STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

June 9, 2017 – 9:09 a.m. DAY 14
49 Donovan Street Morning Session ONLY
Concord, New Hampshire (REDACTED for public use)

{Electronically filed with SEC on 06-23-07}

IN RE: SEC DOCKET NO. 2015-06
Joint Application of Northern
Pass Transmission, LLC, and
Public Service Company 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:
Chrmn. Martin P. Honigberg Public Utilities Comm.
(Presiding as Presiding Officer)

Dir. Craig Wright, Designee Dept. of Environ. Serv.
Christopher Way, Designee Dept. of Resources &
Economic Development
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 to the SEC
(Brennan, Caron, Lenahan & Iacopino)
Pamela G. Monroe, SEC Administrator

(NO Appearances Taken)

COURT REPORTER: Susan J. Robidas, NH LCR No. 44
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WITNESS: JULIA FRAYER

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CHAIRMAN HONIGBERG: Mr. Pappas

is going to continue his questioning with

things that are non-confidential. So, Mr.

Pappas you may proceed.

MR. PAPPAS: Thank you, Mr.

Chairman.

CROSS-EXAMINATION (cont’d)

BY MR. PAPPAS:

Q. Good morning, Ms. Frayer.

 A. Good morning.

Q. I want to start by asking you some questions

about the MOPR, where we left off yesterday.

   In your April 2017 report, you performed

what you called an "indicative calculation"

to do a MOPR analysis. Do you recall that?

 A. Yes, I do.

Q. And as I understand it, you went to the ISO

web site, downloaded their spreadsheet and

worked off of that.

 A. Yes.

Q. Now, have you ever personally been involved

with an ETU that has gone through the MOPR

analysis to clear in the Forward Capacity
Auction?

A. I have not.

Q. Okay. Have you ever reviewed any documents that detail the IMM's MOPR analysis for an ETU seeking to clear?

A. Public documents, yes.

Q. What were those?

A. The IMM has actually published through the ISO-New England stakeholding process instructive manuals, instructions on how to do this, what each aspect of the spreadsheet requires.

Q. Have you ever reviewed any documents of an actual ETU's attempt to qualify? Not the instructive documents, but an actual case where an ETU sought to qualify in a Forward Capacity Auction?

A. No, those are confidential. Those are the property of the Project, Project sponsor. But I have reviewed similar documents and actually participated in preparing such documents in other jurisdictions because ISO-New England isn't the only market with MOPR-type analyses. I've also spent a long
time advising our clients when they appeal
those with FERC. So I'm very familiar with
the concepts that need to be captured in
order to meet the statutory requirements of
the MOPR.

Q. But you've never actually participated in the
analysis for ISO-New England, nor reviewed an
actual case that was proceeding through
ISO-New England for a MOPR analysis; is that
right?

A. Not of an ETU. Of other types, yes.

Q. Okay. Now, when the IMM performs the MOPR
analysis for an ETU such as Northern Pass
seeking to clear, that's one of the IM's
[sic] jobs; correct? There are rules and
regulations, and that's one of the things
that IMM is charged with doing?

A. Yes.

Q. And in performing their job, the IM makes
certain judgments in reviewing and
determining the MOPR analysis?

A. Yes, the IMM may pass judgment.

Q. Yeah. The IMM doesn't merely fill out a
spreadsheet and lets the computer do the
calculations. It actually reviews and makes
judgments of the material that it receives;
correct?
A. Yes. So, for example, to the extent an
entity says that it's anticipating these
types of costs and has agreements with EPC
contractors or other parties, the IMM will
review the contract information and the
agreements that have been submitted to it and
pass judgment, in that they are valid
documentation of the inputs that the sponsor
has put into their workbook.
Q. And the IMM's judgments could affect whether
or not a ETU price mitigates upward and
clears or doesn't clear; correct?
A. It could.
Q. Okay. Let me ask you a few questions about
retirements. And I'm going to speak -- I
believe every question I'm going to ask you
is public information. But by all means, if
I make a mistake, please correct me, okay.
A. Yes.
Q. Okay. In your February 2015 update, you
forecast that NPT qualifies and clears at a
low clearing price in the Forward --

CHAIRMAN HONIGBERG: Do you want to clarify the question and the date associated with the question? You said "February 2015 update," which seems unlikely.

MR. PAPPAS: Oh, I'm sorry.

Thank you. You're right.

BY MR. PAPPAS:

Q. In your February 2017 update, you forecast that NPT qualifies and offers a low clearing price in the Forward Capacity Auction; is that correct?

A. In the February 2017 update analysis, we continue to take the same assumptions and positions that we took in our original October 2016 analysis. So we continued to take as a given what we were provided by the client and cleared it through the Forward Capacity Auction.

Q. Yeah. In your forecast, NPT reduces the overall capacity prices over the ten years you forecasted; correct?

A. Relative to the Base Case without NPT, NPT does have an impact and reduces capacity
prices for six years, six auctions.

Q. Yeah. And you forecast that in response to NPT reducing the capacity price for those years that there would be no -- no generation would retire; correct?

A. We didn't have any retirements. And it wasn't an assumption. It was a result of the model. There was no need for retirements. But we did have what I would call "supplier response" of various types --

Q. Yeah.

A. -- as described in the report.

Q. Correct. But one of the things you forecast were no retirements in response to NPT reducing the clearing capacity price; correct?

A. That is correct.

Q. Now, as a result of NPT lowering the capacity market clearing price, the qualified resources within the Forward Capacity Market would receive less revenue, correct, than without NPT?

A. Yes, less base capacity revenue.

Q. So if your forecast is incorrect, that no
resources retire in response to NPT, and someesources in fact do retire, that would
decrease the capacity market benefits from
NPT that you forecasted; correct?
A. It could. It would not necessarily. Depends
when that retirement occurs. It also depends
on the size of the retirement. It also
depends on other knock-off effects,
consequences of that retirement itself, too.
Q. Conversely, if you're incorrect and resources
retire in response to NPT, the capacity
market benefits you forecast aren't going to
increase, are they?
A. If the only difference -- if there was no
other difference in other assumptions and
inputs that we made, no. The forecast is
what it is.
Q. No, but if assuming there are no other
differences and the other difference is that
there are retirements that you didn't
forecast but actually occur, the capacity
market benefits won't increase. They can
only decrease; correct?
A. Again, I thought I did answer that. I think
they could decrease. It depends on the
timing of those retirements and so forth. As
an example, if the retirements come in FCA --
(Court Reporter inquiry)

A. Sorry. FCA #18 or FCA #19, it has no impact
on the results presented in the Updated
Analysis from March 2017.

Q. And if it comes in other Forward Capacity
Auctions, it would result in a decrease in
market benefits; correct?

A. It could. It depends again on knock-off
effects and consequences. It does not
necessarily have to.

Q. Another possible scenario is that the IMM
could mitigate NPT's price upward from where
you forecasted and NPT could still qualify.
But in that case, the capacity market
benefits would be less than you forecasted;
correct?

A. No, not correct. I believe you're asking
about, when you say the IMM increasing the
offer price, you're talking about the Minimum
Offer Price Rule; correct?

Q. Yes. But what I'm positing is that you
forecasted that NPT would clear at a reduced price from your Base Case; correct?

A. No, not necessarily. I said it would clear not at a specific price, but it would clear. Essentially, the MOPR would not be binding on its clearing. That's a very -- and that's consistent with the market rules in the market. I think you're asking something different. So I got confused with your question.

Q. Okay. What I'm asking is, is that you forecasted clearing and my -- let me start over.

My question is: If NPT cleared, but higher than what you forecasted -- in other words, if your MOPR analysis were incorrect, one scenario could be that NPT could clear, but clear higher than you forecasted, in which case there would be market benefits, but they'd be less than you forecasted.

A. Again, I'm going to say no, because I think, unfortunately, Mr. Pappas, you're missing an understanding of how the capacity auction functions. Once the MOPR is set, and if we
make that additional assumption that the
capacity clears, there is no way then to go
back and say that you would have a higher
capacity price. The setting capacity price
is a function of the shape of the demand
curve. So in order to make your
hypothetical, you would also have to
hypothesize that the demand curve is somehow
different and that would result in a higher
capacity price. And then I would agree, yes,
if the demand curve is somehow different on
top of the Project clearing and this and
that, all these hypotheticals, you would have
a different capacity market benefit.

Q. Okay. I guess what I was positing is if your
MOPR analysis is incorrect and the actual
MOPR price were higher. But I think that
point is made. So let me --

A. The MOPR doesn't set the price. The MOPR is
a condition of whether the resource can or
cannot clear.

Q. I understand that.

A. The demand curve sets the price in the
market.
Q. I understand that. Thank you. So let me ask you some questions about possible benefits without NPT. Now, NPT is competing with other projects to bring hydropower power to New England; correct?
A. Possibly.

Q. On the screen is Counsel for the Public's Exhibit 278, which is a map that shows some other projects. For instance, if you look under K to the far left, on the border of Vermont that's the New England Clean Power Link. Do you see that?
A. Yes.

Q. And A is Northern Pass. Do you see that?
A. Yes.

Q. What's not shown on here is the recently announced National Grid project. Are you familiar with that?
A. I'm familiar with the concept.

Q. Okay. So all three of those projects seek to bring hydropower from Canada down into the New England grid; correct?
A. That's part of their project objective.

Q. Yeah. And both TDIs -- New England Clean...
Power Link and National Grid's Granite State Power Link -- intend to bid into the Mass. RFP; correct?

A. I don't know. I'm not familiar with their business plans.

Q. Okay.

MR. PAPPAS: Put up the next -- put the first page up.

BY MR. PAPPAS:

Q. What's on the screen now in front of you is Counsel for the Public's Exhibit 279, which is the first page of a Granite State Power Link presentation on their web site. And then within that web site presentation is the page that's now on your screen. And if you look at the bottom bullet point, it indicates that GSPL, meaning Granite State Power Link, will submit a proposal to Massachusetts Utilities seeking bids for clean energy in July, with selection due in January 2018. Do you see that?

A. I see that bullet.

Q. Yeah. Is that your understanding that that is the Massachusetts RFP?
A. I haven't reviewed the slide yet, but, I would guess, assume so. I don't know if there is --

Q. Are you aware of any other RFP in Massachusetts other than the RFP we talked about yesterday for this type of clean power?

A. Some of the utilities from time to time have RFPs for RECs. But I don't think that's what they're talking about. Again, I haven't reviewed this document, so I don't know.

Q. Understood. But as far as you know, the only clean power RFP that a project such as Granite State Power Link would bid into is the Mass. RFP we talked about yesterday?

A. That's possible.

Q. And are you aware of whether or not TDI intends to bid into the Massachusetts RFP?

A. I am not. They're not my client currently.

Q. Okay. What is on the screen in front of you now is Counsel for the Public's Exhibit 280, which is the 83D Bidder Conference List from the web site. 83D you recognize as the Mass. legislation?

A. I do.
Q. Okay. And there's a web side and they list the bidder conference. And do you see TDI highlighted on this?
A. I do.
Q. Okay. That indicates that TDI attended the bidder conference for the Mass. RFP.
A. Yes, among many others.
Q. A lot of others. In fact, if you look on, National Grid had several people at this as well.
A. Yes, among other companies.
Q. Hmm-hmm. In fact, somebody from your office attended.
A. Yes. It's a great opportunity to learn about what's going on in the market. We're definitely not planning to bid in the Massachusetts RFP, just to clarify the record.
Q. Okay. Now, would you agree with me that it is possible that a project other than NPT could be awarded a long-term contract as part of the Mass. RFP?
A. It's possible.
Q. It's possible that TDI or Granite State Power
Link or somebody else could get the award and NPT could not; correct?

