STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

July 21, 2017 - 9:00 a.m. **DAY 23**
49 Donovan Street **Morning Session ONLY**
Concord, New Hampshire

{Electronically filed with SEC 07-31-17}

IN RE: **SEC DOCKET NO. 2015-06**
NORTHERN PASS TRANSMISSION - EVERSOURCE; Joint Application of Northern Pass Transmission LLC and Public Service of New Hampshire d/b/a Eversource Energy for a Certificate of Site and Facility (Hearing on the Merits)

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE:

Chmn. Martin Honigberg *(Presiding Officer)*	Public Utilities Comm.
Cmsr. Kathryn M. Bailey	Public Utilities Comm.
Dir. Craig Wright, *Designee*	Dept. of Enrivon.Serv.
Christoper Way, *Designee*	Dept. of Business & Economic Affairs
William Oldenburg, *Designee*	Dept. of Transportation
Patricia Weathersby	Public Member
Rachel Dandeneau	Alternate Public Member

ALSO PRESENT FOR THE SEC:

Michael J. Iacopino, Esq. Counsel for SEC
(Brennan, Caron, Lenehan & Iacopino)

Pamela G. Monroe, SEC Administrator

(No Appearances Taken)

COURT REPORTER: Cynthia Foster, LCR No. 14

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P R O C E E D I N G S

(Hearing resumed at 9:00 a.m.)

PRESIDING OFFICER HONIGBERG: Good morning, everyone. We're starting with Mr. Varney's return to give the Subcommittee an opportunity to ask him some questions. We'll start with Mr. Wright.

DIR. WRIGHT: Thank you, Mr. Chairman.

QUESTIONS BY SUBCOMMITTEE MEMBER DIR. WRIGHT:

Q Mr. Varney, welcome back.
A Thank you. Nice to be here.
Q I just want to follow up with you on a couple of the items you raised in your Prefiled Testimony, and then just some general broad questions regarding energy, environmental policies and how they impact air emissions from power generation in New Hampshire.

In your Prefiled Testimony, you noted that construction of the Northern Pass line could result in air emissions resulting from the operation of construction equipment. Is that correct?
A Yes.
Q Did you do any independent analysis on those

emissions?

A No. I relied on the analysis that was contained in the Draft EIS which included the Supplemental EIS information, the Air Quality Report that they prepared, and especially the very detailed data for construction emissions which was contained in Appendix B of that report.

Q What was the conclusion of that study?

A That there would be emissions associated with construction, as we know, with any type of construction project. And as it relates to the central New Hampshire nonattainment area where conformity was in issue, it was the only nonattainment area in the state, the data indicated that it was well below the de minimis level.

And so in reviewing that information, and also reviewing the New Hampshire DES Air Resources Division comments on the Draft EIS, I found that it was in the range of 1 to 2 percent of the de minimis level for that nonattainment area. And moreover, it only, the Project only includes four communities that are in that area.

And then, finally, as a result of the

improvements at Merrimack Station there's been about a 90 percent decrease in sulfur emissions there and I think it was referred to by DES as almost a single source nonattainment area, and that the data presented by DES for that nonattainment area indicates that it's now meeting attainment and has for at least three years in a row.

Q Thank you. And I can confirm that the data does conform that the area does meet the standard for the new sulfur standards.

You mentioned fugitive dust as well in your Prefiled Testimony as another potential source of air emissions from the construction equipment.

A Yes.

Q And you mentioned Best Management Practices, BMPs. Could you just very briefly, you don't have to go into a lot of detail, but just describe those BMPs?

A Yes. BMPs for fugitive dust would include wetting which many people see on highway projects, for example, to keep dust down when there are dry conditions. Covering of piles, wind breaks, stone aprons where you have truck traffic that's from a paved roadway coming off of a gravel area that's unpaved to prevent that dust from being onto the roadway.

So there are a number of different BMPs that are outlined. DES has a very good Fact Sheet on BMPs associated with fugitive dust emissions which is a DES requirement in the Administrative Rules.

Q I was going to ask you if you felt like the BMPs you're describing are consistent with the State's Administrative Rules contained in Env-A 1002.

A Yes. They are.

Q And I assume if the Project gets a Certificate from this Committee that there would be no objection to that being referenced in this Certificate?

A That's correct.

Q Okay. Who's responsible for monitoring the BMPs?

A It would be the contractors and the Environmental Monitors who would be ensuring compliance with all of the existing rules and regulations of the state as well as any conditions placed upon the Project by the certificate.

Q We talked a great deal about the Environmental Monitor. We won't go into that yet. With respect to operation, not construction, are there any air emissions associated with the operation of the Northern Pass line that would require a site-specific Air Permit?

A No.

Q Does that include the converter station in Franklin?

A My understanding is no, there would not be a need for a permit there.

Q There's no fuel burning equipment, emergency generators or anything like that?

A Not that I'm aware of, but should there ever be one, they would be required to be in compliance with DES rules and regulations.

Q You noted in your Prefiled Testimony that you accepted Julia Frayer's conclusions and calculations regarding potential emission reductions that would result from this Project, is that correct?

A Yes, I did.
Q I know you didn't perform those calculations, but could you just kind of describe for me what fundamentally, what were the check points in your mind that you went through in terms of accepting those calculations?
A Well, first of all, she was very thorough in her evaluation of all of the factors that needed to be taken into account in the modeling effort. Existing federal and state regulations, RGGI, for example, all of those factors, retirements, and as you know, it's a very detailed model that she prepared and then updated.
In addition to reviewing her work and the thoroughness of her work, and her qualifications for doing that work, I also reviewed the statistics that were generated in the Draft EIS where similar levels of reduction were estimated there by other consultants, other independent consultants who were not employed by Eversource.
And the Supplement to the Draft EIS calculated, I believe, a 9 percent decrease in CO_2 emissions which was about 2.9 million metric ton reduction compared to the 3.2 million metric

ton reduction that was included in Julia Frayer's updated record.

Q I'm glad that you brought that 3.2 million ton up. I'm still on the English system so I convert that in my mind to 3.5 million tons. I think you just mentioned 9 percent so I think you've already kind of answered this, but can you put 3.5 million tons in some sort of scheme so a general person can understand how much is that in terms of either New Hampshire emissions or New England emissions?

A For New Hampshire, it's equivalent to the CO2 reductions that are currently in New Hampshire from the electric generation sector, and, of course, the reductions run a New England-wide basis so you can't attribute it to just New Hampshire in that sense. But it is as much or more than all of the CO2 emissions from the electric generation sector in New Hampshire.

And from a New England perspective, I believe looking at the 2050 goals of an 80 percent reduction for New England, I believe it would get us to, result in about a 22 or 23 percent reduction towards achieving the goals for 2050 which is a very significant benefit in terms of achieving the goals for climate change in New England and within New Hampshire.

Q I would agree with you. I think it's a good start, but I think you would agree we have a long way to go in terms of meeting those long-term goals?

A Yes. Point well taken. Many people forget that the baseline for greenhouse gas reductions is 1990, and that from the period 1990 to about 2004, greenhouse gas emissions actually increased in New Hampshire and in New England, and we've been making good progress in reducing it since that time. But in many locations we are, we're almost at the point that we were at in 1990. In other words, we went above the 1990 baseline and now we made progress in reducing, but now we're essentially back where we were in 1990 and we still need to get an 80 percent reduction based on 1990 levels.

So it's a huge challenge, and I think many people appreciate the progress that we've made since the peak in the mid 2000s, but we have a long, long way to go to achieve that 80 percent reduction by 2050.

Q I believe another person asked you this already, but I'll ask you again, do you believe in climate change?

A Yes.

Q Do you believe that manmade emissions contribute to it?

A Yes.

Q Ms. Frayer, do you know if Ms. Frayer in her calculations of the carbon reductions factored into her calculations potential emissions at the generation source of the Northern Pass power?

A She calculated the reductions in New England that were associated with displaced fossil fuel emissions which is the 3.2 million metric ton reduction number. And in calculating the social cost of carbon on the economic benefits associated with carbon reduction, she did a different calculation and did incorporate that into her analysis. I believe the reference would be on, it would be Page 26, Figure 16.

Q You recognize that the New Hampshire forests serve as a valuable carbon sync for carbon emissions?

A Yes.
Q You also recognize that if this Project goes through there will be a new right-of-way up in the North Country with some clearcutting of the right-of-way. I believe when you were here last time you made some sort of estimate as to a potential reduction in the carbon sync in the New Hampshire forest. Do you recall that?
A Yes, I do.
Q Can you just very briefly repeat what you said then because I want to make sure I understood it.
A Sure. That was, again, evaluated as part of the Air Quality Report in the Draft EIS, and there's very detailed data associated with the calculations for the carbon sync. The vegetative cover reductions. Keep in mind that the Project where it's not located within a roadway will continue to be a vegetated right-of-way in the state, but there will be some reduction in the carbon sync. And in looking at that, the Draft EIS calculated, I believe, that it was .002 percent reduction in the carbon sync in New Hampshire, and when added

into the calculations, it would not change the numbers in terms of the million metric ton benefit for CO_2 reductions.

Q I'm glad you said that because that was what I was really curious in as to whether that was taken into account in that calculation as well.

A Yes.

Q Would you agree that New England has seen a significant decrease in air emissions from the New England Power Generation Pool in the last 10 to 15 years?

A Yes.

Q In your mind, what are the factors that have really driven those reductions?

A There's been a reduction in the number of coal and oil-fired generation facilities. There's been an increase in natural gas plants. There's been a slight increase in renewables, I believe, from 2000 to 2014. We went from 7 percent to 9 percent, and I would expect that will continue to grow slightly. We've continued to see an increase in transportation as a sector, transportation emissions. We continue to see an increase in residential emissions, and we've made good progress towards reducing electric generation emissions.

Q Do you feel programs like RGGI, Regional Greenhouse Gas Initiative, do you feel programs like RGGI have been part of that driving force as well?

A Yes.

Q You mentioned RGGI, and, obviously, RGGI applies to fossil fuel-fired generation facilities in New England and couple other states outside of New England. This obviously is not a fossil fuel-fired Project. It's a hydro project so it wouldn't be a regulated entity under RGGI. So in your mind, how does it fit into the RGGI program?

A It's providing relatively clean baseload generation to the New England grid which will displace fossil fuel emissions within New England.

Q Do you feel that energy efficiency should be a primary goal of all states?

A Yes. I believe that, I'm not aware of any state in the nation or any province in Canada that doesn't have energy efficiency as a goal.

Q So you would agree with the cheapest and cleanest megawatt is the megawatt you don't need to use?
A To a limit, yes, and I believe it's part of the strategy of every single state. I believe the progress that's been made has been generally slower than many people would have liked, and there obviously are limitations associated with the regulation of electric rates, and some of the policy issues associated with that that come into play.
Q Do you have an opinion on the long-term picture of Distributed Generation and how that will impact the New England power grid? I know you're not a power expert, but it all ties back to air emissions in my mind.
A Yes. I think there's a lot of hope associated with it. The question is how quickly will it occur, and oftentimes in implementing those issues, it may be something that people hope will be significant, but it may take time, and my professional experience is that those issues usually take much more time than people think.
A good example of that could even be the

Cape Wind Project that many, many years ago was considered to be imminent and to this day hasn't been built. So there are a number of regulatory programs, a lot of initiatives, legislative initiatives which are proposed and are not passed by the Legislature. And so it's very hard for me to look at the crystal ball and say with any certainty what may happen. It's certainly on the agenda of many meetings with Air Directors and PUC Commissioners at conferences, but we'll see.

Q Do you consider large scale hydro to be a renewable energy source?

A I do from the standpoint of setting aside the politics and the regulatory arena. I do.

Q Are you familiar with New Hampshire's RPS program, Renewable Portfolio Program?

A Yes.

Q Does large scale hydro qualify as renewable energy under New Hampshire's program?

A No, it doesn't.

Q I guess I just have one question. Do you have an opinion if this Project is approved, could it possibly displace other zero-emitting power

Q generation in New England?
A I have no basis for saying that that would occur.
Q Okay. Thank you.
A It would be pure speculation.
Q Okay. Thank you.

PRESIDING OFFICER HONIGBERG: Do others have questions? No. It looks like no one else does. Thank you.

Mr. Needleman, do you have any further questions?

MR. NEEDLEMAN: I don't. Thank you.

PRESIDING OFFICER HONIGBERG: Thank you, Mr. Varney. Are we ready to hear from Ms. Shapiro?

MR. NEEDLEMAN: We are. I'd ask her to come up, please.

LISA SHAPIRO, DULY SWORN

PRESIDING OFFICER HONIGBERG: Mr. Needleman, the witness has been sworn in. You may proceed.

MR. NEEDLEMAN: Thank you.

DIRECT EXAMINATION

BY MR. NEEDLEMAN:

Q Ms. Shapiro, can you state your full name for the record?
A Lisa Shapiro.
Q Where do you work and what do you do?
A I work at Gallagher, Callahan & Gartrell, and I'm chief economist with the firm.
Q Briefly describe the purpose of your testimony here.
A The purpose of my testimony was to estimate the property tax payments by Northern Pass Transmission.
Q And I've provided you with two exhibits. Applicant's Exhibit 29 which is your Prefiled Testimony, and Applicant's Exhibit 103 which is your Supplemental Prefiled Testimony. Do you have those?
A I do.
Q Do you have any changes or corrections to either one of those?
A No, I don't.
Q With that in mind, do you adopt both of those and swear to them today?
A I do.
Q Thank you. Nothing further, Mr. Chairman.

PRESIDING OFFICER HONIGBERG: Normally, Mr. Boldt would be next. He's on his way but isn't quite here yet so we'll skip over him and circle back when he's here.

Anybody else from that group here who would want to ask questions? Doesn't look like it. Anybody from Wagner Forest Management? Looks like Counsel for the Public is up.

MR. ROTH: Thank you.

CROSS-EXAMINATION

BY MR. ROTH:

Q Good morning, Dr. Shapiro.

A Good morning.

Q In looking at your analysis, it appears to me that you based your analysis -- the basis of your analysis is that taxes generated depends on the cost of the Project. Is that correct?

A That's one factor.

Q Okay. And that the costs that you used were figures that were given to you by Eversource, correct?

A Correct. Well, actually, technically, by Burns & McDonnell.

Q By Burns & McDonnell?

