 | | and not of the scenery so that's an important |
|----|---|--------------------------------------------------|
| 2 | | distinction that needs to be made. |
| 3 | Q | Right. But in your rating of high, you say it |
| 4 | | would be for activities whose primary focus |
| 5 | | would be toward the project. The loon nesting |
| 6 | | area is in the direction toward the project, |
| 7 | | isn't it? |
| 8 | А | Yes, but I think it really refers, if you read |
| 9 | | the whole paragraph, it really refers to the |
| 10 | | fact that, again, this is a scenic, we're |
| 11 | | charged with evaluating scenic resources so the |
| 12 | | example of high, I think, that's important is a |
| 13 | | scenic pulloff on a scenic highway where the |
| 14 | | primary interest there is the scenic view, and I |
| 15 | | think that's the reference we're trying to speak |
| 16 | | to in that example. |
| 17 | Q | So in your explanation of high, when you say |
| 18 | | activities whose primary focus would be toward a |
| 19 | | project, the activity it sounds like you're |
| 20 | | focusing on is the activity of pulling over on a |
| 21 | | scenic overlook? |
| 22 | А | Yeah, and that may not be worded, you know, as |
| 23 | | effectively as it could be, but again, the |
| 24 | | intent there is you, you know, you would have a |
| | | |

| 1 | r | |
|----|----|--------------------------------------------------|
| 1 | | high effect in terms of duration of view when |
| 2 | | you are looking at a project specifically for |
| 3 | | its scenic value. |
| 4 | Q | And you wouldn't put looking in the direction of |
| 5 | × | loons as a scenic view? |
| | 75 | |
| 6 | A | No. It's |
| 7 | Q | Or scenic activity? |
| 8 | A | Watching birders, I live right near a birding |
| 9 | | area and as you pointed out earlier, you know, |
| 10 | | they've got binoculars or cameras with long |
| 11 | | focal lenses, and they're just focused on the |
| 12 | | wildlife. |
| 13 | Q | Sometimes they take those binoculars away from |
| 14 | | their eyes, don't they? |
| 15 | A | Sure. |
| 16 | Q | Do you know whether people go to Willard Pond |
| 17 | | simply to drift on a boat to enjoy the views? |
| 18 | A | I'm sure that people go to Willard Pond to do |
| 19 | | that, yes. Certainly. |
| 20 | Q | Do you think that some people come to Willard |
| 21 | | Pond to simply enjoy the undeveloped view, |
| 22 | | undeveloped landscape? |
| 23 | A | I'm sure the landscape is a contributing factor |
| 24 | | to their attraction to the pond. |
| | | |

| 1 | Q | And their current expectation could be that they |
|----|---|-----------------------------------------------------|
| 2 | | would see no human structures, couldn't it? |
| 3 | A | I mean, that is possible although I don't think |
| 4 | | the expectation is the same as a wilderness or |
| 5 | | remote site would provide. You know, I think, |
| 6 | | again, my observations are that many of the |
| 7 | | people who go to Willard Pond are there to |
| 8 | | recreate, and to paddle and certainly the view |
| 9 | | is a contributing factor and I'm not disputing |
| 10 | | that, nor would I, but I think it's important |
| 11 | | when you're looking at use and viewer effect to |
| 12 | | understand that people doing different |
| 13 | | activities have different, you know, different |
| 14 | | focus. |
| 15 | Q | Right. So the person that I mentioned who came |
| 16 | | to Willard Pond to enjoy the undeveloped |
| 17 | | landscape, their current expectation when they |
| 18 | | arrive could be that they would not see human |
| 19 | | structures, couldn't that be? |
| 20 | A | That could be. |
| 21 | Q | And you consider the expectations of a |
| 22 | | reasonable viewer, correct? |
| 23 | A | Correct. |
| 24 | Q | And on page 29 of your report, Determining |
| | | |
| | 1 | GEG 2015 2] [Day E/Morning Soggion Only] [00 22 16] |