A. Very possible.

Q. That happens.

A. Yes.

Q. All right. And would you agree with me, in that instance, it's possible that New Hampshire could realize wholesale market benefits and electricity rate benefits from one of these other projects winning the Mass. RFP in lieu of NPT winning the Mass. RFP?

A. Those benefits would not necessarily be the same. And actually, it's quite possible with the Mass. RFP that multiple projects could be awarded a contract.

Q. Sure. But would you agree with me that it's -- if another project was awarded the Mass. RFP and NPT was not, that project could result in wholesale market benefits and electric rate benefits?

A. It could. But it would be an empirical exercise to see which project it is and what kind of benefits it would create. And of course, if that project isn't in New
Hampshire, there wouldn't be any construction period-related benefits either. So, hypothetically, a lot of things are possible.

Q. Sure.

A. Practically, if you look at the Mass. RFP goals and Massachusetts Clean Energy Goals, I would argue that multiple projects will eventually be awarded contracts to meet the Clean Energy Goals, not just one.

Q. It's possible one could win and it's possible multiple could win; correct?

A. It's possible.

Q. Okay. In your analysis, you didn't forecast or assume the possibility that another project in lieu of NPT would be built; correct?

A. I did not assume that.

Q. Okay. Now let me ask you some questions on my last topic, and that is to review some of the possible benefits that you have forecasted for electric customers.

(Pause in proceedings)

Q. What's on the screen in front of you now is Counsel for the Public's Exhibit 263 which
you saw yesterday. And it comes out of the
Updated Analysis; correct?

A. Yes, that is correct.

Q. And it shows that the wholesale market
benefits that your Updated Analysis forecasts
for New Hampshire are $61.6 million. Do you
see that?

A. That is correct.

Q. Okay. Now, your forecasted -- your
forecasted wholesale market benefits you
forecasted over an 11-year period; correct?

A. Yes.

Q. And we saw yesterday that you have forecasted
some benefits in 5 or 6 of those 11 years,
but not in each of the 11 years; correct?

A. When talking about the capacity market
benefits, that is the case. I think the
energy market benefits last longer, so...

Q. Yeah, yeah. And we spoke yesterday about
benefits New Hampshire customers would have
an effect on prices for a period of time
within that 11-year span; correct?

A. When we're looking at specifically wholesale
energy and wholesale capacity market
benefits, yes.

Q. Okay. And --
A. And I should add, if I can --
Q. Sure.
A. -- that's under expected or what we call "normal" conditions. If down the road anomalous weather conditions occur outside of the first 11, 10 years, those benefits would accrue to consumers. And in our Original Report, we studied -- we created estimates for these types of events. We didn't predict when such an event could happen in the next 10 years. But it's very likely it will happen at some point over the foreseeable future. These are hot weather, heat waves in the summer, cold weather spells in the winter. We've seen even historically these repeat themselves, not necessarily on a very predictable basis, but they do repeat themselves. So, to the extent those would occur, there would be additional benefits to ratepayers directly flowing through and showing in their utility bill from the presence of Northern Pass.
Q. All right. But outside of those extraordinary events, what your forecast essentially showed, particularly for the wholesale capacity market, that there's really a period of about five years when the benefits are really realized; correct?

A. That sounds -- subject to check, I don't remember if it's five or six. I'm getting confused now, five or six years. But that's about right.

Q. Yeah, it's in one of the confidential charts, but we're not going to put that up.

A. It's actually six years. So, yeah.

Q. Okay. Now what's on the screen in front of you is Counsel for the Public's Exhibit 282, which shows New England retail electricity cost savings by state. Do you see that?

A. I do. And this is from our Original Report.

Q. Hmm–hmm. And it shows on a comparative basis the amount each of the six New England states would receive. For instance, what it shows is Massachusetts would receive the largest amount of electric cost savings benefits, followed by Connecticut and followed by New
Hampshire and then the other New England states; correct?

A. Yes. And that's consistent with the distribution of load in the region.

Q. Yeah. Okay. And then we saw yesterday a sample Eversource bill, and we talked about the supplier energy charge and it currently being a little under 11.2 cents. Do you see that?

A. Yes, for this bill, I do see it.

Q. And we talked about the fact that any electric savings for customers would come from savings in that energy charge; correct?

A. Through the supply component of the bill, yes.

Q. Okay. What's on the screen in front of you is Counsel for the Public's Exhibit 283. And this comes from Brattle's report. Do you recognize it?

A. I do.

Q. Okay. And it shows Brattle's forecasted savings under the four scenarios they looked at. Do you recognize that?

A. I do.
Q. And if you look at the far right side, it has the total market savings in dollar amounts under the four scenarios. And it has, for instance, under Scenario 1, $34 million; under Scenario 2, $21 million; under Scenario 3, $8 million per year; and under Scenario 4, no savings. Do you see that?

A. I see their chart, yes.

Q. And this is what Brattle forecast for total market savings under the four scenarios they reviewed; correct?

A. Yes. And in my Supplemental Testimony I described why I disagreed with this quite extensively.

Q. Okay. On the screen in front of you is Counsel for the Public's Exhibit 285. And this is a chart of an average monthly bill, residential, for 2015. Do you see that?

A. Yes, I do.

Q. And I've highlighted New Hampshire. And if you look under New Hampshire, the average monthly consumption in kilowatt hours is 621. Do you see that?

A. Yes, I do.
Q. Okay. Now, that's substantially more than
that sample bill that we saw.
A. And interestingly the price is much higher,
too, because the price is essentially 18
cents rather than the 11 you showed.
Q. Yeah, this is back in 2015. But this shows
that in 2015 the average monthly consumption
was 621 kilowatt hours. Do you see that?
A. I see the consumption number.
Q. Okay. What's on the screen in front of you
now is Counsel for the Public's Exhibit 286.
And what this exhibit does is it takes --
starts with your annual -- your 11-year
average savings of rounded up to $61.7
million and converts that to cents per
kilowatt. And then, in order to compare your
savings with Brattle's savings, it converted
your savings to a 13-year period and then
made the conversion for cents per kilowatt.
And so under your forecast, if you follow the
top line, and if you use your forecast
period, it will result -- and this uses the
621, average New Hampshire residential
consumer consumption of 621-kilowatt per
month. So if you look at the top line, it has your $61.7 million average annual savings for the 11-year period at 51 cents per kilowatt. And carry across, that would equate to a savings of $3.14 per month for this amount of usage, which is the average residential usage in New Hampshire in 2015, and then has a yearly savings of $37.67. Do you see that?

A. I see the top row and I recognize my number in the top row. Not sure I recognize the other numbers.

Q. Yeah.

A. And I appreciate that for every household in New Hampshire that this chart is suggesting it's about a $38 of savings on electricity over a number of years. What we have to keep in mind is we have many households in New Hampshire --

Q. Ms. Frayer, the question was do you see it?

A. I do see it.

Q. Thank you. So the top number is your forecast; correct?

A. Yes. I recognize the starting point.
Q. Okay. And then the chart shows Brattle's forecast. Do you see that?
A. I do see those rows labeled as "Brattle Scenarios."
Q. Okay. And do you see where the range of potential savings is on your forecast of annual savings of $37.67 per year? Do you see that?
A. I see the top row, yes.
Q. Yeah. And those are your -- that is consistent with your forecast; correct?
A. Yes, the top row.
Q. Yeah. And then it ranges based on whether we're looking at your forecast or looking at the Brattle forecast from a high of $37.67 per year down to zero. Do you see that?
A. I see those ranges. But again, I've already described in my supplemental why I completely disagree with the Brattle analysis.
Q. And you've made that point abundantly clear, but that wasn't my question.
And so would you agree with me that, depending on which forecast actually turns out, if you will, which forecast becomes
reality, the potential savings under the forecasts in front of this Committee range from a high of $37.67 per year down to zero; correct?

A. I disagree with that. Because, again, if you're actually thinking about household savings and you're starting with my weather-normalized forecast, you're excluding what I just talked about a few minutes ago, that there's opportunities for uncertain events where Northern Pass provides extremely valuable insurance to consumers in New England, including in New Hampshire, which could significantly increase the $37.67 in some years.

Q. Thank you.

MR. PAPPAS: I have no other questions.

CHAIRMAN HONIGBERG: I believe next up is counsel for NEPGA, Mr. Anderson. And Mr. Anderson, are you going to start with confidential or start with non-confidential?

MR. ANDERSON: Confidential.

CHAIRMAN HONIGBERG: All right.
So then, if there's people in the room who are not allowed to see confidential information and hear confidential information, we're going to have to ask them to leave. And we'll be -- we'll ask to shut off the speaker in the public area. According to Mr. Anderson's estimates, he believes he's got about 30 minutes in confidential session and then an hour and a half public. So when he's done with confidential, we will come out and get you.

Pages 29 through 52 of the transcript are contained under separate cover designated as "Confidential and Proprietary."
PUBLIC SESSION RESUMES

CHAIRMAN HONIGBERG: All right,

Mr. Anderson, you may proceed.

MR. ANDERSON: Thank you, Mr. Chairman.

BY MR. ANDERSON:

Q. Ms. Frayer, revisiting a little bit some discussion you had yesterday about the transmission line that runs from Franklin, New Hampshire, to Des Cantan -- my French is non-existent. So, Des Cantan --

A. I have only tried to pronounce it. But Des Cantons.

CHAIRMAN HONIGBERG: We're going to go with Des Cantons.

MR. ANDERSON: Des Cantons.

Perfect. There's my first French lesson.

Thank you.

BY MR. ANDERSON:

Q. So the line from Des Cantons to Franklin, New Hampshire, you said yesterday you don't believe that the costs of that portion of the line should be included in your offer floor price analysis because it's not incremental.
And I'm paraphrasing. It's not an incremental cost above any export sale. In other words, whether the energy will be delivered to New England or whether it'll be delivered to Ontario, that line would carry either way, and in that sense it's not incremental to this specific Northern Pass Project. Is that a correct summation or -- you're looking to me like you'd like to amend --

A. I think it's almost getting there, but if I can just correct a little bit. The line itself is incremental to the system, Hydro-Quebec TransÉnergie System. And what I was trying to say yesterday, and perhaps I wasn't very clear, is that Hydro-Quebec Production, who would be as we've discussed earlier, the shipper, the entity that would be qualifying for the capacity market and then providing the energy that flows on the line to sell into the New England market, Hydro-Quebec Production would have to sell that surplus energy into another market if it couldn't use Northern Pass. And when
Hydro-Quebec Production sells exports, it needs to make reservations on the Hydro-Quebec TransÉnergie System for point-to-point service, and it pays a standard, publicly available tariff. In fact, there are a number of public documents that we didn't go through yesterday that described the arrangements around this new "Quebec line." Let's call it that because I think the TSA referred to or defined it as the "Quebec line." I believe Counsel for the Public actually had an exhibit that memorialized the actual agreement between Hydro-Quebec TransÉnergie and Hydro-Quebec Production with respect to this investment.

Q. Yes, and I think you're correct on that. I guess, you know, the question I'm trying to get at is: Do you know if HQ TransÉnergie will build the line, this new line, if it's not going to be connected to Northern Pass? In other words, if Northern Pass doesn't go through, is it going to build that line?