A Yes.
Q Okay. And that the cost allocation that you utilized, the town by town basis, was also provided to you by Eversource or Burns & McDonnell, correct?
A Correct.
Q And that you didn't do anything independently to determine whether any of those cost estimates or the allocations thereof were reasonable, did you?
A Well, the cost estimates are an engineering opinion. I did not independently view that. I did spend time looking at the cost allocations in terms of whether they added up, they made just kind of common sense, about how the allocations were. And also I had to make some decisions about allocating costs that were generalized costs which are a substantial part of the Project and aren't specifically located in one community. So I made those estimates and model of how to allocate those costs.
Q Okay. But in terms of understanding whether the cost for, for example, the converter terminal, you didn't go and research converter terminals

around the world and determine whether the price that was given to you for the converter terminal in New Hampshire was appropriate or reasonable compared to some other data that you might have had access to, did you?

A No. I did not.

Q Okay. And in terms of whether a mile of towers and conductors in one particular town was reasonable, you don't have any engineering basis or data to confirm whether that's correct. You simply accepted the information that was provided to you by Burns & McDonnell?

A Again, I accepted the information in terms of the costs of the major components of the Project, and I checked and looked at how they were divided among the communities along with the generalized costs but -- if that's what you're asking.

Q And none of these statements that were provided to you by the Applicant's people, and we'll go shorthand there, are based on actual costs, correct? These are estimates.

A I don't think that's correct. I do think they did some testing, and they've been out in the market in terms of getting bids. I believe Mr. Johnson testified about the cost.

Q Okay. But to use a legal term, that's hearsay really, isn't it? You don't independently know. Did you review documents that the Applicants have --

A No.

Q -- that showed that that's what they did?

A No.

Q Okay. And in fact, the actual cost of the Project isn't going to be known until essentially after it's built, correct?

A I don't know if that's true because there may be fixed price contracts that are locked in.

Q But that's a supposition on your part or speculation, correct?

A No. That's a possibility. I don't know if there's been testimony by Mr. Johnson --

Q Okay.

A -- about whether the costs were fixed and known.

Q All right. And isn't it true that some of the estimates that were given to you by Burns & McDonnell in 2015 before you prepared your testimony, that those are not the current

estimates? Those are out of date at this point?
A   No. I don't believe that's true.
Q   Okay. And you didn't do anything to rerun your numbers when you did your Supplemental Testimony and your arithmetic or anything to update and you instead focused on other things in your Supplemental, correct?
A   In my Rebuttal Testimony?
Q   In your Supplemental Testimony that was filed in April, I suppose?
A   Which was my Rebuttal Testimony. No. There was no updated cost numbers to rerun the model.
Q   In these proceedings we generally refer to that as Supplemental. Sorry.
A   Okay. Thank you.
Q   In your analysis in your report, you attempted a couple of different kinds of scenarios to obtain some level of precision about tax rate suppression effects and tax rate escalation, but, ultimately, you rejected that because of a variety of risk of overestimations, underestimates and uncertainties; isn't that correct?
A   No. That's not correct.

Q   Isn't it true that on page 15 of your report you said it's very difficult to estimate because of many different factors and the interaction of them will determine what the tax payment will be?
A   Correct.
Q   And then, ultimately, what you did was you simply, you did a simple arithmetic exercise. You took the estimated costs that were provided to you, and you did a net book value of them, didn't you?
A   That's not correct. I did 11 scenarios with the, for the first year it was original cost. So what was the projected cost of the Project. And I ran four or five different scenarios using that cost calculation and a number of different scenarios of what the tax rate might be, and then I cut back the Base Case estimate of what the cost allocations were in each community, and calculated at only 75 percent of the cost because of the difficulties of allocating among each community until the final costs are known.
     So for each community, I ran 11 scenarios, half of them roughly were at the full allocated

cost with four or five different assumptions on the tax rate, and then I took 75 percent of the estimated costs in that community, and again, ran four or five scenarios with different tax rates. So I ran a range of simulations --
Q I don't dispute that you did a lot of work and analysis, but, ultimately, your conclusion is based upon a very simple arithmetic process of net book value with some escalation, two different scenarios for tax rate escalations; isn't that correct?
A No. There's 11 different scenarios, and in the first year it's original cost, and I looked at both full cost and 75 percent of the costs, and then a number of different tax rates scenarios.
Q As I said, I understand what you looked at, but ultimately your opinion was based on a more simple calculation of the net book value with two scenarios for escalation based on tax rates.
A I don't know what you mean by escalation. In year one, there was more than two scenarios. I looked at a one percent growth, a two percent growth, and I also looked at the historical growth in each community of what their tax rate

had done over time. So I looked at three different scenarios of tax rates to get to the first year.

Q Okay. Well, perhaps I misunderstood something. I'm going to move on to my next question.

You chose the net book value as sort of the proxy for fair market value, correct.

A Correct.

Q And did you choose that because Eversource told you to do that?

A No.

Q Okay. And did you choose that because you don't really know what the fair market value is going to be, say, 29 years from now?

A No.

Q And I think you said in your report that you believe that you used that because towns generally used that approach, is that correct?

A No. I didn't say that. Towns do not generally use that approach.

Q Okay. I'm going to -- could you put up number 49? I'm showing you Counsel for the Public's Exhibit 49 which is a table of litigation between various communities and Public Service of New Hampshire. And can you go to the next page? Just showing you -- and go to the next page. And the next. Okay.

So you can see that there's, this is information that we requested from the Applicants about the number of cases that they've been involved in in litigating the net book value question with communities. Are you aware of that litigation?

A I'm generally aware of the litigation.

Q And doesn't that litigation suggest to you that a lot of towns don't really agree with the net book value approach, and they'd rather see other approaches taken?

A Net book is only one of the five approaches to value --

Q I understand there are many approaches, but --

A Well, in their analysis, the Town's appraisal expert in the cases I've reviewed put forward opinions based on not only other cost methods, replacement cost, they also look at income methods. There's five approaches to value, and in most cases it's more than one --

Q Can I interrupt for more than a second?

The question was do these cases indicate to you that the towns don't agree that net book value is the appropriate way to do it?

A Well, I don't think they agree with it, correct.

Q Okay. And if you use net book value, and straight line depreciation, and nothing else changes, when does the asset depreciate down to zero?

A I don't think it would.

Q You don't think it would?

A I think it would, from an accounting perspective it would. From an assessment perspective, I think there would be a residual value, and it would not go to zero.

Q So there's a scrap value at the end?

A Well, I don't know if it would be called scrap. It might still be in use. So it's a continuing value.

Q But isn't there a scrap value at the end, at the end of, say, if you chose a 40-year depreciation, don't you end up at zero after 40 years?

A I don't think it would go to zero because I think at some point there would be ongoing value

that would not get below a certain percent, but I don't know. It's too many years out, and I don't have experience with what that might be.
Q   But isn't it a natural consequence of a mathematical 40-year depreciation at a certain percentage that it turns to zero eventually?
A   From an accounting perspective, but assessments are based on looking at, making an opinion of value and looking at multiple methods, and net book is just one method, income approach is another --
Q   I'm not asking about that. But if you simply take the accounting method of straight line depreciation, and after 40 years, if you use a 40-year schedule, don't you end up at zero?

MR. NEEDLEMAN: Could I object? I think the witness needs to be given an opportunity to answer the questions.

PRESIDING OFFICER HONIGBERG: Generally, yes, that would be a good idea. This witness seems to be able to handle herself fairly well. The record is going to be muddled, however, if they talk over each other which is going to be useless for everyone. So I'll overrule the

objection. I don't remember the question.
BY MR. ROTH:
Q The question was as, I think you already answered it, but I just want to make clear --
PRESIDING OFFICER HONIGBERG: I thought she'd already answered it, too, when you asked it the third or fourth time.
MR. ROTH: Okay. Then I will ask another question.
BY MR. ROTH:
Q In your workbook, the value goes down to roughly $457 million in year 29 and stays there until year 40. Why did you do that?
A I don't know what workbook you're referring to. I'd have to -- can you put that up, please?
MS. MERRIGAN: Can you switch over to the ELMO?
(Discussion off the record)
A This is a 20-year schedule. You were just talking about 40 years.
Q If you look --
A Thank you for zooming.
PRESIDING OFFICER HONIGBERG: We're going off the record for a minute. Take it off the

ELMO. I think the good news was that nobody would read it anyway.
Q Well, I guess what I can do. I can show it to the witness.
A What was the question again?
PRESIDING OFFICER HONIGBERG: There's no pending question. He's asked you to take a look at a page that I understand has some confidential information on it, and now he'll ask you a question about what he's showing you.
Q There actually was a question. The question was by, my read of that page, at year 29, and hopefully this is not a confidential -- I don't think so. You have the Project depreciated down to roughly 457 million, correct?
A Correct.
Q And then from years 29 through 40, it stays at that value.
A Correct.
Q And my question is why. Why did you take it down to 457 and then keep it there for the duration?
A As you know, my testimony provided an estimate for 20 years, and I did not go past 20 years

because of the difficulty.
Q   Yes, I'm aware of that.
A   In the case of, I was asked to put the schedule for 40 years, and I looked in some other states that do actually use the net book method have a minimum value of 30 percent of the original cost, and then it doesn't, they don't allow the assessed value to go below so I chose to use that.
Q   Okay.
A   Because that is what I -- I had no basis to -- as an economist, I know there's residual value. I don't believe that the assessments would go to zero and because I'm aware that in some other states 30 percent, once it depreciates to 30 percent, even under a net book state so I chose to keep it there.
Q   Okay. Thank you. And do you know when LEI did its calculations in its Supplemental or Rebuttal Report? Did they use that 457 million as part of what they calculated or did they stop at 20 years?
A   My familiarity was with the 20 years with LEI, and they were using my 20-year schedules that

are in the Report. I'm not sure what they did when they were doing, I'm not sure what Ms. Frayer did for 40 years. I don't recall.
Q So you don't know whether that 457 million in value carried through as part of her calculations in Figures 11 and 12?
A What's Figures 11 and 12?
Q In the LEI Supplemental/Rebuttal Report?
A You'd have to give me the -- I don't know what you're referring to.
Q Okay. We'll return to that, and I can ask you that in a little bit.
A Okay.
Q Now, in LEI's Supplemental Report, they criticized Kavet & Rockler for zeroing out the value after 40 years, and I assume from what you've already said that you agree with that critique?
A I do.
Q And for the reasons you already explained, you don't, you believe that that's not a natural extension of the accounting method?
A Well, it's a natural extension of the accounting method, but as that translates into assessed

values in New Hampshire, I think it's unlikely to go to zero.
Q Okay. And do you have any data that supports that assumption that you made that it doesn't just zero out?
A Well, as we were talking about before with the litigation, many towns are assessing at higher than net book.
Q Yeah, but you didn't follow those other methods that -- you didn't use any of those other methods, did you?
A Well, I considered that the income approach would, under Northern Pass since the income, business income is based on net book, under an income approach you'd get the same value as under net book.
Q But the question is you didn't use any of those other approaches, you just did net book value?
A I considered the income approach which yields the same answer.
Q But your opinion is based on net book value?
A No. It's based on the income, under the income approach and net book, and my opinion is to provide a very conservative estimate of the tax

benefits of the Project, and knowing that there's five methods and approaches to value, I chose the most conservative so that I could have an opinion that the benefits would be at least this amount.

Q In Ms. Frayer's Supplemental Report, and this is -- could you put up 102? And I need page 104.

Now, as I understand this note, LEI says that they obtained guidance from you in preparing this part of the report. What sort of guidance did you give them?

A They were looking for the scenario of what property tax estimates to use for the 20 years so I suggested that they take that directly from my report that provided the 20-year schedule.

Q Is that the only guidance that you provided LEI?

A Well, in addition, because I think that the years were slightly off by one or two years from what my schedule was so they had to extrapolate out two more years than what I had, and so I worked with them to explain that the one percent growth in taxes, the tax rates, was not for all the tax rates, just for the local because the

state tax rate is fixed.
Q Was there anything else? Any other guidance that you gave them?
A With regard to property taxes?
Q Yes. Or any other guidance on anything.
A I don't know what else -- certainly on the property taxes was page 16 of my report. That's what we worked on. And mine went from 2019 to 2038. So, again, we talked about how to project it out because the years were slightly different.
Q Okay. So other than this guidance about property tax payment, was there any other guidance that you provided Ms. Frayer or LEI people?
A We discussed the REMI model and how that would incorporate property taxes.
Q And what were those discussions about?
A They were the discussions about whether to use a variable of local spending or state spending because that's two different variables in REMI. And so we discussed whether to treat the property taxes as local or state because the State Utility Tax, whether to treat that as

state spending or local spending.
Q I'm sorry. I couldn't --
A Whether to treat it as state or local spending because one of the property taxes that Northern Pass would pay goes to the State, but the money's distributed back to the locals so my suggestion was still to use the local spending.
Q So you suggested local?
A On the property taxes, yes.
Q Okay. And did you provide them guidance about the use or the calculation of income taxes?
A The calculation of income tax I took directly from the record that was provided by the client.
Q Okay.
A And that's where we did discuss to use the state variable in REMI with the business tax because that does go to the State and that's part of state spending.
Q I'm sorry. I'm still having trouble --
A That's part of state -- I'm sorry. I'll speak up.
Q I'm probably hard of hearing. Too much rock and roll.
A Me, too. The business tax revenue, whether to

treat that as state and local, and I suggested treating that as state because that did go to the state for state spending.
Q Was, is that a REMI variable, state or local?
A Yes. Two different variables in REMI.
Q Okay. Now, are you familiar with the Board of Tax and Land Appeal's decision in the New Hampshire Electric Cooperative case that was recently affirmed by the New Hampshire Supreme Court?
A I'm generally familiar. I know the cases came out at the same time. One was on Eversource's cases and one was on the Electric Co-op. I'm not sure -- so I'm generally familiar with it. I'm not sure I studied the Co-op versus the Eversource decision to see what the differences were.
Q They were fairly similar.
A I think they were. Yes.
Q At page 20. Can you highlight the bit at the top there? The first sentence? And in fact go down to the second sentence as well?
So I'm showing you page 20 of the Board of Tax and Land Appeals decision that was affirmed

by the New Hampshire Supreme Court, and in it didn't they describe the net book value as simple arithmetic calculation of original cost less book depreciation?
A Yes. They're all simple calculations when it comes down to it.
Q And then the board finds that net book value is not credible as an indication of market value, isn't that true?
A In this case. With this expert, they found him not credible.
Q Now, I believe from your Report, you made assumptions that the new utility property is being an existing right-of-way that therefore no local services would be demanded and there would be no offset to revenues because of the Project, isn't that correct?
A I did not consider it. I said if they were there, then that would be an offset. I felt comfortable making the decision that there's no increase on education spending. I'm not aware of any increase because of an existing right-of-way, but there are other experts that talk about the impacts of transmission.