| 1 | | Viewer Effect, you see that? |
|----|---|-------------------------------------------------|
| 2 | А | Yes. |
| 3 | Q | At the bottom. In the last sentence you say the |
| 4 | | expectations of the reasonable viewer can be |
| 5 | | assessed and so on and so forth. Is that right? |
| 6 | А | That's right. |
| 7 | Q | And that's what the SEC rules require, right? |
| 8 | | To look at the expectations of a reasonable |
| 9 | | viewer? |
| 10 | A | Yes. |
| 11 | Q | Actually, it does not. Rule 301.05(b)(6) |
| 12 | | requires you to consider the expectations of a |
| 13 | | typical viewer. |
| 14 | A | Okay. Well, maybe, semantics? I think |
| 15 | | reasonable or typical really could be |
| 16 | | interchanged in some respects because a |
| 17 | | reasonable viewer would have the same approach |
| 18 | | and attitude that a typical viewer would. We're |
| 19 | | just using the language from the determination |
| 20 | | of effect and plugging it in there, but that |
| 21 | | could be interchangeable with typical, and in |
| 22 | | fact, in other, we may have represented typical |
| 23 | | viewers elsewhere in the language or in our |
| 24 | | writing. |
| | | |

| 1 | Q | Do you know where you do reference that? |
|----|---|--------------------------------------------------|
| 2 | A | I don't know, but I know I've used that term |
| 3 | | before certainly. |
| 4 | Q | Okay. You weren't involved in the rule drafting |
| 5 | | process, were you? |
| б | A | No, I was not. |
| 7 | Q | And the rule does say typical. Doesn't it? |
| 8 | A | It does. |
| 9 | Q | Are typical and reasonable, are they synonyms? |
| 10 | | MR. NEEDLEMAN: I think he already |
| 11 | | addressed this issue. |
| 12 | | MR. REIMERS: I'm not sure he did. |
| 13 | А | For the purposes of the analysis, they're |
| 14 | | interchangeable. |
| 15 | Q | And that's your opinion, isn't it? That's not |
| 16 | | in the rules that it's interchangeable. |
| 17 | A | It's not in the rules, no. |
| 18 | Q | That would be your opinion then that they're |
| 19 | | interchangeable, is that right? |
| 20 | A | It is my opinion and my experience both. |
| 21 | Q | So can you read that sentence that begins at the |
| 22 | | end of page 29, the expectations of the |
| 23 | | reasonable viewer? The full sentence? |
| 24 | A | The expectations of the reasonable viewer can be |
| | | |

| _ | | |
|----|---|--------------------------------------------------|
| 1 | | assessed using a multitude of sources such as |
| 2 | | guidebooks, publications, online media, |
| 3 | | anecdotal and interview sources, background |
| 4 | | polling, user surveys, studies as well as |
| 5 | | general field observations and professional |
| 6 | | expertise. |
| 7 | Q | Okay. Guidebooks and publications are two |
| 8 | | sources used to assess the expectations of a |
| 9 | | typical and reasonable viewer? |
| 10 | А | Yes. |
| 11 | Q | And for example, they're one way of ascertaining |
| 12 | | what a reasonable viewer's expectations are. |
| 13 | A | It informs that analysis. |
| 14 | Q | Right. Trying to get to a particular spot if I |
| 15 | | could just have a minute. You note in your |
| 16 | | report that we were just talking about |
| 17 | | guidebooks and publications. You note in your |
| 18 | | report that Willard Pond is discussed in several |
| 19 | | publications of statewide or national appeal, |
| 20 | | don't you? |
| 21 | A | Could you point me to the specific reference? |
| 22 | Q | Sure. On page 62. |
| 23 | A | Thank you. Yes. We list a number of different |
| 24 | | guides in which Willard Pond is mentioned. |
| | | |