A. I'm not familiar with Hydro-Quebec TransÉnergie's strategies around this line,
but I would assume it is somehow connected
with the Northern Pass Project so --

Q. Well, it certainly seemed that way, wouldn't
it, given that it links directly into
Northern Pass and runs from the Des Cantons
substation -- I need more lessons -- from
that substation directly into the Northern
Pass line. It would stand to reason that
absent Northern Pass, there would be no need
to build that line. Would you agree?

A. I would generally agree.

Q. Okay. And will HQP, Hydro-Quebec Production,
will that pay for that line if it isn't built
and if Northern Pass isn't built?

A. The agreement that I reviewed -- and
	unfortunately it's in French, but I have
colleagues that are native French speakers
that have helped me review it -- specifically
says the responsibility of Hydro-Quebec
Production is to continue to take normal
transmission service as it does for 15 years
using the publicly available point-to-point
transmission tariff. And Hydro-Quebec
TransÉnergie has calculated that in doing so,
Hydro-Quebec Production will pay for almost 
the entire -- those transmission tariffs that 
it would have to pay either way would have 
covered, funded almost the entire project 
costs. So, Hydro-Quebec Production's 
responsibility is just a small, tiny amount 
of contributed capital that I think is going 
to be less than $6 million.

Q. Well, let me put it simpler. Will they pay 
for something that's not built?

A. I would assume no.

Q. Okay. So, in other words, if in fact the 
line from Franklin to the substation in Des 
Cantons is not built, they won't pay for it; 
correct?

A. I would assume so.

Q. But if it is built, they will pay something 
for that. That will be an incremental cost 
to HQP; correct?

A. Just that $6 million, not the $600 million, 
because Hydro-Quebec Production still has to 
pay the export tariff regardless of that line 
to ship surplus power to export markets.

Q. Wait. Let me get this straight. You're
saying that if the line is not built -- and the line has been, you know, somewhat agreed to as approximately a $460 million capital cost --

A. Yes. You're asking me about the capital cost?

Q. No, no. What I'm asking is will they avoid that $460 million cost if the line isn't built. And I think your answer was no.

A. Hydro-Quebec TransÉnergie, of course, would not have the cost if the line is not built.

Q. Nor will HQP; correct?

A. No, and this is the problem. And I apologize if I'm being confused here. HQP is not responsible for any transmission investments in Quebec, nor does it collect revenues across --

Q. But they're under a contract with HQ TransÉnergie, and presumably HQ TransÉnergie will recover the capital costs of that project via that contract with HQP; isn't that correct?

A. HQP buys transmission service from HQT, just like we do here in the U.S., and pays a
standard tariff, a publicly published tariff. And what I'm saying is HQP is going to have to take the energy that it would have shipped on Northern Pass and ship it to another destination market because there's no need for it in Quebec. And in doing so, it will incur the same exact export tariff that it would have otherwise paid by shipping to Northern Pass.

Q. Will HQ TransÉnergie incur that $460 million capital cost if it doesn't build the line?

A. No, it won't add that to rate base.

Q. Okay. Turning a little bit to -- oh, one other point on the $460 million capital cost. If indeed those costs were to be included in your offer price analysis -- and you have testified that you don't believe they should be -- but if they were included, and if you can bear with the hypothetical, would the capital cost be the only cost that you would include in your analysis relative to that transmission project? In other words, would there be other costs above the $460 million, like property taxes, insurance costs, other
costs that might be associated with that, that you would want to include in your DCF analysis, much the way you included property taxes and other costs with respect to the Northern Pass line?

A. No, because, again, HQP would have to take service from HQT regardless of Northern Pass and would have to pay a standard tariff regardless of Northern Pass to ship that energy to another market.

Q. Okay.

A. So the tariff charges are essentially a net zero.

Q. Turning a little bit to some of the discussion around your variable O & M costs. As you testified, you developed those essentially as a foregone value, or perhaps better put, opportunity cost. In other words, you found that opportunity cost of not selling into Ontario is a variable operating O & M cost that you've included in your DCF; is that correct?

A. Just to make sure I understood, you're talking about the MOPR analysis still.
Q. Yes.
A. Okay. Yes, we've incorporated the opportunity cost of energy sales based on our forecast for the Ontario market.
Q. And your forecast was for off-peak sales only; is that correct?
A. Yes.
Q. And I think you said yesterday near the end of the hearing that you used off-peak rather than on-peak, or rather than a blended rate, which would in each case produce higher prices, as you testified yesterday, because something to the effect of that energy couldn't be delivered at any time other than off-peak without the Northern Pass Project? Is that correct? Is that what you testified to yesterday, and that's the basis for using the off-peak prices rather than on-peak or blend?
A. So I think what you're capturing is essentially correct. I'm just going to rephrase it a little bit.
What I was saying yesterday is that, but for Northern Pass, so in a world without
Northern Pass, knowing that Hydro-Quebec Production has surplus energy that it wants to sell to export markets, it will seek to sell to the highest market that export energy. But we have to account for the fact that it's already exporting energy on-peak to Ontario, to New York, to New England on existing interties. So when we did our analysis, we actually looked at what is the next best available opportunity to send that surplus energy in a world without Northern Pass, and in our analysis of all those destination markets, it was Ontario off-peak.

Q. So by using only off-peak prices, you're essentially saying that they'll only be able to sell in off-peak or just using this as some kind of proxy. But you would acknowledge that they would have opportunity to sell at other times, right, on-peak/off-peak? In other words, if there was a contingency in Ontario and they needed to export energy from Quebec, that seems like an on-peak opportunity; does it not?

A. No. And I apologize again that I'm not
Q. Well, why is -- let me stop you for a second.

Why is a contingency where typically power prices go high in a region when there's a contingency, when you're going to reserve, whatever the case may be, why would that not be an opportunity? In fact, neighboring regions often export power into areas that are experiencing contingencies. We've had that same thing happen here in New England, and New England has provided that service to Quebec. Outside of some kind of special service agreement between the RTOs, I would think that would be an opportunity to sell at off-peak times. And I'm asking you: Do you think that opportunity could arise for HQP to sell into Ontario at on-peak times?

A. And my answer to specifically your question is Hydro–Quebec Production is already selling it. So the energy we are concerned about, the surplus energy that's being covered in the MOPR, can't go if Hydro–Quebec is already selling maximum energy into those markets,
subject to the transmission capacity. Each
of the interties -- think of it as a hose.
So if you've already got the hose full of
water going to Ontario during the
contingency, you can't put more water through
that hose. And that's the analysis you need
to do when you think about this. There's a
bucket of surplus water. We've already
filled the hoses -- historically, that's
pretty evident from the data -- to all these
markets when prices are highest on-peak. So
now where do they do the next hose if it's
not on Northern Pass? Well, put the next
hose into Western New York off-peak or
Ontario off-peak.

Q. So you're saying that at every on-peak time
in Ontario, the ties, the transmission
between Quebec and Ontario are at their
maximum capacity and there's no opportunity
to sell any incremental energy into Ontario
during any of those times during the year?

A. I'm saying that, generally speaking, if you
look at the actual trade, the flow of energy
from Quebec, the best opportunity is most
likely for the placement of this significant -- we're talking eight terawatt hours of energy is unfortunately going to be off-peak unless you build more infrastructure. And Hydro-Quebec has recognized that. If you go to their annual report, they actually write that, that they love to export. But they are constrained right now. They need new transmission in order to export more.

Q. Do you have any evidence in the record that establishes that?

A. That hydro-Quebec likes --

Q. No, establishes the conclusion you just drew, that there's little to no opportunity to sell power from Quebec into Ontario during on-peak times. Is there any evidence here that establishes that?

A. I think we discussed it at length during the technical conferences. But I don't -- I've described my thinking about it in the MOPR. But I don't know what else you'd need.

Q. ISO-New England and IMM, as we've talked about, developed ORTP, offer review trigger
prices, and net CONE values. As part of
those analyses, they do use assumed energy
prices -- do they not -- to develop assumed
energy margins, which then feeds into the DCF
analysis? Is that correct? They make
assumptions about energy prices?

A. They hire consultants to do some modeling,
yeah.

Q. Yes. And are you aware in ISO-New England
whether they use a blended energy rate, a
on-peak energy rate or an off-peak energy
rate, for example, in their most recent reset
of the net CONE and offer review trigger
prices?

A. I can't recall, off the top of my head.

Q. Okay. Another question I have about the
transmission in Quebec. So we have talked
about the Franklin to Des Cantons substation
as a distinct transmission line that connects
to Northern Pass. But that's not the only
transmission that is necessary to deliver the
capacity, the energy that is going to attempt
to bid in as capacity in the ISO market.
That's not the only transmission that is
necessary to deliver that energy into New England, is it? And when I say the only lines, the Franklin -- I'll just call it the "Franklin line" for now -- the Franklin line in Quebec and the Northern Pass line, those aren't the other two lines; right? You've described that this is system power. It's coming from all over the system, and therefore there has to be a lot of feeder transmission into that substation which then goes to Franklin and then goes into Northern Pass. Would you say that's fair to say?

A. I agree that these are system-backed imports and that they would be using the Quebec system to gather the energy to then feed into Northern Pass.

Q. Okay. And HQP presumably has to pay HQ TransÉnergie to use this extra transmission, if you will, if that's clear what I'm referring to?

A. Exactly. That's what I had talked about ten minutes go. They have to pay a standard tariff for any export sales.

Q. But you don't include those costs in your DCF
analysis, do you?

A. Because they net out to zero. HQP would be paying that same tariff number regardless if it's sending the power to Ontario, to New York or down Northern Pass.

Q. Well, let's say without the -- you know, what eventually may become a dedicated delivery of energy into New England if this all happens, right, I mean, it's supposed to be firm energy. They'll have a capacity supply obligation. They'll have certain performance obligations, delivery obligations. Let's say a scenario in which that causes incremental delivery of energy from these gathering areas to the substation, to the line down in Franklin into New Hampshire. That would be a cost to HQP that they wouldn't otherwise incur; correct? I mean, we're talking about incremental energy delivery into New England. And as discussed yesterday, the Mass. RFP either requires new generation or new exports into New England. In that sense, they would be incurring -- they would be using that transmission system more than they would
otherwise; would you agree?

A. I don't agree that there is anything above and beyond the standard tariff. If you're familiar with how the Hydro-Quebec system works and the tariffs that are publicly available for TransÉnergie, the hypothetical you're creating is outside the four corners of that reality.

Q. So do they pay -- I mean, do they only pay a firm rate? Do they pay a volumetric rate for use of those transmission facilities?

A. They pay a rate and --

Q. Is it volumetric?

A. They can pay an annual rate, they can pay daily rate, a monthly rate or an hourly rate, and it's all the same number, just divided by the number of, how should I say, time increments.

Q. Okay. So you're saying that increased use of transmission lines under that contract does not cause any incremental cost to NHP [sic], is that correct, regardless of the volume of energy delivered in those lines?

A. I am saying that the energy that Hydro-Quebec
Production would sell down Northern Pass is basically displacing energy they would otherwise sell to other markets, and because of that they don't pay any incremental transmission in Quebec for that.

Q. Okay. I'm going to turn to a different topic, capacity deliverability and the deliverability of the resource to actually deliver capacity into New England. And I'll start by referring to a criticism that you had of William Fowler, NEPGA's witness, of some of the testimony that he submitted. And particularly, you criticized his reference in discussion of a 2013 System Impact Study conducted by Eversource; is that correct? If I could turn your attention to Page 27.

A. Thank you for that page reference.

Q. You're welcome, you're welcome.

MR. IACOPINO: Page 27 of which?