Q Isn't it true that there's 60 miles buried in new right-of-way that's not existing right-of-way?
A It's in the road.
Q Yes, but that's not an existing right-of-way for this kind of utility, is it?
A I don't know if that's true. That sounds like a legal question to me, whether a transportation right-of-way is a right-of-way for utilities.
Q And isn't it true that 24 miles is in new forest right-of-way up in the north and that's an existing right-of-way?
A That's correct. That is new right-of-way.
Q Isn't it also true that in the existing right-of-way, there's going to be new structures and equipment as a result of the Project that isn't there now?
A Correct.
Q And that's about a billion dollars worth, isn't it?
A I don't know whether the billion versus 1.6. I'd have to look at the math why you're concluding it's a billion out of the 1.6.
Q It's kind of lawyer math. I determined that the

equipment might be, you know, the towers, poles, wires, insulators, that stuff. So there's a lot of new equipment and wires and poles in the existing right-of-way, correct?
A Correct.
Q And did you perform any analysis to verify your assumptions that there wouldn't be any need for new services as a result of the construction of the Project in the existing right-of-way?
A Again, that was not my area of expertise to look at the costs of maintaining transmission lines, and I deferred that to other experts.
Q So I take that that the answer is no, you didn't perform any analysis of that?
A Correct. No, I did not.
Q Did you contact any town officials anywhere along the right-of-way, existing or otherwise, to verify your assumptions that there be no additional demand on services?
A Again, I didn't assume there was no demand. I didn't look at whether there was, and I left it to other experts to determine whether there would be an increase in costs.
Q So I'll take that also as a no?

A Right. No.

Q Okay. And did you -- can you put up number 351?

Did you consider that new and additional overhead lines in the existing right-of-ways might create new or additional opportunities for interaction between the public and the right-of-way and the infrastructure? And here I'm showing you an article from a news magazine showing a cat trapped on an insulator somewhere with a public official rescuing it.

A I'm not familiar with whether cats are a problem in New Hampshire on transmission lines and whether putting a third line in an existing right-of-way would make it more likely to have cats.

Q The question wasn't specific to cats. The question was did you consider whether there would be new opportunities for all kinds of interaction?

Can you put up number 352?

And here we have a gentleman trying to erect a ladder over a substation in Oregon. And so is the -- can you answer the question? Did you consider whether the new equipment in the

right-of-way and the substations and the transition stations would create new opportunities for interaction that perhaps don't exist now?
A Again, no. That was not part of my analysis.
Q Okay. You can take that one down. And put up 134. Page 67, I think it is. Third page.
I'm showing you Exhibit E to Counsel for the Public Exhibit 134 which is a table of the access roads, routes, that was computed by Dewberry, the Engineers that were hired by Counsel for the Public.
And if you go to the final page?
It shows 67 miles of access roads, and this is probably only the beginning. Did you consider the new access roads that were going to be installed as creating additional demands or services from the communities and the states.
A During construction?
Q Or after construction.
A Again, no. During construction I believe the construction team was looking at what the costs are and how to work with the towns on impacts.
Q Sorry?

A The construction team and the construction plan will take into account what the impacts are on the community. It's outside of my purview.
Q So you didn't do anything to determine whether the town of Pittsburg, for example, was going to have to devote additional of its own resources to police the access road?
A No, I did not.
Q Okay. And I take it that your answer would be the same for the laydown and storage yards that are going to have to be created to construct the Project?
A Are you asking whether I took it into account or whether the Project took it into account?
Q Did you take it into account when you did your calculation of benefit to the communities?
A No.
Q And what about the presence and operation of construction and right-of-way maintenance vehicles and equipment on town roads and city streets. Did you take that into account?
A No.
Q And can you put up Applicant's Exhibit number 1? The Table 5. Start with Table 5. No. Let's

start with Table 90. Okay.

Now, are you aware at least generally that the Project is expected to have impacts on a number of wetland areas?

A I try and stay out of those questions.

Q Okay.

A No. I mean, I'm generally aware but this, I haven't even, this is, I have never seen this.

Q Okay. So this table shows that the Direct Impacts to Wetlands, Rivers, Streams and Vernal Pools. This is a table from a Normandeau report, would be, and this is as of 2015, and I understand it's changed a little bit. Approximately 137 acres of direct impacts to wetlands, rivers, streams, and vernal pools. Am I reading that correctly?

A I'm not sure how to read this. Which column are we looking at here?

Q If you look at the totals, you'll see in the fourth column over, it says 137 acres of temporary impacts.

A Well, that's what it says.

Q Okay. And a relatively modest 2.48 acres of permanent impacts. And so --

And then could you produce the next one, Table 5? No. Take that one down for a second.
So in terms of these wetlands impacts, are you familiar that or aware that the Department of Environmental Services is going to require the Applicants to restore many of those wetlands impacts?
A That sounds reasonable.
Q And did you consider in your calculation of what the benefit either to the state or the communities of these tax revenues, did you consider the cost of those communities or the State to monitor the restoration of those wetlands?
A The costs I looked at were taxes. I'm not sure what the question is. I didn't consider costs. The tax costs or other costs?
Q No. The cost to the communities of having to oversee, and could be the communities or the State, to oversee the wetlands restoration?
A Why? I'm not familiar with who would pay for that, whether that's a Project cost for the monitoring and the Project would pay for those costs. I don't know.

Q Aren't construction sites, excavated areas, access roads, sandpits, wetlands, popular places for four-wheeling and dirt bike riding and late night teen gatherings?
A I'm not an expert on that. I don't know. It's a common sense thing. Yes. Sure. So is, you know, parking lots, and people's houses, and proms.
Q But did you consider whether the communities having to police construction sites and excavated areas, access roads and wetlands that were being impacted by the Project, did you consider the costs of the communities to police those as an offset to the tax revenue that they might receive from the Project?
A Again, consideration, I did not consider it. I pointed out in my study that to the extent there are any additional demands on local services, the cost of those services would need to be factored into the calculation of new tax revenue unless Northern Pass separately provided for those services. So that was the manner in which I considered it.
Q Right. But you're offering or you're suggesting

that there's a benefit from new tax revenue, and I'm asking whether you considered whether there were other factors to be considered in terms of mitigating that benefit, including the requirement of communities to respond to new things going on with their police and fire and rescue.

A What's the new things going on?

Q The excavations, the wetlands restoration, the access roads, the new utility infrastructure.

A Well, again, as I pointed out, if that's something that is a cost to the communities, then the issue is whether that's part of the Project costs and they would be paying for the details on construction sites or monitoring for wetlands.

Q Do local police, Fire Departments, the Fish & Game Department, DRED, Park and Forest Rangers enforce OHRV? You know what OHRV means?

A Um-hum.

Q And trespass and other laws on lands that the existing in the new right-of-way will pass through?

A I don't know.

Q Did you account for the burden that the Project will impose on State Agencies such as Environmental Services and Fish & Game for monitoring construction and restoration in terms of calculating the benefit of taxes?
A Again, I don't know what those costs would be and whether if the costs that are associated would be covered and the Project will be required to compensate the Agencies for oversight as part of the Application fee. I'm not familiar with those details.
Q The answer is you did not account for that.
A No. Did not.
Q All right. I'm going to change direction a little bit here.
In Ms. Frayer's Supplemental Report, she said she consulted with you and we talked about that and I got some more information from you about what that was like. And she criticized Kavet & Rockler for several things such as zeroing out the tax revenue which we already talked about, overlooking the increased spending coming from income tax payments, and not adjusting tax rates and not accounting for tax

reductions, correct?
A I don't have that right in front of me. It sounds correct.
Q And I assume --
A If you want to give me the pages on that, then I could look at it, but --
Q That's okay. And I assume you agree with those criticisms?
A Could you repeat them specifically again?
Q That she criticized Kavet & Rockler -- actually, can you put up --
A Okay.
Q I think if you, the paragraph that starts with first, it says important to know KRA's property tax estimate is based on incorrect specification of effective property taxes for utilities. Kavet & Rockler simply assumed, I'm paraphrasing here, zero out, and they overlooked the possibility there could be increased spending that might be associated with increased state business income taxes payable.
Do you agree with those criticisms?
A Yes, I do.
Q Now, turning to income taxes. In your original

testimony, you did not model or do a computation of income taxes, correct?
A Correct.
Q And to your knowledge, LEI didn't do that either?
A Correct.
Q And in your Supplemental, both you and Ms. Frayer criticized KRA for doing it, and then you did a computation and plugged it into your Testimony and your Report, correct?
A I didn't do an independent computation. I looked at the record, and it was in the record as requested by Counsel for the Public for a schedule of what the income tax paid would be.
Q Okay. Does REMI automatically add tax generation in the model workings?
A No.
Q Isn't that one of the policy variables that's available that REMI does when it computes economic impacts?
A It's possible. It's a choice.
Q It is what?
A It's a policy variable in REMI.
Q So if it's already in there, and then you add it

on top, isn't there double counting?
A It's not already in there. Just like the property tax payments are not already in there. And I agree with the Kavet & Rockler approach. I think that's reasonable to consider increased property taxes as spending, and that's why they modeled it that way. And similarly, business taxes. It's the same thing. It's new taxes paid by the developer and the Project. That is not taken into account in the model.
Q So you're saying REMI doesn't actual produce that automatically?
A No, it does not produce a 1.6 billion Project will pay on average $30,000,000 a year. It does not produce that.
Q Okay. Thank you. And when you did that computation you used the legal rate for, I guess we'll call it state income taxes, correct?
A No. I used the schedule that was provided by the Finance, I believe it was Jim Vancho by Eversource. It was in the record of what the schedule was.
Q So you just took the number from Eversource?
A Well, they use 8.2 percent in their calculation.

Q Okay.
A At the time. Actually the property, the business taxes are going lower than that.
Q And the business tax rate is lower than that?
A Well, it was 8.5, it's gone down to 8.2, and I believe the budget that just went into effect will lower it over another couple of years, I think it's to 7.5.
Q Okay.
A So it's about 10 to 12 percent lower than the number that was in the model. At the time that that model was developed, the rate was 8 and a half percent.
Q So but you chose or you chose the number that Eversource gave you which was 8 percent?
A I think it was 8 and a half percent. I used their schedule because it was in the record.
Q Do you know what Eversource actually pays in New Hampshire for corporate taxes over the past 8 years?
A In New Hampshire? Not off the top of my head.
Q Okay. Are you familiar with the Institute on Taxation and Economic Policy?
A Yes. It's an advocacy group. I am familiar

with them.

Q And I'm showing you Counsel for the Public Exhibit 350 which is a report that they authored, published, called 3 Percent and Dropping, State Corporate Tax Avoidance in the Fortune 500, 2008 to 2015.

Have you seen this report before?

A When you provided it to me. Yes.

Q Okay. And if you look on the first column there on the left, about a third of the way down. Can you find Eversource on there? Okay. And this table here represents 92 corporations paying no state income tax in at least one year between 2008 and 2015. So at least according to the Institute on Taxation and Economic Policy, Eversource didn't pay any tax at all in New Hampshire between, in at least one year and I think it actually says three years between 2008 and 2015. Is that correct?

A No. It's not correct. This report that you provided, I did take a look at it briefly. And it's a combination of all, across all states, and in fact they have a caveat right up front in the report that for any individual state, it does not provide the information. So this is a combination of Connecticut, Massachusetts, and New Hampshire for Eversource. So it doesn't tell us what they paid in New Hampshire.

Q So in one of those states, one of those three states, and it could be a different state each year, correct? Eversource paid no taxes at least three times in that period. Is that correct?

A I don't know. I mean, you have to take the combination of the three. You can certainly look at their SEC filings to see what they paid in New Hampshire.

Q Okay.

A The Securities & Exchange. You have to make filings about what your taxes are and that would be, you would be able to look that up for PSNH in the specific State of New Hampshire.

Q Okay. But let's, I'm going to take this as an assumption from you since you won't agree with this fact. If you assume that Eversource paid no taxes for three years in New Hampshire, and I'm not saying that we have proven that, but if you assume that to be the case, isn't it possible then that Northern Pass could pay no taxes at some point in the future?

A This, again, based on this study, there's nothing in this study to suggest that Northern Pass would not pay the income taxes that it's projecting. The business income tax is subject to the statutory rate. This report is a combination of all three. So there's nothing in this report, and in fact, the factors it talks about of why corporations avoid taxes have a number of policies that are not present in New Hampshire. Single sales factor, combined --

PRESIDING OFFICER HONIGBERG: Wait. Off the record.

(Discussion off the record)

Q I understand you're not wanting to agree with my premise, and that was a fine argument against my premise. But my premise is if you assume that there is no, that Eversource didn't pay any taxes in New Hampshire for three years, isn't it also possible that Northern Pass might not pay taxes for some years in New Hampshire?

A Anything is possible.

Q And let's look at the next table.

Can you highlight Eversource?

Now, this is also in the Institute on Taxation and Economic Policy Report, and this table identifies state income taxes for 240 major corporations between 2008 and 2015 showing what they paid on an average, as I understand it, during that 8-year period. Am I reading that table correctly?

A It's not the average. It's a combined state income taxes. So they're combining, at least that's what they say in their report. They're combining what you pay across all the states.

Q Yes. I understand that. But in terms of the --

A So it's not an average. You just said average. It's not an average. It's an aggregate.

Q It's an average over 8 years. If you look at the 8 year total.

A Can you put the headings -- I'm not seeing the headings. Thank you.

Q See the 8-year total on the right?

A Oh, okay. I'm sorry.

Q I'm sorry. I didn't mean to confuse you with that.

A Okay.