| 1 | Q | Okay. Let me read from you, this is, I don't |
|----|---|-----------------------------------------------------------------|
| 2 | | know that we need to go to it right now, but in |
| 3 | | the Prefiled Testimony of Audubon Society, |
| 4 | | Michael Bartlett's Prefiled Testimony, he quotes |
| 5 | | various of these exact books that Mr. Raphael, |
| б | | and so Mr. Raphael, if any of this sounds wrong, |
| 7 | | please let me know, but you list the book Quiet |
| 8 | | Water New Hampshire and Vermont. Is that right? |
| 9 | A | Correct. |
| 10 | Q | In your chart. And that's a canoe and kayak |
| 11 | | guide? |
| 12 | A | Yes, it is. |
| 13 | | PRESIDING OFFICER SCOTT: Can you bring |
| 14 | | your microphone closer, Mr. Reimers? |
| 15 | Q | Sure. Sorry about that. Does it sound familiar |
| 16 | | to you that that book says about Willard Pond, |
| 17 | | hidden in the southwestern part of New |
| 18 | | Hampshire, protected by an Audubon Society |
| 19 | | preserve, Willard Pond is simply breathtaking? |
| 20 | A | Yes. |
| 21 | Q | And that's a canoe and kayaker presumably |
| 22 | | writing that book, right? |
| 23 | A | Correct. |
| 24 | Q | And they describe it as breathtaking. Do you |
| | | (dec 2015 2) [Dev 5/Werning Genetics Only 1 (00.02.16] |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |

| 1 | | think that that breathtaking involves the view? |
|----|---|--------------------------------------------------|
| 2 | A | Obviously not because the view is not I mean |
| 3 | | the view, oh, I'm sorry. I misunderstood the |
| 4 | | question. I'm sure the view is part of that |
| 5 | | consideration, certainly. |
| 6 | Q | And then you cite from Hiking New Hampshire, |
| 7 | | Second Edition. See that in your chart? |
| 8 | А | Yes, I do. |
| 9 | Q | And does it sound right to you that the quote |
| 10 | | from that book includes, a secluded pond for |
| 11 | | canoeing, fly fishing or shoreline exploration |
| 12 | | with plentiful wildlife and a summit overview of |
| 13 | | the major Monadnock peaks? |
| 14 | А | Yes. |
| 15 | Q | And you also cite in your chart The Wildlife of |
| 16 | | New England? |
| 17 | А | Yes. |
| 18 | Q | And does it sound right to you that that book |
| 19 | | says that Willard Pond is a, describes it as |
| 20 | | pristine 100-acre Willard Pond and in the heart |
| 21 | | of a 18-mile-long corridor of protected land in |
| 22 | | southern New Hampshire's uplands is the |
| 23 | | 1056-acre dePierrefeu-Willard Pond Wildlife |
| 24 | | Sanctuary which is the largest property of the |
| | | |

| 1 | | New Hampshire Audubon Society. Does that sound |
|----|---|--------------------------------------------------|
| 2 | | right? |
| 3 | А | Sounds right. |
| 4 | Q | Okay. That acreage is wrong. Would you agree? |
| 5 | A | You know, what was the acreage again? I'm |
| 6 | | sorry. |
| 7 | Q | It's a minor point. 1056. I think we agreed |
| 8 | | earlier that it was now 1671. |
| 9 | A | Okay. |
| 10 | Q | Do you have any reason to doubt that? |
| 11 | A | No. I do not. |
| 12 | Q | Finally, from the book, you cite The New Hiking, |
| 13 | | the Monadnock Region. Do you see that in your |
| 14 | | chart? Awkwardly titled book. |
| 15 | А | Yes. I do see that. I'm sorry. |
| 16 | Q | And does it sound right to you that that book |
| 17 | | describes Willard Pond as a quote, unquote, |
| 18 | | "wilderness pond," and it goes on to say the |
| 19 | | undeveloped tract is contiguous to other |
| 20 | | protected lands and part of more man 2000 acres |
| 21 | | that includes hills, pristine ponds and a |
| 22 | | mixture of woodlands? Does that sound right? |
| 23 | А | I don't recall reading that specifically, but I |
| 24 | | will take your word for it. |