MR. ANDERSON: Oh, I'm sorry.

The testimony -- I'm sorry. The testimony of William Fowler on behalf of NEPGA.

A. It's actually Page 27 -- I assumed you were saying it's Page 27 of our April 17, 2017
BY MR. ANDERSON:

Q. No, I'm sorry. I'm not being clear. I'm referring to Page 27 of Mr. Fowler's testimony.

A. I don't have a copy of Mr. Fowler's testimony. But I do talk about these issues in my Rebuttal Report. So that's Page 27 as well.

MR. ANDERSON: If I could approach the witness? And you'd like to see that or --

BY MR. ANDERSON:

Q. I think for purposes of the question, I don't think you really need to. That's my opinion, but --

CHAIRMAN HONIGBERG: It's up to you. If you want to show it to her, you can show it to her. If you feel you can ask the question without showing it to her, it's entirely up to you.

MR. ANDERSON: Thank you, Mr. Chair.

A. I do agree that I criticize the reference to
BY MR. ANDERSON:

Q. And do you recall why you criticized his reference to the 2013 System Impact Study?

A. As stated on Page 27 of my Supplemental, I noted that there has been changes to the Project itself. The Project size went down from 1200 to 1090. The technology changed. And I believe also changes to the system have occurred subsequent to that initial System Impact Study.

Q. And is it correct that you went on to say that it would have been more appropriate for him to use a more recent System Impact Study, in particular, a 2016 System Impact Study conducted by Eversource and reviewed by ISO-New England?

   (Witness reviews document.)

A. I don't recall if I myself made the -- well, no. I did make the point that an updated version of the System Impact Study was available. So, yes, I would say that I did make the reference that one could go and look at the updated System Impact Study.
Q. Okay. And did you have an opportunity to
review those, the 2013 and the 2016 System
Impact Studies?

A. I have seen them. But I am not an engineer,
so I can't interpret all of the information
in there. So, also as part of my
Supplemental, I did suggest that some of the
more detailed questions are to be found in
the Supplemental Testimony of another
witness, another expert that Eversource has
that is more familiar with these issues.

Q. If I may refer to Page 12 of your Rebuttal
Report. And I can quote the passage I want
to refer to directly. So I quote: LEI does
not expect deliverability of Northern Pass's
capacity to be an issue since ISO-New England
and the Applicant have already performed
studies to identify required transmission
upgrades, if any.

I see you looking at -- do you want to
read it yourself as well?

A. I am in agreement --

Q. That you wrote that in your Rebuttal Report?

(Witness reviews document.)
A. Yes.

Q. Okay. And are you referring to the System Impact Studies when you say that it "performed studies to identify the required transmission upgrades"? Those are the studies you're referring to?

A. I am.

Q. But are you aware that those studies relate to interconnection for energy only and they have no bearing on whether or not the Project can interconnect for capacity?

A. I am aware.

Q. So in what sense do those studies support, as you say, or give you comfort that the Project will be able to connect for capacity rather than energy?

A. In addition to those studies, I'm also aware that the Project as a new supply resource in the capacity market will also have to undergo other ISO–New England studies and --

Q. Do you know what those studies are?

A. The name of those studies generically are referred to as "overlapping impact analyses" that are performed once the ISO receives all
new qualifications packages from resources.

Q. So as you've written, though, in your
Rebuttal Report, the support that you give
for your belief that they won't have any
problem interconnecting for capacity is
referenced to studies that refer to
interconnection for energy, which is a
different test; is that correct?

A. For energy. And I also have asked Eversource
whether there were any concerns, and I have
been told that there aren't concerns that
would jeopardize Northern Pass's
deliverability.

Q. For?

A. For capacity.

Q. And that's based on, I'm sorry, talks you've
had with Eversource?

A. Well, yes, and my understanding. So the
overlapping impact test, what that does --
let me step back perhaps for a second.

System Impact Studies are absolutely
necessary for interconnecting new resources.
And the System Impact Studies, although
they're looking at what we call "minimum
interconnection," which is whether the energy
is deliverable as a starting point, because
they do identify transmission upgrades that
are necessary to get the project
interconnected into the system on a reliable
basis.

Q. From an energy basis you'd say. Yes.

Could you give any more specificity as
to how ISO-New England, or, rather,
Eversource actually conducts the I39.
There's a standard procedure for that. Can
you give any specifics as to how that test is
conducted with respect to hypothetically
turning on units, turning off units to see if
the line will create thermal overloads or
voltage issues or anything to that effect?
Do you have any specifics around that study,
the System Impact Study?

A. Again, this is where I would probably refer
you to the other expert that is more
qualified than I to speak as to those types
of transmission planning study details.

MR. ANDERSON: Well, I did refer
to that witness's testimony. And perhaps the
Committee is aware of this, that apparently Eversource or Northern Pass substituted one witness for another, and the new witness merely adopted the testimony of the prior witness which had been filed a long time ago and makes no reference to any of this, and in fact doesn't respond or criticize Mr. Fowler's testimony on the System Impact Study.

BY MR. ANDERSON:

Q. So it would seem fair to me that you are the only witness that has provided any information with respect to these issues and, you know, you are the witness that has been presented as having knowledge of this. So your reference to another witness will not be helpful to me. There's nothing in that witness's testimony that speaks to any of these issues that you've raised.

A. And again, I specifically on Page 27 of my Rebuttal Testimony, if we go there... I apologize. It's actually the top of Page 28. When talking about system stability and reliability, I relied on the testimony of Robert D. Andrew, which was filed --
Q. Yeah, and if anyone was to go to that
testimony, you will find nothing with respect
to these issues; yet, in your Rebuttal, you
criticize Mr. Fowler's discussion of the
System Impact Study. You also opine that
studies have been -- the studies have
established that there shouldn't be a problem
with the Project interconnecting for
capacity; yet, at the same time, the studies
you refer to have to do with energy. The
capacity interconnection test hasn't been
done yet. So I'm trying to understand if you
understand that difference, in that the
System Impact Studies do not bear on whether
this project will be able to interconnect for
capacity. Do you understand that?

MR. NEEDLEMAN: I'm going to
object to Mr. Anderson's characterization.
When you look at Ms. Frayer's Supplemental
Report, what you see on Page 27, in
Section 3.1, is a statement that says, "While
an updated version of the Northern Pass SIS
from 2016 was available at the time of Mr.
Fowler's testimony, he based his evaluation on
his review of the 2013 version." And then at the bottom of the page she quotes from Mr. Anderson's -- from Mr. Andrew's testimony and then references the quote. I think what Mr. Anderson is doing is combining the two in a way that is inaccurate.

CHAIRMAN HONIGBERG: Mr. Anderson.

MR. ANDERSON: First of all, I don't know what his reference to -- the Supplemental Testimony you're referring to?

CHAIRMAN HONIGBERG: I think, Mr. Needleman, you're referring to a report.

Is that what you said?

MR. ANDERSON: You're referring to a report or --

MR. NEEDLEMAN: I'm looking at Page 27 of Ms. Frayer's April 17, 2017 Supplemental Report, the Rebuttal Report.


MR. NEEDLEMAN: On Page 27, the first full paragraph in Section 3.1 makes
reference to Mr. Fowler's testimony. And then
further down, at the bottom of Page 27, going
over to 28, she actually ends the paragraph by
quoting the supplemental and the initial
testimony of Mr. Andrew, and then she credits
Mr. Andrew with that quote.

MR. ANDERSON: Well, to respond
to that, number one, without more from that
quote -- and again, this is on my recollection
that Mr. Andrew did not discuss the System
Impact Studies. That seems like a rather
benign statement, that we'll be able to
interconnect, without any basis to it.

Secondly, Ms. Frayer herself
in her testimony discusses these issues. I
quoted from her Rebuttal Report where she
testifies that there should be no
interconnection issues, that it shouldn't
have a problem interconnecting for capacity
because it has satisfied the System Impact
Studies. I'm trying to establish her
knowledge of the System Impact Study, that
that does not bear on capacity
interconnection.
CHAIRMAN HONIGBERG: I think it's pretty clear you can ask her what her testimony is and how her testimony affects the -- is responsive about the particular types of studies you're asking about. If she says she doesn't know, that someone else does, you ask her who that is. And if that is a person who is no longer -- who is not a witness, you may be able to use that. I'm not sure how else, what else you can do. I agree with Mr. Needleman in one respect with respect to his objection, that it was a very long question with a lot of premises referring to a bunch of different documents, none of which I think anybody could find quickly. Mr. Needleman found one of them quickly and identified some things that I think were inconsistent with the premise of your question. So what I would suggest is you come back and try some shorter, more direct questions and see what Ms. Frayer does or doesn't know or is or isn't willing to opine about while she's sitting here.

MR. ANDERSON: Thank you, Mr. Chair, and I will make that effort. Thank you.
CHAIRMAN HONIGBERG: And actually, Mr. Anderson, given the time, why don't we take a break and you can prepare that series of --

MR. ANDERSON: I'll write a lot of short questions.

CHAIRMAN HONIGBERG: -- that series of incisive questions in about 15 minutes.

MR. ANDERSON: All right. Thank you.

(Recess taken at 10:43 a.m., and the hearing resumed at 11:04 a.m.)

CHAIRMAN HONIGBERG: All right. Mr. Anderson, you may continue.

MR. ANDERSON: Great. Thank you, Mr. Chairman.

BY MS. ANDERSON:

Q. So, Ms. Frayer, before we took the break, we were talking about System Impact Studies and their relevance to whether or not the Project is likely to qualify for the capacity market. And in a way, just to kind of sum up your understanding of a System Impact Study, would
you agree that a System Impact Study that
determines transmission upgrades necessary to
connect for energy delivery does not answer
the question of whether a resource will
qualify for the capacity market?

A. I agree that there are additional studies
that are necessary to get to the final line,
if you will, on qualifications.

Q. And would you then agree that in your
Rebuttal Report, when you cite to the System
Impact Studies for your belief that there
will be no problem with interconnecting for
capacity, that that is -- doesn't in fact
provide support for that belief?

A. The way that I view this is that it provides
the first step in that element, because if a
project can't get interconnected under the
System Impact Study, there is no way it's
going to get interconnected for capacity in
the overlapping impact tests that are
necessary.

Q. I'm sorry.

A. No, no, please go ahead.

Q. But you would agree that there are many
resources in New England that pass the System Impact Study or put into place transmission upgrades necessary to deliver energy that in fact fail the Capacity Deliverability Study. Are you aware of that?

A. I'm aware of some resources. I wouldn't qualify it as "many." There are a few wind projects that have passed their System Impact Study but have not passed the overlapping impact test. And in saying they haven't passed, they haven't willingly committed to potential costs that came out of the overlapping impact test.

Q. Do you have a magnitude and from a megawatt basis across New England of resources that have passed the energy deliverability standard but not the capacity deliverability standard?

A. No, I'm not aware of a number, off the top of my head.

Q. Okay. Do you know any of, even at a high-level, what ISO-New England does in order to conduct the Capacity Interconnection Study? In other words, turning units on
turning units off? I mean, do you have some general knowledge of how these studies are done that ISO–New England will look at the entire system and will maybe turn generation off here and, you know, create a line contingency here in order to see how the system will operate with new inputs in stressed conditions? Do you know that general kind of rubric for how these studies are done?

A. I understand a higher-level description of the study. But the descriptions you're giving are probably beyond my expertise.