Q What that shows, at least the way I'm reading it, is that on average over the 8 years, Eversource Energy paid 1.6 percent in state taxes over all three states. Is that fair?
A That's what it says.
Q And that's not 8.5 or 8.2 or 8 percent, is it?
A Well, again, that includes Connecticut and Massachusetts. I don't know what their tax law is in terms of franchise taxes, whether they're a credit against their business taxes. I don't know what their loss was in Connecticut because of the ice storms and whether they had carry forward net operating loss. I'm not, I don't know the details of that.
Q But when you did your calculation of state income taxes, you didn't do anything to determine the actual tax rate that Eversource paid over any period of time in New Hampshire, did you?
A There is nothing in this report that suggests that Northern Pass as a 100 percent in New Hampshire Project, so all the property's in New Hampshire, all the sales will be credited to New Hampshire, it's not part of a larger taxing

entity so it doesn't have the regulatory assets of stranded costs or generation divestiture that there is anything in my 20 years of experience that would suggest that Northern Pass would not face the statutory taxes. There's only two real credits in New Hampshire against business income tax, and one is a net operating loss, and I haven't seen anything in the records to suggest that Northern Pass would be operating at a loss. And the other credit is a Community Development Finance Authority. So it's possible there could be a reduction if they participate in that program.

Q I guess if you would answer the question, then the question was you didn't do anything to analyze what Eversource actually paid in taxes during any period of time in the past. You simply took their number and calculated based on that. You didn't do any research, you didn't come to the PUC to find out what their actual tax payments were like?

A Well, I did look up their taxes, but it's not really, it's not relevant. You can look at their 10 Ks and see what they paid. Their

assessments for PSNH. It's not relevant to Northern Pass.
Q That's your argument, but I'm trying to get the facts, and the fact is you didn't do any analysis on what their actual rate was when you chose the 8 percent or 8.5 percent.
A In the record as requested by Counsel for the Public was what are the projected business income taxes that Northern Pass would pay. It's in my testimony. I didn't see any questions about whether that was a wrong calculation or anybody saying that that wasn't the correct projection of the business income for the first year so I'm just, I'm not aware of any reason --
Q I'll just take that as a no. You didn't do that analysis.
A No. Like I said before, I used what was in the record for the business income taxes.
Q Now, in your original report, you didn't allocate tax payments to spending versus a debt reduction. Now we're talking about property tax.
A Okay.
Q Tax payments to spending versus debt reduction

versus tax reduction, did you?
A   I did look at it in terms of tax reduction versus increased spending. That's the difference between Simulation 2 and Simulation 3.
Q   Okay. But your opinion, your ultimate opinion was because the tax reduction, debt reduction, spending is only relevant to doing sort of an economic impact of those taxes, and in your opinion, your original opinion, didn't you simply do here's how much money is going to be generated, you know, sort of a raw number in terms of tax benefit to the communities. Isn't that correct?
A   No. That's not correct. That's the whole essence of the variation and looking at the 11 simulations was to take into account -- Simulation 2 assumes increased spending because if you take the current tax rate and apply that to the value, that is all increased spending and that's Stimulation 2. Simulation 3 was calculated as a tax reduction, and I discussed that there is a choice with the community whether to do increased spending or to use the

increased tax base to lower everybody else's tax rate.
Q But you didn't model economic impacts of tax payments in your original testimony, did you?
A No. No.
Q Okay. And LEI didn't do it then either, did they?
A No, they did not.
Q And originally, LEI decided not to do it because they assumed that all of the tax benefits could go to debt reduction and that wouldn't produce any meaningful economic impact, and, therefore, not including it, in their view, was being conservative, correct?
A I don't know that specific logic. I do agree that it was conservative to not include it because you have a choice.
Q Okay.
A The communities have a choice.
Q Okay.
A But I don't know about the debt reduction or whether the modeling -- REMI is, well, go ahead. Ask the question.
Q You agree that it's conservative.

A To not include it in a -- what's conservative?
Q I think you just agreed with me that or agreed with actually LEI that it was conservative to not include or not economically model the economic impacts of the tax payments because it's possible that all the tax benefits would go to debt reduction.
A No. Not debt reduction.
Q Well --
A That's not what I said. It's not debt reduction because the primary way that taxes --
Q You're misunderstanding --
A -- is to reduce other people's -- well, you said debt reduction.
Q I'm sorry. I'm going to interrupt you. You're misunderstanding what I'm saying. I said and this is what LEI said. LEI said it's conservative to not include it because the towns, municipalities, could put it all to debt reduction. That's what LEI said.
A I'll accept that.
Q Okay.
A If that's what you said.
Q And when she's testified, when Ms. Frayer

testified here a few weeks ago, have you seen her testimony? Were you here when she testified?
A Parts of it.
Q Okay. Isn't it true that she agreed that Kavet Rockler's 50/50 split was lower and therefore more conservative?
A Lower than? I don't know what you mean.
Q Well, Kavet & Rockler chose to allocate 50 percent of the tax payment to spending and 50 percent to debt reduction, and, therefore, the economic impact of 50 percent, of the tax impact, sorry.
The economic impact of the tax payment only experienced, is only experienced into 50 percent, not 100 percent. You understand that?
A In terms of REMI analysis, yes.
Q So Kavet & Rockler didn't use 100 percent for spending.
A Correct.
Q It used 50 percent for spending and 50 percent for debt reduction.
A That's what they did.
Q And Ms. Frayer testified here a few weeks ago,

and I believe she agreed that that 50/50 split was lower, would produce a lower income benefit and was, therefore, more conservative?
A More conservative than what?
Q Than attributing it all to spending.
A Correct. That is.
Q But in your Supplemental Testimony you said that Kavet & Rockler erred by splitting the tax receipts 50/50 between new spending and debt repayment, correct?
A It's an error. Because they missed the basic thing that the taxes are used for which is to reduce other people's tax burdens, not for debt reduction.
Q Yeah. I understand that that's your assumption, but --
A And it's in every other study that's been before the SEC as far as I've seen in the last ten years.
Q Okay. We're going to talk about those in a moment.
A Okay.
Q And in your view, is, and maybe it's not even your view, maybe it's REMI's view, you know, the

great REMI behind the curtain. In REMI's, the way, doesn't REMI treat tax relief the same as municipal spending? Or maybe I just -- I don't know. I'm asking the question. Does REMI treat tax relief the same as spending?
A No.
Q No? Okay.
A Not necessarily. There's choices. REMI doesn't do anything without the researcher making a decision of what variables to use. I've run REMI with a tax increase and an increased spending and I modeled the tax increase as a reduction in consumer spending.
Q Is it your opinion that tax relief is essentially spending?
A No.
Q No? And so in this case, if Kavet & Rockler didn't attribute any of the tax relief and said 50 percent spending, 50 percent debt reduction, why would that make any difference to you?
A Because the debt reduction is a, in my opinion, to say that all of the money would either go to increase spending or to retire debt misses the most obvious and expected and historically

looking at the way towns spend money in New Hampshire which is if there's an increase in the tax base by a new taxpayer coming into town and expanding the base, it lowers the tax rate. That's not debt reduction. That's lowering the tax burden to the existing -- that's not debt reduction. That's something else.

Q No. I think we all understand the difference or I hope so. Kavet & Rockler didn't say it's all spending or all debt reduction, did they? They said 50/50 to be conservative, as you agreed.

A Well, they forgot the third component which is the most prevalent. They said 50 percent increased spending, and 50 percent debt reduction. What happened to the 50 percent that is more likely to actually go to reduce taxes which puts more money in the business and residence and property taxpayers in the community? They didn't discuss that.

Q Well, now you're up to 150 percent.

A No. You have to make a decision about what you're going to do, and they actually considered an alternative model and rejected it.

Q Okay. Now, in your testimony, I believe, you cited Morrissey's study in the Merrimack Reliability Project and the Gittell study in Groton Wind as authority for this proposition that you're making.

And you can put up 345?

So this is Exhibit 345. And this is Professor Gittell's study that you cited in your testimony. And in it, you can see what Professor Gittell said about this particular phenomenon that you described. That is, of reducing local tax burden. And Professor Gittell suggests basically a 50/50 split for between spending and reducing tax burden, correct?

A No. Not correct.

Q Or an alternative, right?

A No. It's not correct.

Q Well, it says here, the tax payment would have either, one, additional funds for town services. I assume that that's spending.

A Correct.

Q Or two, reduce the local tax burden, isn't that what he did?

A That's not how they modeled it though. This is

a statement of fact here, and also this is a PILOT program which actually does -- PILOT is different than nonPILOTs. PILOTs actually reduce the total tax burden because they come off the top. They modeled as 100 percent lowering taxes.
Q But that's not described anywhere in the report, is it?
A Yes, it is.
Q I didn't see it.
A Well --
Q And I'm looking -- can you show me Footnote 19?
A You can look at how they modeled it.
Q And in it, in Professor Gittell's report, he suggests as authority for this Attorney Moffett's report from Orr & Reno on October 7, 2009. Isn't that correct? For those two choices?
A That's not the modeling. That's a statement of whether the $400,000 in a PILOT program can either be used to increase spending or it could be used to lower the tax burden. That's not how they modeled it in plan in the study. He modeled it at 100 percent reduction.

Q That's not evident from the way he described it because this is the fiscal impact on the town of Groton. That's what this report says.

A Right. But this isn't a model. There's no model in this section.

PRESIDING OFFICER HONIGBERG: This is kind of a cool argument about a report from another docket that you're arguing with the witness about?

MR. ROTH: The point is, she relied on this for authority. I'm trying to --

PRESIDING OFFICER HONIGBERG: And she's telling you something different than what you think is true. And all you're doing is arguing with her about it. Is there something that will resolve this other than a footnote that just refers to an article? Maybe we need to look at that. Maybe we need to bring in some really extrinsic evidence about this other extrinsic report.

MR. ROTH: I plan to, you know, my next exhibit is Mr. Moffett's report, is Attorney Moffett's report.

PRESIDING OFFICER HONIGBERG: Okay. Let's get to it then.

MR. ROTH: Okay.

BY MR. ROTH:

Q So this is Attorney Moffett's report on which Professor Gittell relied for his assessment or opinion about the fiscal impact, and I understand you disagree with me that that's all there was to it. So this is what Attorney Moffett said.

Can you highlight the bottom here? Actually go to the next page, the last paragraph on the bottom.

And here Attorney Moffett said that the PILOT would have reduced local tax burden and would have reduced the total tax rate by 40 percent. So this is what Professor Gittell was relying on for his opinion that there would be either spending or tax reduction when he made his opinion in 4.3 of Gittell's report. Correct?

A I don't know.

Q Isn't it true that both of these are just assumptions about reducing tax rates and reducing the tax burden on other taxpayers? But there's no analysis about how he got there, is there? Either from Attorney Moffett or Professor Gittell?

A He did the math. The math is right here.

Q Right, but he just assumed, he just made that assumption that it was going to be tax reduction and tax rate relief, correct? He didn't provide any analysis or data to show that that's actually what happens.

A I don't know. I'm reading a yellow sentence that doesn't have an analysis. It has numbers. It also about a PILOT program which is different. PILOTS are different. When you pay a PILOT, DRA takes the PILOT income off the top, and then calculates the -- so literally the tax burden is reduced. It's not just reduced in the words of to people in town because what you have to raise by taxes is technically lower because a PILOT is treated as income off the top.

Q Okay. But you cited Gittell for the proposition that this is just the way it's done by the towns; that they apply the tax benefit to tax reduction in their town, correct?

A This is a PILOT program. I don't know what the question is.

Q The question is you cited Gittell and Gittell cited Moffett for the proposition that this is the way towns do it. Not the way Kavet & Rockler did it.

A Which it? Kavet & Rockler, we were talking about REMI where they made an assumption of 50 percent increased spending, and then the other 50 percent was assigned to debt reduction which actually had a negative impact on the economy. This is the third leg which is really the primary leg in my opinion which is tax reduction. This is a calculation for tax reduction similar to what I did in Simulation 3 which is tax reduction calculation.

Q Maybe I'm just not understanding you. But here is what, I'll explain where I'm getting this.

You criticized Kavet & Rockler for not including tax reduction, and you cited Gittell, and Gittell cites Moffett for the idea that Kavet & Rockler were wrong not to include tax reduction, and the reason they were wrong is because this is what towns do based on your experience, correct? And citing Gittell and essentially Moffett, too. Isn't that what you did? You cited Gittell for the proposition that that's what towns do?

A No. That's what analysts do in considering the benefits or the payments and the effect on the local community is you either assume, they can either use it for increased spending or tax reduction.

Q Okay.

A Kavet & Rockler assumed increased spending and debt reduction. Debt reduction is not tax reduction.

Q All right.

A It's partially, but it's not the whole story.

Q Okay. I get that. So the question is then, isn't it true that Gittell and Moffett simply assumed that this is the way it happens. Or in this case, this referred to a PILOT which is a unique set of circumstances that applies to a renewable energy facility, not to Northern Pass Project.

A I'm not sure what the question is.

Q The question is didn't Gittell simply assume that there would be tax reduction rather than

come up with any particular data to support that?
A No. They specifically say, the previous highlight you said they can either do two things. Number one was 40 percent increase in spending; or number two, tax reduction, and here's the calculation of the tax reduction that Mr. Moffett did associated with the PILOT.
Q Right.
A So they stated 1 and 2.
Q Okay. But either he just made an assumption about the tax reduction, right? Or he basically took the PILOT program or that's done automatically by DRA, right?
A He made the calculation.
Q Yes. But how is that supportive of your proposition that that's just the way it's done by towns and analysts? It's just an assumption.
A No. In my opinion, there's two things you can do with an increased taxpayer coming into town. You can either keep spending the same and lower the tax rate for everybody, including the new payer in town or you can keep the tax rate the same and now you have this new increased tax

base and you can increase spending without affecting the tax rate. And that's exactly what was done by Mr. Gittell in this report. He pointed out, number one, and number two.
Q But Gittell did it because that's what's required to be done under a PILOT or he just assumed --
A No, that's not required.
Q -- that that's what happens, right?
A He made a calculation under scenario two. He's got two scenarios. Scenario 1, 40 percent increase in spending. Scenario 2, a reduction of 40 percent in the tax rate.
Q Right, and there's no serious analysis in Gittell's report that supports those choices, is there?
A I don't know what "serious analysis" means. I don't know what you mean by that.
Q Well, for example, data about what do towns actually do with that, with that money? Do they spend it or do they use it for tax reduction?
A Right. That's the analytical tool. You either increase spending, you lower tax rate or you do some mix in it.

Q But that's just an assumption they make.

PRESIDING OFFICER HONIGBERG: All right. We're going to take a break. We're going to take our morning ten-minute break.