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| 1 | Q | If you'd like, we can look at it. |
|----|---|-------------------------------------------------|
| 2 | A | No. I take your word for it certainly. |
| 3 | Q | Aren't these public documentation of the scenic |
| 4 | | or recreational values of Willard Pond? |
| 5 | A | Certainly. They're part of that. Part of what |
| 6 | | informs that understanding of the public value. |
| 7 | | Other, you know, other elements that we |
| 8 | | discussed yesterday have to do with the Town |
| 9 | | Plan, and, again, the interests and the |
| 10 | | predilections of the users. |
| 11 | Q | You are familiar with Jean Vissering, correct? |
| 12 | A | I know Jean very well. |
| 13 | Q | Who is she? |
| 14 | A | Jean is a landscape architect who lives in |
| 15 | | Montpelier, Vermont. |
| 16 | Q | And she was involved in the 2012 Antrim Wind |
| 17 | | docket as Counsel for the Public's aesthetic |
| 18 | | experts, is that right? |
| 19 | A | That's right. |
| 20 | Q | And I believe, I'm not certain, that you refer |
| 21 | | to Jean's 2011 guide that she primarily |
| 22 | | authored. Actually, before you answer that, in |
| 23 | | the packet of two new documents that I gave you |
| 24 | | today, we were just looking at one of them, the |
| | | |

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| 1 | | Official List of Public Waters. It's the one |
|----|---|--------------------------------------------------|
| 2 | | that's before the Official List of Public |
| 3 | | Waters. |
| 4 | А | I've got it. |
| 5 | | PRESIDING OFFICER SCOTT: Again, the |
| 6 | | microphone, please. |
| 7 | Q | Do you see this? The exhibit is marked ASNH 13. |
| 8 | A | Yes, I do. |
| 9 | Q | Are you familiar with this Clean Energy States |
| 10 | | Alliance Guide? |
| 11 | A | Yes, I am, and I contributed to it. I reviewed |
| 12 | | it and made some corrections and additions I |
| 13 | | recommended to the author. |
| 14 | Q | And on that, the second page is the |
| 15 | | acknowledgment's page and you were acknowledged |
| 16 | | by Jean Vissering as having provided either |
| 17 | | images, technical review or general information, |
| 18 | | right? |
| 19 | A | That's right. |
| 20 | Q | On page 15 which I didn't, I didn't print the |
| 21 | | whole thing as an exhibit. Page 15, Ms. |
| 22 | | Vissering states, quote, and actually could you |
| 23 | | read it? The first sentence beginning with for |
| 24 | | certain uses. |
| | | |

| 1 | A | For certain uses there may be public |
|----------|---|------------------------------------------------------------------------------------------|
| 2 | | expectations of a primitive or natural setting; |
| 3 | | e.g., remote camping or for cultural landscape |
| 4 | | in which change is to be kept within narrowly |
| 5 | | defined parameters. |
| 6 | Q | And the next sentence? |
| 7 | A | For example, recreational areas restricted to |
| 8 | | nonmotorized uses are likely to be more |
| 9 | | sensitive to changes involving built elements |
| 10 | | than other settings. |
| 11 | Q | So do you agree with that statement? Those two |
| 12 | | statements? |
| 13 | А | I think in general that's a fair statement, yes. |
| 14 | Q | Do you think it would be reasonable for a |
| 15 | | current Willard Pond visitor to have |
| 16 | | expectations of a primitive or natural setting? |
| 17 | А | Not primitive but natural setting. |
| 18 | Q | And Ms. Vissering discusses, she says, for |
| 19 | | example, recreational areas restricted to |
| 20 | | nonmotorized uses are likely to be more |
| 21 | | |
| | | sensitive to change involving built elements |
| 22 | | sensitive to change involving built elements than other settings. What kind of boats are |
| 22 23 | | |
| | А | than other settings. What kind of boats are |