Q. Do you have an understanding that the Capacity Deliverability Study is a so-called "more stressful test," in that it creates greater stress on the system than an Energy Deliverability Study?

A. I'm not sure I would have used the word "stress." But my understanding is that it's testing the deliverability of all interested parties that came in to show interest and their ability to deliver capacity. So maybe that's what you're referring to in terms of
"stress." But my understanding is that it needs to look at the delivery of capacity differently than what the process is for a System Impact Study.

Q. Okay. So you're not aware that in order to test whether Northern Pass can pass the capacity deliverability test, that ISO-New England would turn on all generation in New Hampshire, on a fictional basis, of course, all generation in New England and Northern New England and then determine whether or not 1,000 megawatts coming in would have any adverse impact on the transmission system or on other generators?

A. I don't know the specifics, but what you're describing seems reasonable. But I'm not familiar with the specifics of the actual transmission simulations.

Q. I think you testified you're aware that with respect to the System Impact Studies that have been conducted for Northern Pass, that they identified a series of transmission upgrades that would be necessary in order for that resource to interconnect for energy; is
that correct?

A. That's my understanding.

Q. And did you -- and I think you have testified that you included any costs associated with those transmission upgrades in your capital cost in your MOPR analysis; is that correct?

A. That's my understanding, that the figure I used incorporates all of those upgrade costs.

Q. So with respect to the capacity deliverability test, do you know when a new resource that's newly trying to enter the capacity markets, do you know when they begin that process at ISO-New England? Is there a series of steps at ISO-New England that that resource must take, beginning with a show of interest? Are you aware of that process?

A. Yes.

Q. And do you know what month, approximately, they must submit the Show of Interest form?

A. I think it's in March for the following year's auction.

Q. So, March for the next February's capacity auction. And are you aware that ISO-New England will provide a preliminary report to
that project proponent at some time in the
months thereafter?

A. I believe so.

Q. And are you aware that at that time the
Project proponent may withdraw its show of
interest based at least in part on the
capacity deliverability test?

A. I'm aware of that aspect of the rule.

Q. And do you know if either Hydro-Quebec
Production or Northern Pass -- presumably it
would be Hydro-Quebec Production as the
shipper, the entity trying to interconnect
its capacity resources -- do you know if in
fact they did submit a show of interest for
FCA #11 or FCA #12?

A. I don’t know.

Q. Okay. And therefore, if in that Capacity
Deliverability Study ISO-New England
identified transmission upgrades that were
necessary in addition to those that were
identified in the System Impact Study, you
don’t know the cost of those?

A. I don’t know if there would be any costs, no.

And I don’t know if they’ve done the study to
know if there's any costs.

Q. Okay. And you don't know certainly then -- I
guess it follows that you wouldn't know the
timing of the in-service date of any
transmission upgrades that might be necessary
via the Capacity Deliverability Study.

A. I don't know any specifics.

Q. Okay. If I could turn my attention to the
issue of price separation in the Northern New
England Capacity Zone. You testified that,
in your opinion, the Northern New England
Capacity Zone will not price-separate in FCA
#12, even with Northern Pass qualifying for
the market and interconnecting into Northern
New England; correct?

A. Yes.

Q. And as you explained, there is an established
formula for how something called the "maximum
capacity limit" is determined; is that
correct? And that formula is the installed
capacity requirement minus what's something
known as the "local resource adequacy value";
is that correct?

A. Yes, there is an established formula for the
Q. And even with that formula, would you agree that what really the maximum capacity limit represents, so the MCL represents, is the amount of capacity that can be exported out of Northern New England to Southern New England due to the existing transmission topography in New England? Is that correct?

A. In simple words, yes. It's a little bit more complicated once applied to the MRIs. But yes.

Q. Yes. And the line that separates the Northern New England Capacity Zone from Southern New England, and the line that also roughly approximate these transmission constraints precluding capacity and energy from leaving Northern New England, that line is roughly at the Massachusetts border; you would agree? Massachusetts border with New Hampshire. And I should be more specific. The Massachusetts border with New Hampshire and Vermont.

A. I guess, geographically. But it's more important where it is electrically on the
system.

Q. But from a very rough standpoint, that's -- in fact, that is the line that creates the Northern New England Capacity Zone and other zones in the south of New England; is that correct?

A. Yes, it contributes to that distinction and definition of "zones."

Q. Okay. So as we just -- or you just testified the formula for the MCL, or maximum capacity limit, is the installed capacity requirement for all of New England minus the local resource adequacy requirement for all of New England that doesn't include Northern New England.

A. Yes. And in fact, if it helps the Committee, we provided a very detailed response describing this in data discovery after the technical sessions. I have it labeled as "Technical Session 11 1-6 Response." That goes through the formula and all the details with our forecast of that MCL value.

Q. Yes, duly noted and read. Thank you.

So, given this formula, there's really
kind of one of two ways, or maybe potentially
three ways that the maximum capacity limit
could actually increase. One could be that
the installed capacity requirement increases;
correct? Another could be that the local
resource adequacy value could decrease, or
both.

A. Yes.

Q. In each of those scenarios, the maximum
capacity limit will increase; is that
correct?

A. Yes.

Q. Now, in your analysis, you testified that the
maximum capacity limit will increase by
approximately 500 megawatts from FCA #11 to
FCA #12; is that correct?

(Witness reviews document.)

A. To be clear, maximum capacity limit for
Northern New England.

Q. Well, isn't that the only one relevant in New
England?

A. Well, currently, yes. The zones can also
change in the future.

Q. The only one relevant for MCL 12 -- I'm sorry
FCA #12.

A. Well, and the only one I guess you would say relevant for Northern Pass because --

Q. All the above, yes.

A. Yes. And yes, the answer to your original question, that increase by about 500 megawatts. It's Figure 7 in that data response.

Q. Have you been following ISO-New England's predictions on the maximum capacity limit over time? Are you aware that ISO-New England continually reviews updates and makes predictions about all kinds of important market data, including the maximum capacity limit? And are you aware of what ISO-New England's most recent prediction is for the maximum capacity limit for FCA #12?

A. I am aware that the ISO goes through and does an annual update and, in fact, presents it to the PAC Advisory Committee that I'm part of. I am not aware of any recent submissions that they may have made or predictions, though. I reviewed all materials that were available to us back in early spring, and they hadn't had
any updates at that time. But I haven't reviewed any newer updates of ICR value or MCL since probably February.

Q. Okay. So then you're not aware that more recently, ISO-New England has predicted that there will actually be a decrease in the MCL out into FCA #13?

A. I'm not aware of it.

Q. Okay. So, going back to the formula we were talking about, the MCL equals installed capacity requirement minus the local resource adequacy value — excuse me for a moment.

If I may refer to Footnote 16 in your Rebuttal Report. Do you have that in front of you, Ms. Frayer? Can you see that?

A. Yes.

Q. And if I may just paraphrase from it, essentially you say that you have incorporated indirect impacts on the Northern New England export capability itself. When you say "Northern New England export capability itself," what you're referring to is the ability of Northern New England to export energy or capacity, this maximum
capacity limit that we've been talking about; is that correct?

A. I'm sorry. I'm looking for this because it doesn't match my pagination. So give me a second. On my Page 17 I don't have that footnote. You said this is the April 2017 Rebuttal Report?

Q. I did not say the date. I'm going to go back. This is the April 17th Rebuttal Report, yes.

A. Bear with me. I probably was looking at the wrong document. Getting tired. Sorry.

Q. Understood.

(Witness reviews document.)

A. If you could maybe ask your question again.

I have it now in front of me. So I apologize.

Q. Okay. No worries. So you report that you have made some change to the export capability, the Northern New England export capability -- in other words, some change to the maximum capacity limit value presumably -- and part of my question is based on the transmission upgrades identified
in the System Impact Study, I believe that's what I draw from this -- so I guess my question is twofold.

Number one, is that in fact true? Are you referring here to transmission upgrades that will be compelled by the findings in the System Impact Study; and if so, can you report on the value? What, you know, numerical value did you change the maximum capacity limit to reflect what you say will be an increased ability to export capacity out of Northern New England?

A. So this footnote is referring to -- again, I think you said it correctly. It's talking about analyses that we've done. Those analyses are referring to zonal price separation. This is in the Forward Capacity Market. So it's our simulations of how the ISO-New England's Forward Capacity Auctions incorporate zonal price separation. And I don't think the interpretation here is that we made a change. We always had this since the Updated Analysis. Since we changed to model the MRI curves, we've always had the
same methodology. The MRI curves require you to consider zonal price separation explicitly. And the MCL value is an important component of that because it allows for the zonal demand curves, which is the zonal MRI curves, to shift.

Q. All right. I'm not quite sure you're answering the question, so I'll try to ask it in a different way. And I'll quote here. "LEI's analysis incorporated Northern Pass's indirect impacts on the NNE export capability itself." I read that to say that you have made some adjustment to the export capability, the maximum capacity limit, based on Northern Pass's indirect impacts. Can you explain to me what you mean by "Northern Pass's indirect impacts" and how that bears on the MCL value, and not discuss price separation? That's not what my question is about. Just that first sentence, can you explain that? What are the indirect impacts? Where do you get them from? And how did that affect your MCL value?

A. So the indirect impacts are inputs that we
have incorporated into our transmission
topology that reflect changes in the
north/south limit after other known projects
like the Greater Boston AC transmission
upgrades are put into place. They were
referred to even in our Original Report. I
can't say the values because I believe the
values are actually confidential. They were
provided to us by Eversource. And there's an
interplay here between Northern Pass and the
north/south interface, which I think you were
referring to -- I call them "north/south
interface." That's the name for that
electrical interface. You were
geographically placing it between
Massachusetts and Vermont earlier in the
discussions. So that is an input to our
modeling of the electricity markets. It
affects the energy market modeling. And to
make it consistent, it flows through to the
calculations of the MCL, which then flow
through to the calculations on estimates
around the MRI.

Q. So if I hear you correctly, you have made
WITNESS: FRAYER

some adjustment to the MCL based on
information that you received from Eversource
that is confidential and you cannot provide
to the Committee or to any intervenors?

A. Well, it is in our prior reports. It's
documented in my Original Report; it's just
in the confidential version.

Q. It's in the confidential materials.

A. Yes.

Q. I see. And in that Original Report, you
identified exactly by how much you changed
the maximum capacity limit based on what you
refer to as "indirect impacts" of Northern
Pass?

A. Yes.

Q. And I'm still not sure I've gotten quite the
answer. These indirect impacts, again, are
these -- when you think of indirect impacts
of Northern Pass, you think of other
transmission upgrades that are necessary that
may have been identified in the System Impact
Study. Is that what you mean by -- are the
indirect impacts, are those a result of these
other transmission upgrades, or do you
believe that the Northern Pass Project itself will in some way increase the MCL?

A. I don't think I can definitively answer your question, but I believe Robert Andrew or others at Eversource would be able to answer those.

Q. Okay. Let's see. Now, as a general matter -- actually, let's, yeah, go to this.

So as a general matter, to the extent supply into Northern New England increases and there are no retirements -- so a net increase in supply into Northern New England, and again with no retirements -- would that tend to increase the chances of price separation in Northern New England?

A. Generically it would move us closer to the point where we might have price separation. But in terms of whether it causes price separation, that's an empirical question.

Q. Now, in trying to assess the impact on supply into New England if Northern Pass Project in fact delivered capacity into Northern New England, you would agree at least that the capacity value you're attributing to Northern
Pass is 1,000 megawatts; is that correct?