(Recess taken 10:36 - 10:50 a.m.)

PRESIDING OFFICER HONIGBERG: All right. We'll resume. Mr. Roth, you may continue.

BY MR. ROTH:

Q I'm showing you now Counsel for the Public Exhibit 347 which I refer to as the Morrissey Report, and this was also cited in your Supplemental Testimony, correct?

A Correct.

Q And you cited this in addition to Gittell as I understood it for the proposition that one should consider tax reduction in addition to spending. Is that correct?

A I cited it by way of you have to consider one or the other or a combination. Correct.

Q Okay. This is page 8 of that report.

A Yes.

Q As I understand what he did here was he treated it all as an increase in local government spending; is that correct?

A   Correct.
Q   So he didn't do any tax reduction either.
A   Well, actually, I believe he used 100 percent of increased spending for the National Grid side, but I kind of insisted on only 50 percent because I wasn't really comfortable with that 100 percent assumption. So the, I believe at the end of the day the, technically speaking, it wasn't 100 percent. He modeled it as 100 percent, but I only gave him 50 percent of the taxes that I calculated.
Q   But this certainly doesn't provide any support for the proposition that you should also include tax reduction.
A   Oh, it does, because my analysis in this report, I was a witness in this docket, did look at tax reduction. Again, that's Simulation 3 where you calculate the tax payments based on the assumption of the reductions. So in my testimony in this docket, I did look at the different scenarios where we used as reduction.
Q   That may have been your testimony, but --
A   Um-hum.
Q   But Mr. Morrissey didn't do that, did he?

A Well, again, he used it as 100 percent. He made a decision. He accounted for all of the tax benefit in some way.
Q As spending. Not as tax reduction.
A Correct.
Q Okay. And you can't tell from Morrissey's report what he relied on for that assertion, can you?
A I believe he relied on that as a potential. Not based on his analysis that they would spend it. It's as a matter of economic analysis with REMI because really REMI's only suited for the increased spending side. It's very difficult in this application with these types of projects to estimate using REMI for tax reduction. There's some problems with that. So he viewed it as the potential. He wasn't taking the position that all of it would be spent. You could see when you're highlighted in yellow estimate their potential estimate impact so he's providing at the maximum, this is the potential.
Q But he doesn't mention --
A It could be less.
Q Sorry. He doesn't mention anything other than

entering it in REMI as an increase in spending, correct?
A Correct, because of their potential impact.
Q And there's no data or source referenced by him supporting this particular choice for all, for entering it all as spending, is there?
A Not that I'm aware of. No.
Q Entering it all as spending leads to the maximum amount of economic benefit, doesn't it?
A As measured in REMI.
Q Yes.
A I mean, that's as a modeling issue. Yes.
Q All right. And did you conduct any town-by-town research of your own to learn what each town would do with the benefit as between spending or tax reduction?
A No.
Q So your statement that these are -- you said in your Supplemental Testimony that these are embedded trends in local decision making regarding spending decisions. That's just your opinion, not based on any data or research that you performed?
A No. If you look at the trends over time with

the spending in communities, during the recession you had, property values had gone way down and also the economy was in extremely rough shape, and so spending went down. And as you see more addition in property values, you tend to see an acceleration in spending.

Q But you just told me a minute ago, the last question I asked, that you didn't do any research to find out what the towns were going to do with the benefit?

A You asked me about the specific 31 communities. I'm talking about my general experience and analysis for 20-plus years of looking at property tax trends in New Hampshire.

Q Okay.

A I didn't look at the specific communities to determine what they might do. That's why I did 11 simulations because it was under different scenarios of what they might do with the revenue.

Q Understand. I want to understand what, you said your 20-plus years of experience in observing this, but you haven't, I didn't see on your CV any reference to a study or report or presentation or testimony that you had made in the past which would suggest that you performed any sort of scientific analysis of this particular phenomenon. That is, how do towns allocate between spending or tax reduction. Is it fair to say that you have not done that, and you're simply relying on your experience and observations?

A   I didn't take a position on whether they use it for spending or tax reduction. My point was that you have to at least acknowledge that that's the range of choices and what was in the Kavet & Rockler report was not the range of choices. It was 50 percent increased spending and then 50 percent debt reduction. There wasn't anything associated with tax burden reduction. They didn't even mention it.

Q   I understand your criticism. I'm trying to understand whether you have done any scientific research or analysis on how towns in general treat this issue. Do they spend it or do they give it back to the taxpayers? Isn't that true? You have not done that scientific research or analysis?

A For this report, no.
Q Or before.
A Oh, sure. I've had a number of cases where I've looked at what communities might do and looked at their trends and have talked to different groups over the years and advised on what might happen with it.
Q But I didn't see anything on your CV that suggests that you published anything about that or made a report or made testimony about that.
A Well, I did do the statewide property tax report when the statewide property tax first came into effect, and we looked at what might happen in the communities that were donor towns versus receiver towns and what might happen to spending and well-being in those communities from the fiscal impact perspective.
Q Now, in her report, Ms. Frayer essentially followed the same approach that Kavet & Rockler used and only assumed 50 percent would go to additional spending, didn't she?
A Which report? What are we talking about?
Q The Frayer Supplemental. I'm looking at the redacted version of LEI's Supplemental. This is

Applicant's Exhibit 102. It's labeled confidential, but I'm not going to show anything that's confidential.

So I'm showing you page 51 of LEI's, they called it a Rebuttal Report?

A Um-hum.

Q And as I see this, and maybe I'm misreading something. I'm certainly capable of that. It appears to me that she took 50 percent and treated it as spending.

A Correct.

Q And if you look at the table on the next page --

Figure 11 and 12, next page, and highlight the tables?

And you'll see, again, she in terms of employment impacts and GDP impacts she treated it, she took 50 percent, treated it as spending, correct?

A Right.

Q Isn't it true that she didn't do a calculation for tax reduction either?

A No, but she corrected the misspecification by Kavet & Rockler about the debt reduction. So Kavet & Rockler didn't just put in 50 percent spending as an assumption which is a reasonable assumption. They then took the other 50 percent and modeled it as a debt reduction, which actually the way they modeled it was a reduction in spending. So it was actually a negative impact, and it offset so she corrected for that.

Q That's a separate criticism, but I think that Kavet & Rockler will explain that when they get an opportunity to.

A Sure.

Q But what I'm pointing out is that you criticized Kavet & Rockler for not taking into account tax reduction, and yet that's exactly what Ms. Frayer did as well. She didn't provide any economic benefit for tax reduction either, did she?

A That was in my testimony with the calculations of what the savings would be. That's right. And my criticism wasn't that they didn't model it. It's that they didn't mention it, and then they modeled it wrong by treating it as debt reduction. My criticism wasn't that they didn't model it. Again, it's very difficult to model tax reductions in this context in REMI. It's

not really set up for it.
Q And yet, I think, Ms. Frayer actually testified here that she used it all in spending. 100 percent. Didn't she?
A This just went blank.
Are you talking about the -- she ran two different scenarios. One scenario was 50 percent, and she kept the 50 percent on property taxes in both scenarios, but on the business tax, the business income tax, she ran a 50 and 100.
Q Can you put up page 120 of Frayer?
A So for the -- well, you just took it away. Okay.
Q Can you highlight the first --
This was, I believe Ms. Frayer was being questioned by Attorney Pappas, and she said we assumed that subject to check, but we assumed that all of the estimated property tax revenues that Dr. Shapiro projected would be used but for local government spending.
Isn't that what she said? But that's not what she actually did, is it?
A Well, I don't know whether this, she misspoke or

this was translated, because Dr. Shapiro projected would be used but for local -- I don't know what the but for. I'm not quite sure what this description says. Very clearly what she did is in the previous page you just showed me which was the 50 percent number. That's very clearly what she did.

MR. IACOPINO: Peter, can we see what the question was?

PRESIDING OFFICER HONIGBERG: Let's see the question and the answer, and we may even need the previous question.

Q We'll take it one piece as a time. And highlight the bottom of 22 through 24? You did it. Good for you.

Now in your Supplemental Report in estimating or forecasting the economic impact from the payment of property taxes, what amount of tax revenue did you assume municipalities would spend. And she answered, all of it.

PRESIDING OFFICER HONIGBERG: Can we take the highlighting off and let people just read the series of questions and answers rather than paraphrasing?

MR. ROTH: Certainly.

PRESIDING OFFICER HONIGBERG: Now that we've all had a chance to read that, do you have a question for Dr. Shapiro?

MR. ROTH: She already answered it.

PRESIDING OFFICER HONIGBERG: Okay. Refresh my memory. What was the question that she answered?

MR. ROTH: The question was, Ms. Frayer said that all of it was going to be used on spending, but that's not what she said in her report. And she agreed. She only used 50 percent.

PRESIDING OFFICER HONIGBERG: Oh, I don't think that was the answer to the question. I honestly don't. I'm going to give Dr. Shapiro another crack at that question and see if that is in fact her answer.

A What's the question?

Q The question was, Ms. Frayer said in her testimony that all of the tax revenue would go to spending, and that in her report she only used 50 percent, correct?

MR. NEEDLEMAN: Mr. Chair, I'm going to

object. The basis of my objection is I don't think that accurately represents her testimony.

PRESIDING OFFICER HONIGBERG: Sustained.

MR. ROTH: I'm not sure how that --

PRESIDING OFFICER HONIGBERG: Where do you think it says what you think it says?

MR. ROTH: Where she said we assume that, and I'll leave out subject to check.

PRESIDING OFFICER HONIGBERG: Well, the subject to check is actually pretty important, I think, but let's assume -- you don't want to read that, but I can. So starting with we assumed.

MR. ROTH: Okay. We assumed that, subject to check, but we assumed that all of the estimated property tax revenues that Dr. Shapiro projected would be used.

PRESIDING OFFICER HONIGBERG: Stop. Stop right there. How much did you project would be used on spending?

A We decided to adopt the 50 percent spending that was in the K & R.

PRESIDING OFFICER HONIGBERG: Now keep reading.

MR. ROTH: But for local government spending.

A Right. And it says described on page 69.

PRESIDING OFFICER HONIGBERG: So if we want to know what Ms. Frayer used in her analysis, we would go to page 69 of Appendix C of her Supplemental Report, not her subject to check recollection of what she did.

MR. ROTH: And we can do that. The ambiguity will thicken.

Q Is everybody ready for the rest of it? On page 70? So on page 69 and 70, she doesn't say one way or the other what she did with it.

A No. It's on the footnotes in the other page you showed that had the actual results of the model show the low tax scenario and the higher and showed in both cases that she used the assumption of 50 percent.

Q Correct.

A Correct.

Q But in her testimony, I submit she said that she used all of it.

PRESIDING OFFICER HONIGBERG: All right. You can make that argument. You could argue down the road that that's what that testimony says, and people will be able to make their own judgments about what it actually says.

Mr. Needleman, did you have something you wanted to say with your finger up and your mouth next to the microphone?

MR. NEEDLEMAN: Yes. I'm going to object to that because it mischaracterizes the testimony, and I will show that in redirect.

MR. ROTH: You're going to redirect Ms. Frayer?

PRESIDING OFFICER HONIGBERG: Mr. Roth, move on.

BY MR. ROTH:

Q Now, when you did your tax benefit analysis for the communities, you didn't take into account the possibility or perhaps even likelihood that there would be taxpayers in those towns who would seek abatements because of proximity to the Project, did you?

A Mr. Chalmers addresses the issues of impacts on existing property owners, and I believe concluded that there's no material market level impact.

Q Okay. So you had seen Mr. Chalmers' analysis before you wrote your report?
A No, but when I was retained to do the report, I asked whether, is anybody going to look at whether there is potential impacts, and if they find any, then I need to know what they think the impact would be so I can include it.
Q Okay. So when you did your report, you didn't do any independent analysis of what Mr. Chalmers said to determine whether that was credible.
A No. Well, I do note that in Kavet & Rockler it seemed like they came to the same conclusion that there is no significant impact because they didn't include it in the model, and they specifically said that in their report.
Q But we're talking about your testimony here today.
A Right. I left that to other experts.
Q Okay. All right. Now, we're going to change subject a little bit, and we're almost to the end here.
Can you bring up 354? Now, some years ago, and this goes, you know, really got The Wayback Machine cranked up here, you did a study on tax

payments arising from the Portland Natural Gas Transmission System pipeline, is that correct?
A It was the fiscal and the economic. I did that in conjunction with Dr. England at UNH, yes.
Q Okay. In that you estimated the New Hampshire tax payments, property tax receipts at 32.88 million. Does that sound right?
A That's 21 years ago. I'd have to look at the page and see what the number is.
Q When you did that, you indicated that there were a number of variables and significant room for error because of compounding of early mistakes. Do you remember writing that on page?
A If you're reading that, I don't have page 2 in front of me. Sure. Where is that?
Q Right there in the middle. The estimation process includes significant room --
A Um-hum. Correct.
Q And so because of that, you employed simplifying assumptions as you did in this case, correct?
A Correct.
Q And but in this, in your PNGTS report, you didn't model the economic effects of property tax or income tax payments, did you?

A Not using the REMI model. Again, the REMI model is very difficult to model tax reduction so you have to make an assumption that in order to estimate the potential economic impact, you have to make an assumption that it's used for spending. That's really the only tool REMI has for you. So we didn't include that.
Q Okay.
A Correct.
Q Do you consider that to be more conservative?
A Well, it depends on what you're looking at and what kind of information. They're really just scenarios to try and get a sense of it. I generally go with not including it as a payment because we just don't have enough information about it, but I don't have a problem with other scenarios. We talked about Mr. Morrissey wanted to include it as 100 percent as a potential. Professor Gittell actually assumes zero spending in his in-plan modeling to be more conservative. He included it. I don't think the 50/50 is an unreasonable assumption that Kavet & Rockler looked at. It was the specification and their discussion about the 50 percent reduction that I

took issue with as well as their estimated tax payments had an error in it.
Q Have you gone back and studied the actual effects of the PNGTS line on tax revenues to compare it against your estimates?
A I did take a look at it. I didn't do a comprehensive study. The Project ended up costing so much more than what I had included that I couldn't distinguish about what I anticipated the tax rates were, whether they had gone up or down or whether it was because the Project had cost so much more. And then I believe some time into it they did some type of upgrade on a compression station so that would have increased the value. So I couldn't get a good sense of how it compared. I do know that the numbers were higher than what I had estimated. Substantially higher.
Q And you supported Public Service of New Hampshire with testimony and reports in the scrubber case, isn't that correct?
A Correct.
Q And did you go back and study the actual economic effects to check your predictions?