| 1 | Q | Only boats with electric motors? |
|----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | A | And nonmotorized boats. |
| 3 | Q | So no gas-powered boats are allowed, is that |
| 4 | | right? |
| 5 | A | That's right. |
| 6 | Q | During your visits did you see anyone using an |
| 7 | | electric boat? |
| 8 | A | I don't recall. There was one boat when I was |
| 9 | | there once over by the loon area. I couldn't |
| 10 | | tell whether it had a motor on it or not. |
| 11 | Q | Have you ever seen anyone bringing an electric |
| 12 | | boat from lake to lake? |
| 13 | A | Bringing an electric boat from lake to lake? |
| 14 | Q | Yes. |
| 15 | A | I'm trying to think. I have some recollection |
| 16 | | in Maine of seeing, you know, on some remote, |
| 17 | | so-called remote lakes people having electric |
| 18 | | motors, actually on their canoe, in fact. |
| 19 | Q | Electric motors? |
| 20 | A | Yes. |
| 21 | Q | Do electric boats make much noise? |
| 22 | A | Not typically, no. |
| 23 | Q | What about compared to motor boats? By a motor |
| 24 | | boat, I mean a petroleum-powered motor. |
| | | $\left(\frac{1}{2} \right) = \left[\frac{1}{2} \right] = \left[\frac{1}{2} \right$ |

| 1 | A | No. Typically an electric motor does not make |
|----|---|--------------------------------------------------|
| 2 | | as much noise as a gasoline-powered engine. |
| 3 | Q | When Ms. Vissering states, for example, |
| 4 | | recreational areas restricted to nonmotorized |
| 5 | | uses are likely to be more sensitive to changes |
| 6 | | involving built elements than other settings, |
| 7 | | isn't she describing a place much like Willard |
| 8 | | Pond? |
| 9 | А | No. Not necessarily. I think she's referring |
| 10 | | to more remote, and as she said in the opening |
| 11 | | statement, primitive areas. Again, as I pointed |
| 12 | | out earlier |
| 13 | Q | Can I just interrupt? Did she say primitive or |
| 14 | | natural setting? |
| 15 | А | Yes. She said of a primitive or natural |
| 16 | | setting. Yes. But okay. Well, both. True. |
| 17 | | And then she says remote camping. So I think |
| 18 | | that leads me to believe and I recall from this |
| 19 | | particular entry that and in general that we do |
| 20 | | have to make a distinction between how we |
| 21 | | classify primitive, remote and wilderness, |
| 22 | | versus a place like Willard Pond that's directly |
| 23 | | accessible with gasoline driven cars that are |
| 24 | | right at the, can be seen right at the boat |
| | | |

1 launch so that certainly would not indicate a 2 remote or primitive setting. MR. NEEDLEMAN: Jason, I'm also going to 3 ask that David be allowed to see the pictures on 4 5 the following page which I think are 6 illustrations to see whether or not he thinks it 7 would be helpful. MR. REIMERS: 8 Sure. MR. IACOPINO: Is that a page that we don't 9 10 have in the exhibit? 11 MR. NEEDLEMAN: Yes. 12 PRESIDING OFFICER SCOTT: Let's go off the 13 record while we find them. 14 (Off-the-record discussion) 15 PRESIDING OFFICER SCOTT: Back on the 16 record. 17 Have you seen the photographs that Attorney Q 18 Needleman referred to? I have. 19 Yes. Α 20 Moving to page 126 of your report, are you 0 21 there? 22 Α Yes, I am. 23 This is Section 5, overall conclusion. 0 24 А Yes. *{SEC 2015-2}* [Day 5/Morning Session Only] $\{09-23-16\}$