A. Yes, we are modeling 1,000 megawatts. Yes.

Q. But you arrive at a net increase in supply by adding Northern Pass's 500 megawatts; correct?

A. I'm confused.

Q. Well, why don't you refer to your Rebuttal Report. If I may, refer to your Rebuttal Report at Pages 12 and 13. Sorry. If I may have a moment. I have the wrong page cite.

(Pause in proceedings)

Q. Excuse me. I had to find the right page cite. If I could refer you to Pages 17 and 18 of your Rebuttal Report. And for the benefit of the Committee and those in the room, I will read just the three words that precede the top of this page. So, beginning on Page 17, what you're seeing on screen is Page 18. But at the beginning on 17 it says, "After accounting for retirements and new wind additions in Northern New England, Northern Pass results in a net increase of approximately 496 megawatts in Northern New England..." So I have two questions on that.
How many megawatts of new wind additions did you add to Northern New England in that scenario?

A. We would have to take a look at the data requests. If you bear with me, I can try to find the answer for you. I know we provided that in data responses.

Q. That's okay. I think the answer is probably relatively de minimus. I imagine it would be somewhere in the 20 to 30 megawatt range.

   More importantly, I want to you ask you about the retirements you refer to there. As I see it, and let me ask you if could agree with it, if you were to add 1,000 megawatts for Northern Pass, and let's say you added 30 megawatts of wind and you have a net of 496, and then you put retirements into the equation, I get a value of approximately 530 megawatts of retirements. Does sound right?

(Witness reviews document.)

A. I'd have to think about this. I agree with your math, but I don't think we had any retirements as a result of, how should I say...
it -- to be clear, these aren't retirements as a result of Northern Pass. They're retirements that are occurring contemporaneously with Northern Pass. But you're right in terms of the megawatt magnitude. But just because I think there's a potential to misread that the retirements are happening as a consequence of Northern Pass, that's not it.

Q. No, that's not the question I asked and was not suggesting that.

A. Okay.

Q. I'm trying to understand how you arrived at, when you input 1,000 megawatts of Northern Pass and you arrive at a net addition of 500 megawatts, that's what I'm trying to understand, of supply into Northern New England.

A. And again, I think we do talk elsewhere in the report that there are contemporaneous retirements even in the Base Case that are happening in Northern New England.

Q. Indeed. I am not entirely clear if the yellow highlight on your data request
responses indicates confidential material. I believe it does not, and it's not marked as confidential. But I'm going to present this for the screen, for everybody to see, if I may. I can check with counsel --

A. That might be a good idea.

MR. ANDERSON: If I may, Mr. Chair?

CHAIRMAN HONIGBERG: Sure.

MR. ANDERSON: Okay. Thank you.

(Off-the-record discussion between Atty. Anderson and Atty. Iacopino.)

CHAIRMAN HONIGBERG: Ms. Frayer, do you have some information that might be helpful as folks try to figure out whether it's confidential?

WITNESS FRAYER: I apologize. I was talking out of order. So I have a copy of all my data responses. And when they're in yellow, that specific data response is confidential. And I believe each individual pages are marked as confidential. But when the data response was submitted, it was noted that the yellow or highlighted areas, consistent
with how we also marked up our reports, would
be redacted for the public version.

MR. ANDERSON: Okay. Thank you.

It would be a very natural and opportune time,
I think for the benefit of everybody, for me to
be able to introduce this confidential material
now. It goes directly to the question of the
retirements that Ms. Frayer uses in her netting
of supply into Northern New England. I
apologize to the Chair and the Committee for
not recognizing that sooner, and I'm happy to
accommodate the Committee to introduce this in
any way you see fit.

CHAIRMAN HONIGBERG: All right.

Why don't we ask the people who aren't entitled
to see confidential information to step out for
a few minutes while Mr. Anderson does this
business. And we apologize for making people
do this.

(Pages 106 through 112 of the
transcript are contained under separate
cover designated as "Confidential and
Proprietary.")
PUBLIC SESSION RESUMES

(Exhibit NEPGA 4 marked for identification.)

CHAIRMAN HONIGBERG: Mr. Anderson, you may proceed.

MR. ANDERSON: Thank you, Mr. Chair.

BY MR. ANDERSON:

Q. If I may turn your attention to Page 18 of your Rebuttal Report, now marked as NEPGA Exhibit 4.

MR. ANDERSON: For the record, I'll note at the outset that what is on the screen is not a completely unmarked version of Ms. Frayer's Rebuttal Report. I have added what you'll see is a black line going from a horizontal line marked as zero dollars down to a horizontal line marked as negative $5. I just want to note that at the outset. I will refer to that in a bit.

BY MR. ANDERSON:

Q. So, Ms. Frayer, would you agree that the red line represents what the Northern New England demand curve would look like if your
prediction for the MCL in FCA #12, the 500-megawatt increase in MCL in fact went through? In other words, you drew that red line based on where that MCL for FCA #12 line exists. And that's consistent with the design, that the demand curve in that zone is supposed to essentially start to drop down at the MCL line; is that correct?

A. Yes.

Q. Okay. And if you look back at FCA #11 MCL, that represents the actual MCL value for FCA #11; is that correct?

A. Yes.

Q. And therefore, the blue curve represents the actual demand curve in Northern New England for FCA #11; is that correct?

A. Correct.

Q. Okay. Now, as we discussed, ISO-New England is not predicting an increase in MCL from #11 to #12. In fact, it's predicting a decrease in the MCL from FCA #11 to FCA #13.

So my question for you is: If we were to -- if in fact the MCL -- rather, the MCL line for FCA #12 is much closer to where you
have the MCL line for FCA #11, or in fact if it's the same, would you agree that the demand curve for FCA #12 would look more like the blue line rather than the red line if the MCL for FCA #12 is much closer to the MCL for FCA #11? Would you agree that it would look more like the blue line than the red line?

A. I would have to think a little bit about that. I think the MCL values import in the starting point, but the curvature also changes. So I'd have to look at the entire MRI formula to fit the new zonal demand curve for Northern New England.

Q. Fair enough. And the curve may change -- some of the shape of the curve may change. You wouldn't expect it to be to a great extent, but I suppose you'd reserve judgment for that. But importantly, the positioning of the curve, would you agree that the curve would be positioned quite similarly to the blue curve we see here on this figure?

A. With your hypothetical that the MCL value would be similar to the FCA #11 value, the curve would start to move away from the zero
access. But again, I think the curvature might be different.

Q. And do you have any sense if the curve might be steeper, more shallow?

A. I'd have to go back and take a look at the full formula. So they actually fit a polynomial type of formula to it.

Q. But you would agree that, you know, changes from one year to the next in the system, other things may go into the MRI calculation. You wouldn't expect to see a fundamentally different shape on the curve, would you?

A. Well, I don't think you would expect the curve to, like, invert itself. Excuse me. But as you can see, even between the red and blue, although they're starting different zero points, they have different what I'm going to call "Y value" positions, and that's what I was referring to in terms of shape.

Q. Sorry. Do you need a break for water?

A. No, I have some. Thank you.

Q. Okay. Take a moment.

(Pause in proceedings)

Q. Are you okay? You want another --
A.  No, no, I'm good. Thank you.

Q.  Okay. So, just sticking with this kind of line of discussion. So, again, if we were to assume that the MCL for 12, FCA #12, is the same as for FCA #11, and that the blue curve, more or less there may be some change to the actual slope of the curve, but at least where it starts to drop in price would be the same, if you were to take that blue curve and then add back in the 530 megawatts that you modeled as retiring, but which we now know will not retire in FCA #12, if we were to add that back into the supply stack, which you said was 9,050 megawatts, that would get us up to roughly 9,580 megawatts. If you were to look at 9,580 megawatts, which is the line that I drew in, this black line, and look at where it intersects with the curve, what kind of price impact would you say that would have? In the order of, say, $5?

A.  I think it would be in that range, but not fully $5, but again, because I think the shape is changing, but it wouldn't be zero. I would agree with the hypothetical you're
presenting, that it would no longer be crossing at the zero-dollar mark.

Q. Okay. And what that value represents, let's say it's $5, means that resources in Northern New England would be paid $5 less than resources in the rest of the system; is that correct?

A. It is representing the congestion price difference between the rest of New England and Northern New England.

Q. Now, you testified elsewhere that 60 cents of price suppression -- or 60 cents of a reduced price for Northern New England assets would probably not compel retirements.

My question for you is: Would something in the order of a $5 decrease in capacity prices for resources in Northern New England, in your opinion, would that more likely compel retirements, one or more retirements?

A. I think we need to take a look at the details to see whether -- well, let's put it this way: What this is representing is the price difference. So what we would need to take a look at is the price paid. So, if under your
changes to the MCL, which are driven over changes to the ICR or the LRA and other changes in the market, we would want to see what the full base capacity price is. Five dollars is just the difference between what generators in Southern Massachusetts are getting paid versus Northern New England. The economics are really about the price levels and the revenues collected. So I would agree with you that Northern New England generators, under this hypothetical, would be paid less than their peers in other parts of New England. Whether it's enough to force a retirement depends on the price level, which I don't know what it would be. We'd need to actually study it.

Q. Well, let's take your prediction on FCA #12 of a $6.30 clearing price. That would result -- a price differential of $5 would cause $1.30 clearing price for Northern New England assets. In your opinion, would $1.30 price for assets in Northern New England compel retirements in Northern New England?

A. In your hypothetical, $1.30 might compel
retirements anywhere. But I don't accept the six -- I don't expect -- I'm not willing to accept the way that you've created, built up that hypothetical to the $1.30. I agree that $1.30 level is a very low price. It would start to cause folks to delist in the market and not willingly take on a capacity supply obligation. But I don't believe the math behind the hypothetical with your choice of starting point is correct.

Q. Understood. You're saying if Northern New England did price-separate, then perhaps we wouldn't have $6.30 as a system-wide clearing price. Understood. I guess the point being, and the question I ask is: If we had clearing prices, say in the order of six, seven, the clearing prices we've seen in the last couple auctions, a $5 price differential is a pretty major price differential and in fact causes capacity prices for Northern New England resources, including, of course, resources in New Hampshire, to be faced with perhaps the retirement decision, given those very low capacity prices. Would you agree?
A. I would, again, not agree to, again, the build-up of the hypothetical. You were saying the reason you're starting with six is because those are in the range of prices we've seen in the last few Forward Capacity Auctions. We have to keep in mind that in the last few Forward Capacity Auctions we have not had price separation. So I don't believe that's a reason to again create that hypothetical with a starting six.

Q. We also haven't had 1,000 megawatts of new input into Northern New England in the last couple auctions either, so that might bear on price separation in Northern New England?

A. Well, we've had quite a bit, actually, of new resources. Not new imports, but new resources. We've added significant amounts of new generating resources in the last few auctions.

Q. In Northern New England?

A. Across New England, without price separation. So if there's no price separation, it doesn't matter. We've added new resource --

Q. Well, the price separation would matter
because we're talking about Northern New England price separation. So whether they, new resources came in to Northern New England or elsewhere I think would bear on whether or not Northern New England would more likely price-separate; correct?

A. To that question I would say correct, but not to the original question that you asked in setting your hypothetical.

Q. Okay. I'm going to turn my attention to another issue, if I may. If I could turn your attention to Page 9 and 10 of your Rebuttal Report.

Ms. Frayer, referring to Page 10...

(Discussion off the record.)

A. That chart is public. So that chart is public.

BY MR. ANDERSON:

Q. So if I may refer to a public chart on Page 10 of your Rebuttal Report, I'd like to mark that as NEPGA Exhibit 5, please.