A I did have a conversation afterward about what they had estimated with the direct number of -- this is on the scrubber construction or which?
Q Yeah. The scrubber. Yeah, I guess it was the scrubber construction.
A Yes. That what's I -- I think I had projected over a thousand jobs with half of them indirect and induced, and I think I did check with them afterward if they had an accounting of how many on-site people there were, and it was in the ballpark of what I had assumed.
Again, I didn't do a comprehensive study, but I do tend to go back and try and see looking at the available data whether it passes, it's similar to other studies I keep an eye on as well.
Q Is there any way or did you, I guess is the question, did you go back and review whether the GDP effects came out the way you predicted?
A I did not. That's extremely difficult because you'd have to isolate out the GDF. I mean, I can go and count the number of people onsite to get the direct employment and maybe you can get some data on what their vendors spend, but in

order to estimate the GDP you'd really have to get in and do a comprehensive study of what actually was spent and where in order to -- then actually model the GDF because you can't tag GDP numbers to actually figure out what GDP increase resulted from that project. But you could go and check your assumptions on the inputs.
Q   Okay.
A   I did not do that.
Q   Did you go back and do any review to test your predictions on the PSNH Laidlaw analysis that you did?
A   Which part of that analysis?
Q   You made the opinions about economic benefit in the Laidlaw biomass plant, and have you gone back and reviewed and to determine whether those predictions were accurate?
A   Well, I have kept track with the logging industry and the recent study by Plymouth State University that estimated that there's 900 jobs associated with the 6 independent wood plants, and my study was on the one plant which is smaller than the six combined, but it's about two thirds the size, and I had estimated about

250 jobs, and they had estimated 900. So I thought my numbers came out pretty conservative.
Q And --
A That's the extent of my -- so I continue to watch, and I don't have an ongoing relationship with Laidlaw to be able to determine it, but I have continued to follow as I can as a professional the other studies that have come out on the biomass industry to look at what types of jobs they're projecting and compare that to what I had done.
Q And I assume you also did not do a GDP --
A No.
Q -- check-in?
A No.
Q Thank you very much. That's all I have.

PRESIDING OFFICER HONIGBERG: All right. I saw Mr. Boldt here, but he left, and I'm informed that he decided he had no questions he needed to ask.

I think the next group up is the Municipal Group. Who's going to go? Mr. Whitley?

CROSS-EXAMINATION

BY MR. WHITLEY:

Q Afternoon, Dr. Shapiro. How are you?
A Good. How are you.
Q My name is Steven Whitley. I represent several municipalities along the route: New Hampton, Littleton, Deerfield, Pembroke, and the Water and Sewer Department of Ashland, and I'm going to ask you a couple questions, but I'm going to start off with a real quick point that Attorney Boldt asked me to cover due to his conflict.
A Okay.
Q You didn't separately value the improvements to the Coos Loop and the Berlin generators, did you?
A No. Well, the improvements in the Coos Loop that are already embedded in the $1.6 billion of the Project are incorporated into my tax estimates. To the extent there might be other benefits from that improvement either -- because I understand there is a potential that it would increase the tax payments for the wind farm because -- so I didn't look at that.
Q Okay.
A So I did to the extent it was included in the base cost.

Q Okay. And that I think gets to the other question that Attorney Boldt was looking for an answer on, and that is just to confirm that your understanding is that those costs, the Coos Loop and the Berlin generators, were included in the overall Project costs that you were provided.
A I believe they were. I don't know if there's a piece of the upgrade. I think they still have to get an ISO report if there's some additional upgrades to the Loop. That's not included. But the base, I think it was something like $50 million that go toward it. That is included.
Q Okay. Thank you.
I want to step back now and just talk about your background for a second.
A Okay.
Q You were trained as an economist, and I think you mentioned already you work for a law firm in Concord right now, correct?
A Correct.
Q And the services that you offer to clients are at least two-fold that I'm aware of; an expert consultant which is what you're doing in this proceeding, and then you also are a lobbyist,

correct?
A Correct.
Q I didn't see in your CV anywhere and I understand from your testimonies that you've done that you're not trained as an appraiser or an assessor?
A I'm not. Correct.
Q And you're not holding yourself out to clients or this Committee as an appraiser or an assessor, correct?
A Correct.
Q And you're not licensed in New Hampshire or elsewhere to appraise or assess property?
A Correct.
Q So you're not offering an opinion of fair market value in any particular community, correct?
A Correct.
Q And you've never appeared before Superior Court or the BTLA and offered an opinion of value on a particular piece of property, correct?
A Correct.
Q Could you tell me what percentage of your work in the last three years has been for the utility industry?

A I don't know exactly. It's less than 50 percent.
Q Okay. And a range is fine, and you said less than 50 percent?
A Yes.
Q Can you put a bottom number on it? More than 25 percent?
A With this docket? Probably more than 25 percent.
Q Okay. Well, I would like you to include the present docket.
A Right. So, I mean, that's the last three years so yes, I'm sure it's not below 25 percent.
Q That's a fair point. Yes. I'm sure they keep you busy.
And what percentage of your work in the last three years has been as a lobbyist?
A Probably less than a third.
Q Okay. And can you put a lower bound estimate on that? More than ten percent, but less than a third?
A Yes. I mean there's been a lot of health care issues, and I have health care clients.
Q As a lobbyist, my understanding of that clients

service is that you advocate for certain goals or positions as directed by your client. Would you go with that characterization?
A No. That's usually not my role. Because of my background and my training, I'm often the educator and trying to take complicated material, break it down into something that's understandable, and also understand the other side of the arguments and be able to explain them as well. So --
Q Okay. I'm sorry. I didn't mean to cut you off.
A No. Go ahead.
Q You said educate. Who are you educating?
A Legislators. Staff.
Q Legislative staff?
A Legislative staff. Executive branch.
Q You answered previously that you offer two services. Expert consultant and lobbyist.
A No. You said those two services. I didn't say that's the only two services I offer.
Q No, I'm not meaning to characterize those as the only two you offer.
A Okay.
Q My point was that you agree that those were two

that you offered, two services that you offered.
A Expert -- say that again?
Q Expert consultant and as a lobbyist?
A They are two services that I do, yes.
Q How do you distinguish between those two?
A How do I distinguish? Well, if I am directly lobbying and I'm part of an advocacy, at the end of the day, if I can't explain and back up my information, then I don't have credibility, and most of my work is about the analysis and writing reports and presenting the testimony about the outcomes. And the difference in lobbying is you get into the process issues of where it is, how to count to the number that you need so you're more targeted in who you're talking to because there's actually a vote at the end of the day with people that you're routinely dealing with.
Q And would you say that advocacy on behalf of a client plays a role in your lobbying services?
A I really, that's, I usually don't get picked to do that. It's mostly the data and the explanations that are about that and understanding what people's knowledge level is

and experience is to be able to try and explain things in a way that a broad diverse group of people might be able to understand pretty complicated industries.
Q So over the last three years, your 10 to 30 percent of lobbying, you have not been advocating on behalf of your clients?
A Well, I mean, advocating, I don't know what you mean advocating. Advocating for an outcome. I don't know what you mean by advocate.
Q It's one of the -- I think it's a word that you used in response to one of my questions, and so that's why I'm asking it back to you because I assume that you had a certain meaning in mind when you used that word.
A Well, the meaning in my mind is that it's important to disclose who's paying you, and if somebody takes a position on a bill that's for or against, and I'm tagged to testify on it, then I would consider that advocating for the client's position. But in something like, for example, HB 324 which was the property tax bill on assessments, I didn't get involved at all in terms of advocacy, but I was a resource for

analyzing what the impacts are and what the options are.
Q A resource. Would you classify your work on that as a lobbyist or an expert consultant?
A I was a strategic consultant to my client on that.
Q You wouldn't characterize that as lobbying for your client?
A Well, under the definition of the law of what lobbying is we take a very expansive view. So even if I'm working on something and providing background information on how a bill might work or what the impacts are, and I don't even directly talk to a legislator, I would still record that as lobbying.
Q Okay. And in this proceeding, you're a consultant or an expert for Northern Pass as opposed to a lobbyist; is that accurate?
A Correct.
Q But you're also are and have been a registered lobbyist for Northern Pass, correct?
A Correct.
Q Dawn, can we go to the Apple TV, please?
Is your screen working, Dr. Shapiro?

A It's still a pretty picture of the winter.
Q That's mine. That's not what I'm asking you about though.
A Okay.
Q What I'm showing you now is going to be marked as Joint Muni 237.
A Okay.
Q And I'll represent to you that this is a list of registered lobbyists as of 12/31/2015.
A Okay.
Q And I obtained this from the Secretary of State's office.
A Okay.
Q And I'm going to go now to -- you see there the highlighted entry?
A Correct.
Q And you see there that you're registered as a lobbyist for Northern Pass?
A Correct.
Q I want to show you now what's going to, marked at Joint Muni 231. This is the same information, but this is on a form that the Secretary of State prepares of lobbyists as of 12/5/2016.

A Okay.
Q You see there your name and registered on behalf of Northern Pass?
A Correct.
Q I want to show you now Joint Muni 232. This is, again, a form prepared by the Secretary of State lobbyist as of May 24th, 2017, and you see there on the second page your name registered as a lobbyist for Northern Pass?
A Correct.
PRESIDING OFFICER HONIGBERG: Mr. Whitley, she has agreed with you that she's a lobbyist for Northern Pass.
MR. WHITLEY: And I'm not going to ask her again if she's a lobbyist for Northern Pass.
PRESIDING OFFICER HONIGBERG: Okay. Good.
BY MR. WHITLEY:
Q During your time as a lobbyist for Northern Pass, your firm has been paid for their services, has it not?
A Correct.
Q I want to show you now what's been recorded for calendar year 2015. This is the form that I believe your firm is required to provide to the

Secretary of State's office.
A Correct.
Q You see there this one is marked, the X marked there, activity up until the end of the year. You see here, client, Northern Pass, and you see on Line C, fees received to date, some $273,000?
A Correct.
Q And I show you here. This is your signature on the form, correct?
A Correct.
Q Okay.
A Along with everybody who's registered.
Q Correct. That's correct.
You see here this is a similar form but for the following calendar year. You can see that there. Activity up until 12/31/2016?
A Correct.
Q On this next page here you see Line C in the middle there, your firm received to date $127,000, correct?
A Correct.
Q And again, I'm not going to show you the next page, but it is your signature page again.
A Okay.

Q Sounds like you agree that you did sign that form?
A Yes.
Q And then more recently, this one is activity up until May 31st of this year. You see that date? You see the check there?
A It says March 31st?
Q Did I say May? I did say May. You're right. The third month is March. March 31st, 2017.
A Okay.
Q And you see there, C, the total up until that date was some $66,000, correct?
A Correct.
Q And in 2015, you also prepared your Prefiled Testimony for Northern Pass in this proceeding, did you not?
A Correct.
Q And in 2016, you responded to Data Requests, you sat for Technical Sessions, isn't that correct?
A Correct.
Q And in 2017, you prepared your Supplemental Testimony, you observed the cross-examination of other experts before this Committee, and you're sitting for cross-examination yourself, all for

Northern Pass, correct?
A Correct.
Q And yet your firm during that same year, three-year period, has received $466,000 for your lobbying efforts on behalf of Northern Pass, correct?
A That's what the forms say.
Q Yes, and that amount of money doesn't, hasn't swayed your opinion one way or another on the testimony and the opinions that you provided?
A No. On taxes? No.
Q I want to turn now to get into the meat of your testimony and Attorney Roth covered some of this already, but I want to get back to the net book value that you've employed.
A Okay.
Q Very generally, you know, I think you've already stated that Northern Pass provided you with the total costs of the Project on a town-by-town basis.
A Correct.
Q And then you made assumption that the fair market value equaled the total Project cost in the first year of operation of the Project. Is

that correct?
A   Well, I didn't include all the costs in order to be conservative. I didn't include the cost associated with rebuilds and relocation and also the cost associated with land. So the base cost that's in my analysis is, I believe it's 1.525 billion, not the full 1.6 is the Project cost.
Q   Okay. And I was going to ask you that and answered that for me. I was going to ask what the difference was between the reported 1.6 total cost and your use of 1.5.
A   Right.
Q   Thank you. And the tax payments for those first 20 years are generally based on this fair market value simplification, correct?
A   Correct.
Q   And part of that is straight line depreciation of 2.5 percent for that 20-year period, correct?
A   Correct.
Q   And what that looks like, if we had any of the municipalities that you ran the scenario for, is that the tax payments are largest in the early years, and then they gradually decline over the life of the Project, all else being equal?

A All else being equal, correct.
Q Okay. And those tax payments for any host community decline because they're based on a declining net book value, right?
A Right, unless their tax rate goes up enough.
Q Sure.
A But the base itself, right. And it depends on their spending in the community. If the community is increasing spending faster than the total property value, then the rate is going to go up, too.
Q I guess maybe a better way to ask that question would be to add that proviso that all else being equal and those sort of factors don't change --
A Yes.
Q -- then the payments are declining because the net book value is declining.
A Correct.
Q But there are other ways to estimate fair market value, and I believe you've already spoken about those, and you mentioned there are five of them. Original cost which is net book value or what you employed, reproduction costs, comparable sales, capitalized earnings, income, or costs of

an alternative delivering the same power and energy; is that correct?

A It's correct except the second one, the replacement cost sometimes is replacement or reproduction costs. It's also less depreciation.

Q Right. I'm trying to simplify.

A Sorry.

Q You're right, though, yes. Okay. You were not required to use net book value here though?

A No. Um-um.

Q But that's the only one you've ever really used for a utility client. Is that true?

A I haven't recalled previously projecting what the tax payment would be beyond the first year up until this docket. And in fact, in the other dockets I'm involved in currently and most recently I only provided an estimate of the first year. That was the common practice. And if you look back to the previous dockets in front of the SEC, I don't recall ever seeing long-term projection. It was basically the first year based on original costs is by and large the same thing as replacement cost in year

1 because there's no inflation yet. And it's really over time where there gets a difference of opinion of what the value is, and what I've seen and what I've done in the past is either assumed the tax stay the same or don't even comment on it.