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WITNESS - DAVID RAPHAEL

| 1 | Q | And this is where you present your overall |
|----|---|----------------------------------------------------------------------------------------------|
| 2 | | conclusion as to Willard Pond? |
| 3 | A | Yes. |
| 4 | Q | You begin by stating that, quote, portions of |
| 5 | | Willard Pond are encircled by New Hampshire |
| 6 | | Audubon dePierrefeu Wildlife Sanctuary. Is that |
| 7 | | right? |
| 8 | A | Yes. |
| 9 | Q | What portions are you referring to? |
| 10 | A | The portions that the Audubon Society has |
| 11 | | conserved. |
| 12 | Q | And you know what percentage of the shore land |
| 13 | | that would be? You don't have to give me a |
| 14 | | percentage if you want to just describe or a |
| 15 | | percentage. |
| 16 | A | Yeah. I don't know specifically. It looks like |
| 17 | | probably a little less than half or about half |
| 18 | | of the pond shoreline. |
| 19 | Q | What is that based on? |
| 20 | A | The sanctuary map that I have here that was |
| 21 | | produced by Audubon. |
| 22 | Q | Showing that Audubon has conserved only 50 |
| 23 | | percent? |
| 24 | А | Well, there's, on one side is what appears to be |
| | | $\left\{ SEC 2015 - 2 \right\}$ [Day 5/Marning Saggian Only] $\left\{ 00 - 22 - 16 \right\}$ |

WITNESS - DAVID RAPHAEL

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| 1 | | the sanctuary and the other side it's listed as |
|----|---|--------------------------------------------------|
| 2 | | private property. |
| 3 | Q | Is that the source you used? |
| 4 | A | You know |
| 5 | Q | In your analysis? |
| 6 | A | One of the sources certainly, that was, yes. |
| 7 | Q | So having spent time on Willard Pond, and |
| 8 | | produced this report, you understand the Audubon |
| 9 | | Society to own approximately 50 percent of the |
| 10 | | land around Willard Pond? |
| 11 | A | That's my understanding. |
| 12 | Q | That's your current understanding, having done |
| 13 | | all of your |
| 14 | A | I understand that yes, I'm not certain exactly |
| 15 | | what percentage of the shoreline and property is |
| 16 | | Audubon owned, but I'm aware that it's within |
| 17 | | the sanctuary and based on this map, that was |
| 18 | | the, map that I had available to me it appears |
| 19 | | from the map that that's 50 percent. |
| 20 | Q | How wide is the boat ramp? Ballpark. |
| 21 | A | You know, it's probably 100 feet, maybe 50 feet |
| 22 | | to 100 feet width overall from edge to where the |
| 23 | | woods begin. |
| 24 | Q | And it's a 96-acre pond? |
| | | |

| | r | |
|----|---|-----------------------------------------------------------------|
| 1 | A | Yes. |
| 2 | Q | Would it surprise you to learn that the Audubon |
| 3 | | Society owns the entirety of the land |
| 4 | | surrounding the shore land except for the boat |
| 5 | | launch? |
| б | A | So why would the map show private property? Is |
| 7 | | that newly acquired? |
| 8 | Q | I'm not sure what you mean by the map. |
| 9 | A | Your own map that I had. It was right here. |
| 10 | | I'd be happy to introduce it. |
| 11 | | MR. REIMERS: May I approach the witness? |
| 12 | | PRESIDING OFFICER SCOTT: Please do, and we |
| 13 | | now have Mr. Reimers speaking in the microphone |
| 14 | | nicely. If you could do the same thing, |
| 15 | | Mr. Raphael. |
| 16 | A | I'm sorry. |
| 17 | | MR. REIMERS: Mr. Chair, might I suggest |
| 18 | | that this would be a good time to break for |
| 19 | | lunch so I could take a better look at that map? |
| 20 | | PRESIDING OFFICER SCOTT: The committee |
| 21 | | would like that apparently. Okay. We'll do 45 |
| 22 | | minutes for lunch. |
| 23 | | MR. REIMERS: Thank you. |
| 24 | | (Lunch recess taken at 12:00 noon) |
| | | |
| | 1 | <pre>{SEC 2015-2} [Day 5/Morning Session Only] {09-23-16}</pre> |