(Exhibit NEPGA 5 marked for identification.)

Q. And you refer to this chart as providing
support for your assertion that ISO-New England is forecasting growing capacity market revenues; is that correct?

A. I've referred to this chart, I believe on the prior page, to make the point that capacity markets will grow with imports over time. That's actually the exact sentence of the quote.

Q. Actually, if I may quote from Page 10 [sic], it says, "It is clear that ISO-New England forecasts growing capacity market revenues in the future."

(Witness reviews document.)

A. Sorry. Where are you quoting from?

Q. I'm quoting from the bottom of Page 9 in your Rebuttal Report. The sentence begins, "If the size of each segment is compared" -- and you're referring to the Figure 2 --

A. Okay. Yup.

Q. -- on the screen -- "it is clear that ISO-New England forecasts growing capacity market revenues in the future."

A. Growing capacity market revenues in the future for these types of resources, again,
because of the reference to this chart.

Q. Sure. And, actually, the resources you're referring to are gas-fired resources, specifically combined cycles; is that correct?

A. I believe there's two in this chart:

Combined cycle, the green color bars, and CT, which is a peaker, that's the red.

Q. And are you implying by that, that ISO-New England is predicting that capacity market revenues will continue to increase?

A. What I'm applying, again, is the original sentence that precedes the introduction of this figure on Page 9, where I said -- where I talk even in this entire section about the natural integration or relationship between energy and capacity markets, where if energy market prices are coming down, capacity market prices have to rise. And this is not just limited to this chart. Executives from ISO-New England have been talking about this -- and I can find you multiple references to this idea -- repeatedly in recent years. So that's what I'm saying.
It's not an absolute that capacity market revenues are going up. It's about the relationship between energy and capacity.

Q. Okay. So you would agree, then, that ISO-New England -- or at least you're not citing or reporting that ISO-New England is predicting increasing capacity prices out into the future.

A. What they're predicting --

Q. That's a "Yes" or "No."

A. I don't think ISO-New England does specific predictions in isolation of capacity prices, so I wouldn't be able to say that. But they do do analyses like this and in other veins as part of their own economic studies where they're looking at the relationship between energy capacity markets.

Q. Sure. But I just want to establish that what you're talking about as a relationship between energy and capacity, it could be read to say that ISO-New England is predicting, and again I'll quote, "forecasts growing capacity market revenues in the future." I understand now, and I think I understood

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then, that what you're talking about is
revenues for particular types of resources.
CCs and TTs may need greater capacity market
revenues due to energy prices. But certainly
ISO-New England itself is not predicting,
forecasting growing capacity market revenues
and clearing prices in the future, are they?

A. Well, they would need to have a prediction of
a capacity market price behind these bars. I
don't know what the exact numbers are, but
there is a capacity market price forecast
implicit in this.

Q. Do these bars represent predictions? Or are
these -- because these bars, you're looking
at 2016, 2017, 2018. These are auctions that
have already cleared. In fact, the capacity
revenues represented in this figure are set;
correct?

A. I agree with you there. But they are making
other -- as part of their economic studies,
they are making longer-term predictions about
the future capacity market, as they are
required, because those studies go out much
further than the annual markets report does.
Q. And one last point on this. I'm sorry. If you were to add 2019 and 2020 to that chart, and we do have those values, would the capacity bars be smaller than they are in 2018? In other words, have the markets cleared lower --

A. At the lower price --

Q. -- in subsequent years since 2018?

A. Yes, although I don't know what the energy bars would look like because that is a prediction.

Q. Hmm-hmm. Okay. But at least with respect to capacity, 2018 really represents kind of the high mark for system-wide clearing prices in New England, I believe, as it refers to the 2018 year, half of which -- or, you know, more than half of which is in the FCA #9 capacity commitment period, and that was the highest system-wide clearing price New England's ever seen; isn't that right?

A. That is correct.

Q. Okay. Thanks.

If I could talk a little bit about your prediction of the clearing price in FCA #11.
Now, you predicted that FCA #11 would clear at $6.30 system-wide; correct?

A. Are you speaking about our Updated Analysis?

I think so.

Q. Yes, in your Updated Analysis.

A. Yes, that -- well, that is correct. I want to make sure that we're not going into confidential information again.

(Witness reviews document.)

Q. You have a chart that or a figure that represents your predicted clearing price for all the auctions over time, both in the Base and in the Project Case. Is that --

A. It's confidential.

MR. ANDERSON: I can hold off on that for now if that would be convenient for the Committee. Yes, it will be. Okay. Let me see.

CHAIRMAN HONIGBERG: I think what we'll do, Mr. Anderson, is when the next questioner is going to do a confidential portion, we'll have you do it then.

MR. ANDERSON: Okay. Fair enough. I'm just parsing through to be sure
that I have a section that may not require confidential treatment.

(Pause in proceedings)

MR. ANDERSON: I do have one more series of questions that I am certain does not refer to confidential material, and I'll reserve the rest of my questions for that period of the confidential material. So this will be my last for now.

BY MR. ANDERSON:

Q. I just want to refer back to some comments you made yesterday when you were testifying.

You testified at one point that ISO-New England wants this type of resource, the import capacity resource coming over Northern Pass. Do you recall saying that, "ISO wants this kind of resource"?

A. I believe I said something like that, yes.

Q. And it struck me as odd because, you know, I'd asked your opinion: Do you believe that ISO-New England is either a policy maker or makes decisions or in fact in any way designs the market in order to favor one type of resource over another?
A. The answer to the question is that ISO-New England does not want to design market rules that are favoring specific resources --

Q. Okay. So by saying --

A. -- to my knowledge. I'm speaking to my knowledge. I'm not speaking for ISO-New England.

Q. Well, by saying that ISO-New England, quote, wants this type of resource, it certainly gives off the impression that it's got ISO's backing, so to speak, and perhaps encouraging the Project to come in and be approved. And you would agree, though, that ISO-New England does not take opinions on specific resources in that way. In fact, their mandate, their only obligation is to design and administer markets in a resource-neutral way that procures resources at the lowest possible cost to meet the resource adequacy needs of the region; is that correct?

A. I don't know if that's word-for-word correct, but I wouldn't argue with the general description there of their mandate.

Q. So does that sound like an organization that
expresses its want for a particular resource?

A. Well, I don't know -- I can't speak for their organization. But what I can do is explain my statement about "want" if you'd like, because there are lots of public documents and speeches done by executives at ISO-New England that speak about "the fit" within their market for a variety of different infrastructure resources. Gas pipelines they've talked about. They've talked about transmission that brings new clean energy. Multiple projects. In fact, I think Counsel for the Public had an exhibit earlier that showed multiple transmission concepts. That's taken from an ISO-New England document.

Q. Well, everything you've listed are reliability projects. And certainly reliability, maintaining system reliability is part of ISO-New England's mandate. We've discussed and testified that Northern Pass is not a reliability project. It's a merchant project. So my question, perhaps more pointed is: Does ISO-New England express a
preference for one merchant project over
another?

A. They don't express project-specific
preferences, but they have talked about those
clean energy imports and that there's a
number of non-reliability projects for
transmission being proposed that they view as
favorable for the resource adequacy of their
market. Doesn't mean that they express a
preference for those projects over, let's say
a combined cycle plant in a particular part.
But it's part of their own presentation where
they've talked about the merchant -- the
various merchant transmission projects that
have been proposed.

Q. Well, reference to a project is not
expressing a preference for a project, is it?

A. No. And I've said they don't express
preference for any specific project. I've
never seen them say, "I want Northern Pass."
And I think my point was that they want a
project like Northern Pass. They would like
projects that bring additional energy and
capacity to the market.
Q. So when you say "like Northern Pass," you mean any project that brings energy or provides energy to New England at the lowest possible cost. Is that --
A. You could say that has the characteristics and features of a project like this. Because all they care about energy capacity; right?
Q. All they care about is meeting their resource adequacy requirement at the lowest possible cost and markets that achieve that goal. You keep talking about "a project like Northern Pass," and that's ambiguous to me. I'm trying to be clear if you're saying a project that is a hydro project and an import into New England or if you're really simply referring to ISO-New England, what they want is the least-cost solution to their resource adequacy needs, and if a particular project fits into that, and the market procures that product, ISO is happy with that.
A. I would agree with that part of your question.
Q. Okay. Thank you.
remainder of my questions would go into confidential material. So at this point I should cede the mic.

CHAIRMAN HONIGBERG: All right. Next on the list is Municipal Groups. Is there -- but before turning to them, is there anybody who has something that would take, 15 to 30 minutes of non-confidential and we could get that person or that group started and finished?

MS. FILLMORE: Mr. Chair.

CHAIRMAN HONIGBERG: That's Ms. Fillmore.

MS. FILLMORE: I have about 15 minutes. Mine is not confidential.

CHAIRMAN HONIGBERG: And you said you have about 15 minutes?

MS. FILLMORE: Yes.

CHAIRMAN HONIGBERG: And you're part of the Municipal Groups anyway, Ms. Fillmore.

MS. FILLMORE: Yes.

CHAIRMAN HONIGBERG: So that works out perfectly.
MS. FILLMORE: It does.

CHAIRMAN HONIGBERG: Are you going to be questioning from there, as is your wont?

MS. FILLMORE: I will.

CROSS-EXAMINATION

BY MS. FILLMORE:

Q. Ms. Frayer, I'm over here. Hello. My name is Christine Fillmore. I'm representing several municipalities in this matter, and I'm a spokesperson for Municipal Group 2. I would like to start by talking a little bit about your October 2015 report.

MS. FILLMORE: Dawn, can you turn on the Apple TV, please?

Q. Just generally, this is the section, the next 14 pages or so of this, Section 7, this is the section --

A. I don't see anything on my screen. Oh, sorry.

Q. Okay. And here's where you present your predictions of how many jobs will be created if the Project were approved and how much you estimate GDP would increase if the Project
were approved; is that correct?
A. Yes.
Q. And that includes both the planning and
construction phase and the operations phase;
is that correct?
A. Yes.
Q. To develop those predictions, I think you
told Attorney Pappas yesterday that you had a
choice of which factors to select in the REMI
PI+ model, which ones to turn on?
A. In order to simulate these expenditures and
impacts they have, there is some flexibility
in REMI to do it one way or another way, yes.
Q. Okay. If the Project were to be approved and
clearly built and begin operations, would you
then analyze how close your predictions in
your reports were to what actually happens?
A. If I could just confirm I understood the
question, Ms. Fillmore. You're asking if I
would do a backcast once the Project is
operating to see if my predictions in 2016
were accurate?
Q. That's right.
A. We could try to do that, but it wouldn't be a
Q. Do you plan to do that?
A. I have not been hired to do that.
Q. You've provided predictions of a similar nature for several other projects in the past, haven't you?
A. "Predictions," I assume you're speaking about the REMI PI+ model, local economic benefit modeling?
Q. Yes.
A. Yes, I have provided predictions like this in other projects.
Q. And is one of those projects the Greater Springfield Reliability Project?
A. I did not provide local economic benefit analysis for the GSRP project, as far as I recall.
Q. You did analyze the economic benefits of the Project.
A. I looked at the economic benefits through the lens of the electricity market benefits, which are discussed in earlier chapters of this report.
Q. Okay. Did you provide a local economic
benefit analysis for the Champlain-Hudson Power Express Project?

A. I did as part of their article -- they're siting procedures in New York.

Q. And has that project begun construction?

A. No, it has not, to my knowledge, no.

Q. Have you provided analysis of local economic benefits for any project that has subsequently been approved, constructed and begun operations?