So this was something I departed from from my previous analyses because there's so much of an issue and there's so much litigation going on, I thought it would be important -- and a lot of misunderstanding about what happens over time. So I thought it was important to provide a conservative estimate of at least what the taxes would be over the first 20 years. Not by way of an opinion of value or what would be used, but based on the five allowable methods to provide a conservative estimate so it would be at least this amount that the Committee could take into account when they're considering public interest.

Q And I think in your response just now you said this is the first time you've projected out over 20 years?

A Um-hum.

Q Correct?
A Correct.
Q Didn't you do that in the Portland Natural Gas proceeding as well?
A Yeah. I took the simplifying assumption of it just stays the same so which is not really taking an opinion of why it would be the same. So correct. I stand corrected.
Q So this is not the first time.
A You're right. I agree.
Q Okay. Other than those two, have you done anything similar for any other clients or projects?
A Well, for clients I've certainly done projections when they're purchasing assets and have been an advisor on what the costs might be over time in a lot of private sector settings, but in reports in front of regulatory agencies, it hasn't been common practice to actually estimate what it might be as a minimum value.
Even the Draft Environmental Impact Statement just did a first year and then made the assumption that they would stay the same, but they also said they could decline over time

or increase. They didn't really take a strong position on what would happen.

Q But for any of those other clients when you've used an approach at estimating fair market value, it's been net book value, has it not?

A Not necessarily.

Q So you have considered the other four approaches.

A Sure.

Q And used them.

A Again, I'm not an appraiser, but just in terms of possible estimating of costs, I've considered other scenarios.

Q Were you present when Mr. Quinlan was testifying before the Committee?

A No.

Q Have you reviewed his transcript?

A I reviewed the interchange that you had and Mr. Boldt. I don't think I read the whole thing, but I did look at the exchanges on taxes.

Q Okay. Are you aware or do you recall that he testified that it's the industry standard to use net book value?

A I believe he did. I'm not for sure. But

subject to check, and if that's what the transcripts say, then I accept that.
Q Assuming that is his testimony, do you agree that that's the industry standard?
A I don't know. It's very common to use book value, net book value, but there's so much variation across states. I mean, I'm looking at it from 50 states, and within each state you have local jurisdictions. So I did try when I started the Project years ago to see if I could find a really good report that analyzed it of what it is, and it's definitely a very prevalent way of assessing utility property is net book because of the regulatory climate, but I wasn't able to determine whether it's, you know, what percent and how common it is. In New England, I take it face value that for Eversource that's common, but I don't know that.
Q Are you aware or do you understand that states do it differently, and, you know, just because that's the approach in, say, Connecticut that it may not be the same one here in New Hampshire?
A Sure. The whole issue with New Hampshire is that there's not a specific formula that's

described in law so it leaves everything up in the air with a lot of uncertainty and room for disagreement on what the fair market value is of a special purpose asset, that there's not a huge number of comparables, and so there's a lot of unique situations with different types of utilities so it makes it subject to disagreement and uncertainty about what is the fair market value of an utility property, especially ten years after its built. I think there's less disagreement in year one.
Q You testified earlier today that Northern Pass didn't direct you to use net book value, but did you suggest an alternative approach to them?
A No, because of the uncertainty, and this is to provide in this docket an estimate of what the potential benefits are associated with the Northern Pass tax payments, and in looking at the different methods, I chose the one that is conservative. So it would be at least that amount.
Q So I understand you didn't suggest a different approach. Did you yourself consider a different approach to estimating fair market value?

A Well, again, the income approach which you would take a discounted cash flow of the whole future payments that would be paid to Northern Pass would yield the same answer as net book value. So under an income approach to value where you looked at the income that's in the docket that's been reported, for example, in the response to Counsel for the Public of what the income would be associated with the Project, mathematically you come to the same number. So the net book methodologically is the same as a discounted cash flow in a simplifying approach.

Q And I understand that's your testimony today, but is that stated in your testimony or your Report anywhere?

A Sure. I think I said something in my Report about under an income --

Q If you want to take a second and just look, go ahead.

A I also remember we had a question from the City of Concord one time during the proceedings where I provided that as well. I'm just trying to see where it would be. I'll have to look at the break if you don't mind.

Q Okay. I want to turn back to the cost figures now. These cost figures were allocated by the Project to the 31 host communities. That's your understanding, correct?
A I'm sorry. Say that again.
Q I'll say it again. No problem.
The total cost figures were allocated to the 31 host communities by the Project.
A Well, it was a combination because they allocated town by town on a per mile basis for the components of the Project that were across towns, and then I did some allocations so they provided all the cost estimates. I did some allocation.
Q And we're going to go through that a little bit.
A Okay.
Q But you said they did it on a per mile basis, and I believe your report or your testimony described it as linear feet?
A Correct.
Q Is that what you mean?
A Yes. Linear feet. Yes.
Q Then the station investments, the transition stations, they were allocated directly to the

community they were located in?
A Not the underground to overhead. They were incorporated into the overall underground cost. They were not separately allocated to the communities, but the Deerfield/Franklin were directly allocated to the communities.
Q And the process of taking total cost and then allocating based on linear feet in a given community, that's sometimes referred to as the unit method, correct?
A Well, the engineers actually built it up as a labor factor and a material factor associated with each part of the Project and then allocated so you could maybe think of it as a unit, but I really think they, when you look at it, they built the cost up from the bottom in terms of what's the labor and material factor associated with each of the major components of the Project.
Q Okay. You mentioned a second ago some of the, I don't want to say allocation but some of the work you did adding to the cost figures that Burns & McDonnell provided to you, and it's my understanding that that mainly comprised some of

the indirect costs.
A Correct. I didn't estimate the indirect costs. They gave me all the costs, but I had to make an allocation to the communities.
Q Dawn, can we go to the ELMO, please?
Dr. Shapiro, what I want to direct your attention to, this is your Report.
A Um-hum.
Q Which is, it's Appendix 44 to Applicant's Exhibit 1, I believe. This is Figure 2 -- excuse me. Figure 1. And it lists some various cost elaborate terms in that figure. And when you talked about indirect costs, that included the AFDUC contingency, property taxes during construction and Project support, correct?
A Correct.
Q And those indirect costs you did allocate to the various communities based on linear feet in a given community?
A Well, no, no. Based on their pro rata after Burns & McDonnell took, also because the station costs are not allocated per mile. So if that's what you meant. The HVDC line was allocated per mile. The AC line per mile. But then the

stations in Deerfield and Franklin were directly, they did the allocations.
Q No, I know. I'm talking about the indirect items.
A So the indirects were not allocated per mile. They were allocated pro rata based on what the others yielded for each community. Then whatever share of the total of the direct costs that community had, then they were allocated that share of what you're calling the indirect cost.
Q That was my next question. Okay.
Are you aware if the value of the easements and the right-of-way for the Project is included in these cost figures?
A I believe they are, but I mean, these were all the costs that I was provided unless they were under the land bucket. If they were in the land bucket, then I didn't include land because it's treated a little bit differently in terms of assessing land. So I would have, if they were included in the cost, then they're in here. And they are taxable.
Q But you don't know as you sit here whether and

to what extent they were part of the cost figures that you received?
A   Yeah. Which easements?
Q   The easements for the utility corridor.
A   So the payments to PSNH? I mean that -- you know, that's a lease payment. Lease payments were included in here, I believe, but I'm not --
Q   But if I'm hearing you correctly, you're not certain of where exactly they were included?
A   I'm not. Because if they're part of an ongoing operation, then they wouldn't necessarily be in here, although they would be taxable.
Q   Okay. You had an exchange with Attorney Roth this morning about whether or not you independently verified some of the cost figures that were provided to you, and I believe your answer was that you did not.
A   Correct. Did not.
Q   I'm sorry. I didn't mean to interrupt you. What was your answer?
A   You're correct. I did not. I'm sorry. I interrupted you. Apologies.
Q   So for a given municipality, say, for instance, for New Hampton, you're not able to

independently verify how many meters of wire are in New Hampton, how many labor hours it's going to take to construct the Project there, how many tons of cement, any of those sorts of potential construction costs?

A Well, I mean, it was built up by Burns & Mc, looking at, Burns & McDonnell, looking at the cost allocations for the construction in each, you know, it was allocated by per mile for -- I'm not sure what you mean by -- I guess I don't really know what the question is.

Q I'm just asking you to clarify, and I think you did already answer the question that you didn't independently verify the costs in a given municipality.

A No. I did look at the allocations to make sure they added up, and there weren't any errors as you went into each community across each of these different major buckets of expenses. And to make sure, for example, that some of the indirect costs associated with the rebuilds were not included, they had to be taken out and allocated to what I'd include in my Project.

So I looked at more of the spreadsheets to make sure that they added up and that there weren't errors, but I didn't independently assess concrete or labor costs associated with the construction.

Q Okay. Thank you.

Dawn, can I go back to Apple TV, please? Let me know when your screen comes up.

A Okay. Here it is.

Q Okay?

A Okay.

Q This is marked as Joint Muni 240. This is a Supreme Court opinion, PSNH v. Town of Bow, and I want to direct your attention to something that's at the bottom of the page here.

Can you read for the record, and read slowly so the stenographer can take it down, the highlighted part in that paragraph that's in front of you there.

A "Because the unit method valued the entire PSNH system as a whole and then allocated a portion of that value to each component property based on its net book cost, it failed to focus on the income contribution of the particular property and included the effects of property outside the taxing jurisdiction. Additionally, we have previously noted that changing price levels would render such a method impractical and unfair. The court therefore determined that the unit method was an unreliable means of evaluating specific property. We find ample evidence in the record to support the trial court's rejection of PSNH's valuation method."

Q Have you seen this court case before?

A Not this particular one but I'm aware that there's been cases where the utilities' expert using the unit method was rejected.

Q Are you familiar with the critique that you just read from?

A Generally.

Q Okay. Isn't it true that your method of allocation assumes some identical assets or costs in the host communities that you were not able to independently verify?

A Based on the costs that are available in the planning purposes, the best available information is to allocate by linear foot or by mile. Under construction, you have more information about what the specific costs were.

In each community the specific plant that ended up in a particular community.

But it's still going to all add up to the total cost of the Project. So you could start at the aggregate level and allocate it and then you can also look at what's in each particular community. And they need to match if you're going to end up with a first year value based on the total cost of the Project.

Q I want to turn now to the depreciation rate. That's chosen based on accounting and tax considerations as opposed to the actual physical depreciation rate of the assets. Isn't that correct?

A I believe so. I think that's accounting, but it may have something to do with the expectant life. I don't know.

Q Okay. You may have covered this with Attorney Roth so I apologize if I missed it, but is it your opinion that net book value is an accurate estimate of fair market value or you're just using that as a simplifying assumption?

A I think it really depends on the situation. I mean, one thing is clear with these court cases is that really depends on the particular facts of the case. I mean, when you look at these decisions, you know, in one case the BTLA accepted the unit method, and in another case they rejected it, and they're allowed to do that, and they're looking at what the facts are put forward.

So when you look at Northern Pass, it's one Project, going into service at one time, you know, if approved. You don't have generation assets, you don't have multiple types of regulatory jurisdiction. So in some ways, it's more akin to a pipeline in terms of taxing because it's one type of project.

But, of course, you get into the details of what's in each particular community. So the court has stated it, and I don't disagree as an economist that there's five general approaches to value. All have their pros and cons. And within each method there's different assumptions and different outcomes that you might get of an opinion of value, even using the same method, and you see that in cases where the two experts, they'll both use replacement cost or they'll both use sales and they come up with pretty different values, and even under net book what's actually included and how you're dealing with it.

So, you know, in my opinion of, it's, you know, one method isn't per se right or wrong in New Hampshire law. These are the tools that appraisers have, and it comes out into the situation. I chose a conservative value that I think is a possibility that that will represent fair market value. I'm not saying it's the method or it's more likely or less likely. But you look at one project, their earnings are going to be on net book, it's a 40-year contract --

Q   If I could just -- you mentioned something that I want to hone in on. You mentioned just now that you don't have any sense of how likely net book value is to be an accurate estimate of fair market value. Am I remembering that right?

A   Because of the law. I mean, from these court cases, they're not, they've been very clear in my understanding of that they don't pick a method.

Q Correct.
A So I can't, I'm not picking a method because there's nothing in the law to pick a method.
Q Okay. And court cases aside, have you done any sort of work or analysis to see how reliable net book value is at estimating fair market value?
A Well, you don't really know fair market value until something is sold. That's really -- and then it's got to be an arms-length transaction.
Q Again, have you done any sort of analysis to look at how reliable net book value is at estimating fair market value? Say, for instance, after an asset is sold?
A I am familiar that in some utility sales they sell at book value and in some utility sales they've sold above book value.
Q Okay.
A So I am aware of sales that were at book value.
Q You mentioned earlier this morning this concept of -- I forget the terminology. Salvage value or scrap value. Do you recall that exchange?
A Residual value. Yes.
Q Thank you. Residual value is another way to say

it. That's not really explained in your report though, is it?

A I think that came up in the context of past 20 years so that has to do with whether or not it would ever go to zero, and because I'm aware in other states that use net book value as the adopted formula in the state for estimating the value of utility property, and I'm aware in those instances there's often a floor of 30 percent so that's why. It's not relevant to my report.

Q Okay. Well, okay. You mention other states that utilize net book value, and I think you said a 30 percent floor on the residual value.

A Correct.

Q Which state was that?

A I know Connecticut was one that I was provided by the client, and then when I did my review there was a study done by the DRA in New York. There was a number of states that had that. It wasn't a scientific review. It was just my -- again, I didn't make a forecast beyond 20 years or an estimate, but there were circumstances where the Northern Pass needed a 40-year

schedule and so --
Q   So you say you don't have an opinion on beyond 20 years. So are you not offering the opinion that after 20 years there's a floor of 30 percent?
A   Well, I do think that, but my report only estimates 20 years. You're now asking me and we've, in rebuttal to Kavet & Rockler who chose to go 40 years, I shared my view of that, but my report is estimating for 20 years to provide that.
Q   And you mention the example of Connecticut in something provided by the client. What did they provide you? Was it a statute, a law?
A   I believe one of the attorneys, I asked if there was a precedent that they were aware of with a floor because in my economic view, and my experience in New Hampshire, I just frankly can't imagine anybody ever letting it go to zero for taxable basis if it's still in use. I just -- it doesn't happen.
Q   There's no corollary. Are you aware of any corollary in New Hampshire to what you were provided in Connecticut?

A There's no rules. There's no set formula in New Hampshire.
Q So that's a no.
A Right. There's no formula in New Hampshire. It's all case specific.
Q Do you understand, though, that by using the first 20 years and doing that very simple mathematical 2.5 percent a year, it's very easy to extrapolate from that and go out to 40 years where I think you testified, you agreed this morning, that the net book value is zero?
A Correct.
Q So if that's the case, I mean, why not include in your report something to the effect that there is a floor for how much this property could be worth in these communities?
A That's beyond the 20 years, and in terms of my report, I felt that, I mean, it's iffy enough forecasting in general with a crystal ball and with changes in law and changes in technology. So to go beyond 20 years, I did not want to provide an estimate. I just didn't think that's -- it's too much uncertainty.
Q Is it your understanding that any towns that

have utility assets in them use a 30 percent of original cost floor?

A I don't know. I don't know what their Assessors do. I mean, again, because in most cases you're not just going to look at net book value. You're going to look at the income approach. And if you're still earning income on the assets over time, then under that approach they're going to be valued. Under replacement costs you're going to have inflation. So again, because there's these five different methods, there's chances that it would be more than the net book in any particular year.

Q I want to put up for you now the Prefiled Direct Testimony of George Sansoucy. Are you familiar with his testimony?

A I am.

Q Okay. This is from November 15 and this is SAN 1 which has been provided already. I want to turn your attention to a question and answer that he gave. And you see there on the top of the page, the question?

A Page 28?

Q It's on page 28. Yes. Sorry. It's on page 28.

You see that there?
A Yes.
Q I'm going to minimize this to kind of get more of the answer on one screen, but if you want me to go back up to the question let me know.
I want you to take a look at, though, that first sentence on line 1 and 2, and then skip down to lines 15 through -- got to minimize it again, sorry, just so that it's all there. 15 through 21.
A Is there a question?
Q Well, yeah, but I wanted to give you a chance to read it first.
A Okay. Yes.
Q So you're done reading it?
A Thank you. I'm done reading it.
Q Okay. Mr. Sansoucy's Testimony here, his Prefiled Testimony, is that there are actual examples in New Hampshire where the net book value goes far below that 30 percent floor that you cited. And that that's the dilemma a lot of my clients and the other represented municipalities are facing is that under the net book value methodology, there's a concern of

what happens after 20 years, after 40 years. And so I don't think it's an academic conversation.

A No. I agree. It's a real concern. I'm well aware of the concern.

Q But it's sounds like you'd agree that there are instances in New Hampshire where the net book value does go below 30 percent as indicated here by Mr. Sansoucy?

A Well, let's just make sure we're clear. Net book value is in accounting. By definition, it will keep depreciating until zero except to the extent there's added plant. So if you mean for tax valuation purposes that it goes below 30 percent? I mean, I just want to make sure I understand your question. If you can restate that.

Q Well, you're hitting on it. I mean, I think what Mr. Sansoucy is getting at here, and I don't want to testify for him, but the utilities are taking the position that the net book value is the correct estimate to fair market value, even when it is at a point where it's below, say, 30 percent of the original cost.

A Well, I don't know if that's what this says here because it says by definition it's depreciated there. I don't know what the, it doesn't say here what the assessed value is or what the utility's position was. Maybe that's on the next page or something. I mean, this just says as a factual matter.

First of all, this was, it looked like it was a faster depreciation than 40 years because after 26 years it was only 7 percent left. So if it's on a 40-year schedule it should have been just little bit less than 50 percent. So that must have been a different depreciation schedule. This itself doesn't tell me what the assessed value is. So it's a fact that the book value is down to 12 million. It doesn't say what the assessed value is.

Q Okay.

A Maybe it was 30 percent. I don't know what the assessed value is from this paragraph.

Q Okay. You described your report earlier this morning and the, I think it was 11 scenarios that you ran.

A Yes.

Q And you describe some of the differences in between those various scenarios. But for all of those scenarios, you still utilized the net book value method and straight line depreciation, correct?
A Well, those 11 scenarios were for year 1.
Q Right.
A Right. So there is no depreciation in year 1.
Q Um-hum.
A So year 1 is original cost. So I did for my 11 scenarios, taking a lower view of cost. I only included the 1.5 to 5 billion in my analysis. So I did 11 scenarios to estimate the range for the first year. When I did do scenarios over 20 years, correct, I only used the net book value.
Q Okay. You mentioned earlier, and I just want to make sure I understand your response, that it's your understanding that the Project is expected to continue functioning beyond 40 years, correct?
A I don't know. I'm not an expert in the lives of transmission projects.
Q Okay. The 2.5 percent rate, that applies to all types of assets in a given community. So it's

the same rate for the H-Frame, the monopole, the conduit, the transition stations, the converter terminal, the substations. It's the same for all the services in a given community.
A Well, not land. The land is not included in my analysis.
Q Okay.
A I believe the 2.5 percent was universally applied, and that's the accounting treatment.
Q So that's a yes then, other than land?
A I believe so. Other than land. But I don't really know for sure that that's correct. I believe it is correct that they're all treated the same 40-year depreciation schedule.
Q Okay, and that 2.5 percent rate, that's not based on the physical condition of the asset, it's age, how it actually depreciates in the field. I think you just testified that it's an accounting figure.
A It is, but I don't know what the standards are. Usually, the depreciation schedules are supposed to have something to do with the life of the project, but there's also different policies. It looked like that previous line you were

talking about had a much quicker depreciation schedule than 40 years to be down to 7 percent in year 26. I know that wind farm sometimes have a 7-year depreciation or 10-year because of the Production Tax Credits and it's the private sector and they're not subject to the same regulatory accounting.

So I don't know as a factual matter in accounting whether, what the requirements are between a depreciation schedule and the useful life of the project. I don't think you can just make it up. It has to have some bearing in the performance. I'm not an expert in that area.

Q And in one of your prior responses you addressed one of my questions, and that is land, the land value or the right-of-way value is not part of your report.

A The land value, the land purchases are not included or the land easements, no.

Q No, I don't mean the land purchases. I mean the occupancy of a right-of-way that a given municipality would assess. That's not part of your projection, your lower end projection.

A I'm just not sure -- are you talking about a lease payment or -- I mean, we've talked about that most of the Project is in or a big part of it is in a PSNH utility right-of-way. So I'm not sure what you're talking about specifically. And then the other --

Q Let me back up and ask it this way. You just mentioned a second ago that land was not included.

A The purchased land was not included.

Q Okay. Thank you.

A The purchased land. And that may have also included some purchased easements. I don't know. That whole, that's that whole bucket of costs I chose not to include. It would be taxable. It would make the numbers higher than what I've included. But I took, again, a more conservative view.

Q And is it your opinion that the land that these utility assets is going to occupy will also depreciate at 2.5 percent?

A No. Land doesn't depreciate.

Q Okay. You know, I showed you a Supreme Court case from earlier. That one was from, I'll represent to you just so, that was from 1994.

There's been several others involving utilities, and, in particular, PSNH, and I'll represent to you, and we'll talk about some of them shortly, there was PSNH versus New Hampton in 1957. Appeal of PSNH in 1984, PSNH v. Bow which we looked at previously from 1994.

So for -- back up. In each of those cases, the methodology that the utilities used was net book value. Are you familiar with that history of PSNH utilizing net book value?

A Again, I don't know -- the more recent cases, what I have seen, for example, in the Bow case in the Superior Court where the Town lost, and now they're appealing that to the Supreme Court, the Utility's appraiser did utilize both a net book, sales and income approach. I believe. He definitely used sales approach, he might have done a reproduction actually. So I don't know in all these cases. Most of the time the appraisers are using more than one method. They're not required to. And I don't know if those older cases, I don't know what the Utility appraisers did, but I do know in the more recent cases, you see more than one method employed.

Q Would you agree that for PSNH, Eversource, that one of the methodologies they typically employ is the net book value?
A Yes.
Q Okay. I'll represent to you and I think Counsel for the Public may have mentioned an exhibit that many municipalities over that 50-year time frame have declined to use net book value. Would you agree with that?
A Well, actually, it's interesting that you say that because I think right now we heard in Technical Sessions, and I don't disagree with this, and I've heard this in public hearings, that about a third of the communities are utilizing DRA's value which is not just net book. They also do an income and sales approach as well and primarily income and cost method.
Q How much of those municipalities are host communities?
A Well, I know Canterbury because I live there, and they are still using the DRA value. I haven't looked at which of the 31 communities take DRA's value or have hired their own appraisers that have come up with something

different. But that's changed over time. When I looked at this data years ago, maybe about 8 years ago for a different project, in the aggregate it looked like net book was about what the value was when you added it up across all communities. I believe that's changed more recently. The communities have hired appraisers, and they've won these cases. So I think that's a more recent acceleration of that trend.

Q The Supreme Court decisions that I just referenced and it sounds like you're generally aware of, they all predate this Project, do they not?

A Which ones?

Q The four that I just mentioned with PSNH as one of the parties.

A Sounded like the years, you said they were older, right.

Q And they predate your Original and Supplemental Testimonies as well?

A Correct. Well, the ones you've cited have all been prior to 2015. I mean, there's more cases since.

Q I want to show you now, this is a discovery response, this has been marked as Counsel for the Public Exhibit 155.
A Oh, here's the earnings.
Q I'm sorry?
A Nothing.
Q Is that showing up on your screen?
A It is.
Q Okay. You see at the top there is the Data Request.
A Um-hum.
Q Are you familiar with this request and this response?
A I'm not -- generally. I don't remember this one specifically, but I generally think so.
Q Do you recall if you helped prepare a response?
A I think probably. I'm not a hundred percent sure, but it looks like language that I've used and seen.
Q Take a second and review it and just confirm for me that you agree or disagree with what it says?

PRESIDING OFFICER HONIGBERG: Off the record.

(Discussion off the record)

A Do I generally agree with this?
Q Yes.
A Yes, I agree with that statement. Generally agree with the statement, yes.
Q And do you see that the question was asking for the industry standard. Correct?
A Yes.
Q But there's nothing in that answer that provides a basis or a source that net book value is the industry standard in there.
A I don't see anything in there. Right.
Q Okay. I want to turn now to one of the other Supreme Court cases that I mentioned. That's the Appeal of PSNH case. You see that on your screen there?
A Yes.
Q Been marked as -- I'm sorry.
A Is this 1984? Is that what we're talking about?
Q This one is yes. 1984.
A Okay.
Q And it's Joint Muni 233. And I'm going to go to a page here. Just bear with me.
You see that highlighted part at the bottom of that column?

A Yes.
Q Take a second to read that and let me know when you're done.
A Yes.
Q Would you agree that the language in this court case is pretty similar to the response in the Data Request that we just viewed about when the use of net book value is compelled?
A I guess so. Yes.
Q Are you, I assume, let me know if I'm wrong, that you're aware of the Supreme Court's language about net book value being compelled only when regulations are so extensive to make sale above net book value impossible.
A I am familiar with this language, correct, yes.
Q Is that why you've decided to use net book value because you believe that there are regulatory conditions that exist that make it impossible to sell above net book value?
A As I've stated previously, I chose net book value because of the five methods. It's a conservative lower estimate to provide the Committee and the Public and the Towns with a minimum estimate to make sure that they can have

a predictability and in factoring in their decisions that the value would be at least this amount.

Q So is that a no?

A I don't know. I don't have an opinion on this. It may be true that on Northern Pass that's FERC regulated that it would fit under this definition. I don't know.

Q Okay. So you're not offering any opinion or testimony about the presence of regulatory conditions that may or may not restrict sale to net book value?

A Again, not as an opinion on value. As an opinion of why and part of this is one of the methods that's allowed, and that's why I used it. I don't have an opinion on whether or not this is controlling in this case.

Q I'm not asking you whether it's controlling in this case. I'm asking you whether you're providing any testimony or opinion on whether you believe there are regulatory conditions which restrict sale to net book value.

A I'm not sure.

Q Okay. Are you aware that the PUC has approved

sales of utility assets above net book value?
A I am.
Q And the PUC's own rules allow such sales, do they not?
A Mostly because I read the decision where they said it's discouraged or you won't get the acquisition premium back, but it's not disallowed.
Q Okay.
A But that's the PUC. This is a FERC-regulated project. So it's a different regulatory agency.
Q Okay. But I thought your prior testimony was that you're not offering an opinion on regulatory conditions.
A No, but you just said about the PUC and Northern Pass is about FERC. That's a fact.
Q Okay. You're not providing any information or testimony on whether or not a utility could benefit from PUC or FERC regulations, are you?
A No. I'm not.
Q Wouldn't you agree that such regulations provide certain benefits to the regulated utilities?
A Well, that's the only way you can build something is under the regulatory model. We

haven't deregulated transmission lines.
Q So is that a yes?
A If there's not a choice, then it's a, yes, conceptually there's benefits, I guess, because --
Q Let me ask it this way. Are you aware that utilities can obtain service monopolies?
A Sure. Yes.
Q Are you aware that utilities can recover from their rate based operation and maintenance, power expense, income taxes, deferred federal income tax, property tax, depreciation, amortization?
A Prudently incurred. Yes.
Q Are you also aware that they get a return on equity as well?
A That utilities get a return on equity if there's an allowable. Whether or not they learn it, they may not, but there's an allowable. Are we talking about the PUC or FERC regulated? I mean, is this just general questions about utilities or are we talking about Northern Pass?
Q That's okay. I'm going to move on.
MR. WHITLEY: This is a good time.

PRESIDING OFFICER HONIGBERG: We're going to break for lunch. We'll come back at 1:30.

(Lunch recess taken at 12:27 p.m. and concludes the **Day 23 Morning Session**. The hearing continues under separate cover in the transcript noted as **Day 23 Afternoon Session ONLY**.)

C E R T I F I C A T E

I, Cynthia Foster, Registered Professional Reporter and Licensed Court Reporter, duly authorized to practice Shorthand Court Reporting in the State of New Hampshire, hereby certify that the foregoing pages are a true and accurate transcription of my stenographic notes of the hearing for use in the matter indicated on the title sheet, as to which a transcript was duly ordered;

I further certify that I am neither attorney nor counsel for, nor related to or employed by any of the parties to the action in which this transcript was produced, and further that I am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

Dated at West Lebanon, New Hampshire, this 27th day of July, 2017.

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Cynthia Foster, LCR