A. Great question. I'm just thinking. I don't think I could come up with a project right now, off the top of my head. Infrastructure projects like this sometimes take many years to develop. So I don't know if I have done this analysis -- I don't think I've done this analysis for projects that have actually reached the fruition of operations.

Q. So would it be fair to say that there is at this point no empirical evidence of how accurate your predictions for this or any project of local economic benefits have been?

A. There isn't any studies that I have done that showed as to the nature of the empirical...
evidence. But the REMI model is used by many, many professionals. And there may be quite a bit of empirical evidence as to the forecasting accuracy of that modeling tool. I just don't have it on the tip of my fingers right now.

Q. You are the only expert in this proceeding who's used the REMI model. You are the only expert presenting for the Applicant.

A. I am the only expert presenting for the Applicant on this modeling piece.

Q. You've also provided projections of other economic benefits, the ones you were just discussing with Mr. Anderson. And have you provided those predictions for any project that has subsequently been constructed and begun operations?

A. Probably. I'd have to go back and take a look through my corporate CV and find a project, because some infrastructure projects other than transmission, we have done analyses forecasts of electricity markets for some of those that are in operation.

Q. And have you gone back for any of those
projects and looked at the comparison of what
your projection was and what actually
happened?

A. I have never been asked by a project to do
that. But I do routinely go back and look at
my model's forecasting accuracy, independent
of specific project engagements. And I
actually think we presented some of that at
one point through the technical sessions. So
we do do backcasting of our models
independent of specific project engagements.
We do that routinely, probably once every
year or year and a half.

Q. But you don't look specifically at any
predictions that you've made.

A. Well, it's actually looking at forecast
accuracy, so it's comparing a prediction to
what actually happened.

Q. Is any of that information before this
Committee?

A. I'd have to check and see if it's part of a
data discovery we provided. I don't recall
if it was a data discovery formally provided
or informally provided. Can I get back to
Q. No, I think you've answered my question enough. Well, was any of that backcasting done for a specific project?
A. No. As I've said, I don't have clients who come back and ask me to do a backcast. But we take it upon ourselves to do our own backcasts.
Q. Okay. Also in that same section in your Original Report, and in your Rebuttal Report, can you tell me if your report includes an estimate of the number of jobs that would be lost if the Project were to be approved?
A. Can you clarify your question? What do you mean by "number of jobs lost"? In what context?
Q. I think you might characterize it as a "negative benefit."
A. So the model does predict there may be some negative impacts in the longer term, what we call a "rebound effect" in the model, where if you're going -- if the economy is going through a boom, once that boom ends, the economy has to kind of shrink back to the
more normal size and therefore rebalance itself. So those are presented in some of my figures in this report.

Q. Do those figures reflect impacts during the construction phase or just the operations phase?
A. The operations phase.

Q. So, for the construction phase, does your report include any information on any potential negative effects on jobs?
A. No, we didn't project any negative effects on jobs.

Q. So you're saying there would be no negative impacts on jobs during construction.
A. Based on my analysis in the Original Report, yes.

Q. And what is the basis of that analysis?
A. I'm confused by your question. Can you ask it in a bit more specific -- the basis is documented in my report.

Q. Can you tell me where?
A. Well, Section 7 describes all of the findings from the local economic benefit analysis.
And it's doing so and describes all the
inputs and the assumptions. That's what I assume you mean by "basis"?

Q. Yes. Can you show me where exactly in Section 7 you refer to negative impacts on jobs during construction?

A. Well, I don't. That's what I thought I just said.

Q. Can you show me where you give the reason that there are no negative impacts to jobs?

A. I don't have to give a reason. The analysis begins with what are the impacts. It doesn't begin with a question, "What are the positive impacts?" If the model predicted negative impacts, it would have presented itself in the findings.

Q. I see. Bear with me just one moment.

(Pause in proceedings)

Q. I'm looking now at Applicant's Exhibit 102. This is your Rebuttal Report. And Section 5.2 is the section on KRA, Counsel for the Public's experts, and you talk about their report.

A. That's correct.

Q. And I'm looking at the second paragraph and
this sentence which I am highlighting. Do you see that?

A. Yes.

Q. And it says, "For example, for the negative externalities projected to be experienced for the Town of Plymouth during construction due to traffic delays, there may have been offsetting temporary positive economic impacts for surrounding communities with similar business." Did I read that correctly?

A. Yes, you did.

Q. So if business is lost in downtown Plymouth during construction and people go elsewhere to shop or eat or see a show, it's a wash, essentially -- is that what you're saying? -- because they'll do those things somewhere else?

A. I'm only saying it's a wash -- I appreciate it's not a wash from the perspective of the unique business. But from a REMI modeling perspective, which is what we did at a state level, and which is what KRA also did at a state level, it could be a wash. That's what
I'm saying. Our analysis isn't granular enough, neither mine nor Mr. Kavet's and Mr. Rockler's, to go down to that individual business level within the REMI model we're using. You can ask REMI to develop another type of model that is more granular, but it's not the tool that either one of us had access to in this instance.

Q. So would you agree with me that your analysis does not present as detailed a picture as it might?

A. I would agree that our analysis is looking at a state-by-state perspective. I would also agree that there are differences of opinion as to, which is what this paragraph goes, as to certain aspects of the impact that may be more granular than what is represented by the model.

Q. Would you agree with me that business that shifts from Plymouth to a nearby town doesn't help Plymouth?

A. I would agree with that statement in general.

Q. And does the REMI model take into account permanent impacts that might result from loss
of business from one town that shifts to
another town and does not come back after
construction is completed?

A. If there was empirical evidence of that and
there was a net effect, the model could do it
on a state level. But it doesn't report
results on a town-by-town level.

Q. Are you saying that the town-by-town level is
not important enough for the Committee to
consider it?

A. No, I'm not saying that. I'm just saying
that was outside the scope of my analysis.

Q. Why?

A. My analysis was to look at the benefits to
New Hampshire as a whole, not to individual
constituents.

Q. I'd like to refer now to Counsel for the
Public's Exhibit 148, which is also Joint
Muni 200. And I am looking at Page 63. I
will represent to you that this and the next
20 or so pages include e-mails and letters
from 22 businesses, owners or operators of
businesses in downtown Plymouth with their
concerns about the impact that construction
may have on those businesses. I'm not going
to go through them all. But I'd like to ask
you, are you familiar with these letters and
e-mails?

A. No, I haven't reviewed them.

Q. And you told Attorney Pappas yesterday that
you relied on the Applicant's other experts
regarding construction impacts, as far as
jobs go; is that correct?

A. Well, I relied on the other evidence
regarding construction impacts in order to
then do the forecasts that I did around jobs.
They themselves didn't look at jobs. I'm the
witness responsible for looking at job
impacts, GDP impacts.

Q. I thought you told Attorney Pappas yesterday
that you did not look at the specifics of how
jobs would be impacted by the construction,
that you had relied on other experts.

A. That's true. Yes, I relied on other experts,
for example, for opinions on implications of
the aesthetics and so forth. That's an
example. But that other expert didn't tell
me a specific -- didn't conclude with a
specific job number.

Q. Right.

A. Okay.

Q. Do you know if those experts talked with these business owners or any others in reaching those conclusions?

A. I don't know. You'd have to ask those other experts.

Q. Do you know what kind of research or study they did to come to those conclusions?

A. I'm not familiar with the details of their work.

Q. Which experts are you talking about here?

A. I'd have to go back through my notes to find the names. I apologize. I'm not very good at recalling all the names. There's a big pool of experts that have been retained. But I do believe they may have been referenced in footnotes throughout my rebuttal.

Q. Thank you.

A. For example, just as an aside, Appendix C of my rebuttal, starting on Page 69, does document all the background information in our rebuttal's economic impact analysis. And
I think there is reference there, topic by

I seem to have lost my exhibit. Hold on one
moment, please.

(Pause in proceedings)

Do you have your April 2017 Rebuttal Report

in front of you?

A. I do, yeah.

And now I do, too. So I would like to go to

Page 47. Looking at Footnote 95, which is

now on the screen, would it be accurate to

summarize this footnote criticizes KRA's

assumptions which were based in part on

information about an underground construction

project in Massachusetts?

A. Yes.

And in particular, I'd like to draw your

attention to the last sentence, which I will

highlight now. It says, "KRA has also

mistaken the loss in 'foot traffic' as

'sales,' ignoring the fact that the lost foot

traffic could be made up for in higher sales

per customer." Do you see that?
A. Yes.

Q. So you're saying here that -- do I understand correctly, you're saying that if businesses lose foot traffic during construction, that those businesses, say in Plymouth or Franconia, would be able to make up for it by selling more goods or services to the customers who manage to get there?

A. This is a critique of a specific aspect of KRA's input. It's a critique more of the math. So if I had to answer your question, can I provide you with a simple illustrative example?

Q. Yes, please.

A. So the idea or understanding is that, instead of assuming that a 30 percent loss in foot traffic is perfectly equal to 30 percent loss in sales, what you're suggesting is that more detailed analysis could be done where a loss of foot traffic means a loss of customers. But then part of that could be offset, let's say the 30 percent loss of foot traffic, with some increase in sales per customer. It's not one to one. That is our question: Why
would it be one to one? There is no
foundation for it being one to one. No
evidence provided that it's one to one. And
the loss in sales is not solely a function of
foot traffic.

Q. Does this sentence in the footnote say that
part of the loss could be made up for?
A. Well, it says "could be made up." So it
doesn't say it will be made up a hundred
percent. So it's positing that there is
additional factors that should be considered
that could change the outcome.

Q. Is there any data in your report or that you
used in developing this Rebuttal Report that
shows how likely that scenario is, that loss
of sales from foot traffic could be made up
for with increased sales to customers?
A. I have no additional data beyond what's in
the report.

Q. So you haven't conducted any studies or
modeling on that particular issue.
A. No, I have not. This is a critique of KRA's
assumptions.

Q. I understand that. I'm trying to understand
the factual basis behind that critique.

A. The factual basis is that sales is not just a function of the number of customers that come through the door. Sales is a function of the type of customer you get through the door and a lot of other considerations and factors.

Q. Are you familiar with the Flying Monkey Performance Center in Plymouth?

A. No, sadly I am not.

Q. Are you aware -- I guess you're not, then -- that they present live music and performances?

A. I am not aware of that.

Q. Well, I'll posit to you that they're there and that's what they do.

Can you explain to me how a business like that could make up for a loss in customers through additional sales to the ones who do get there? Would a person buy two tickets?

A. No. I'm not familiar with what their specific business revenue streams are. Do they have a bar or restaurant on site?

Q. They do.
A. So, sales per customer is definitely a very important driver for restaurants and drinking establishments.

Q. Thank you. That's all I have.

CHAIRMAN HONIGBERG: All right.

We will take our lunch break and come back in about an hour.

(Lunch recess taken at 12:32 p.m. and concludes the DAY 14 Morning Session. The hearing continues under separate cover in the transcript noted as DAY 14 Afternoon session.)
CERTIFICATE

I, Susan J. Robidas, a Licensed Shorthand Court Reporter and Notary Public of the State of New Hampshire, do hereby certify that the foregoing is a true and accurate transcript of my stenographic notes of these proceedings taken at the place and on the date hereinbefore set forth, to the best of my skill and ability under the conditions present at the time.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action; 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.

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Licensed Shorthand Court Reporter
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June 9, 2017  

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S

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