STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

April 17, 2017 - 9:05 a.m. DAY 3
49 Donovan Street MORNING SESSION ONLY
Concord, New Hampshire

{Electronically filed with SEC 04-23-17}

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

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE:

Chmn. Martin Honigberg Public Utilities Comm.
(Presiding Officer)

Dir. Christopher Way, Des. Dept. of Resources &
Economic Development
Craig Wright, Designee Dept. of Environmental
Services
William Oldenburg, Des. Department of
Transportation
Patricia Weathersby Public Member

ALSO PRESENT FOR THE SEC:

Michael J. Iacopino, Esq. Counsel to the SEC
Iryna Dore, Esq.
(Brennan, Caron, Lenehan & Iacopino)
Pamela G. Monroe, SEC Administrator

(No Appearances Taken)

COURT REPORTER: Cynthia Foster, LCR No. 14

{SEC 2016-05} [Day 3 - Morning Session ONLY] {04-17-17}
## INDEX

<table>
<thead>
<tr>
<th>WITNESS PANEL</th>
<th>MICHAEL AUSERE</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILLIAM BOWES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Resumed)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Cross-Examination by Mr. Pappas 3
- Cross-Examination by Mr. Whitley 59
- Cross-Examination by Mr. Tanguay 84
- Cross-Examination by Ms. Fillmore 96, 105
- Cross-Examination by Ms. Pacik 99
- Cross-Examination by Mr. Reimers 108
- Cross-Examination by Ms. Birchard 135

## EXHIBITS

<table>
<thead>
<tr>
<th>EXHIBIT ID</th>
<th>DESCRIPTION</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JM 82</td>
<td>Press Release, 4/12/17</td>
<td>80</td>
</tr>
<tr>
<td>JM 84</td>
<td>Technical Session 10/20, Revised Cost Estimate</td>
<td>103</td>
</tr>
</tbody>
</table>
P R O C E E D I N G S

PRESIDING OFFICER HONIGBERG: I just want to make sure people understand that as long as we have a quorum, we can proceed and there are going to be some days during the course of the many weeks that we'll be doing this when one or two people may be missing, but as long as we meet the statutory quorum requirement, we can go ahead. We'll also note that the room that we have just off to the side here to our right is set up so that if someone's in there, the sound is being piped in and there's one of these screens so the people can see whatever exhibits have been put up for review by the witness and everyone else in the room.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: I think, Mr. Pappas, you were probably in the middle of a cogent question when we interrupted you.

MR. PAPPAS: Thank you.

CROSS-EXAMINATION

BY MR. PAPPAS:

Q Good morning, Mr. Ausere and Mr. Bowes.

A (Ausere) Good morning.
A (Bowes) Good morning.

Q Mr. Ausere, I want to resume asking you some questions of you and I want to start with your Supplemental Testimony. Now, in your testimony, you talk about the SEC requirements that the Applicant provide financial assurances for a decommissioning plan. Do you recall that?

A I do.

Q And in your testimony, you describe the four things that are listed in the SEC regulations. You describe an irrevocable standby letter of credit, a performance bond and a surety bond or an unconditional payment guarantee from a parent company maintaining at all times an investment grade rating. Do you recall those?

A (Ausere) I do.

Q So I want to ask you some questions about this topic. And my first question is, the fourth item, unconditional payment guarantee from a parent company maintaining at all times an investment grade rating. Now, as you indicated earlier, NPT does not yet have a rating, correct?

A (Ausere) Correct.
Q: And you talked about the rating for Eversource. Are those ratings investment grade ratings?

A: (Ausere) Yes.

Q: Okay. But in this case, though, Eversource is not providing an unconditional payment guarantee for the decommissioning costs, correct?

A: (Ausere) In my testimony I describe that the financial assurance for the decommissioning payments come from the operation of the TSA and Hydro-Quebec's guarantee of HRE's obligation under the TSA.

Q: In other words, Eversource is not providing an unconditional payment guarantee for the decommissioning costs?

A: (Ausere) Correct.

Q: Thanks. Now, NPT's Application to the SEC does not include one of these four types of financial assurance, is that right?

A: (Ausere) Correct.

Q: And what NPTC is seeking to establish through your Supplemental Testimony is that they think, NPT believes that they provide adequate financial assurance for the decommissioning plan, correct?
A (Ausere) Correct.

Q So I want to review what the Applicant claims to be those financial assurances, but before I do, let me just ask two preliminary questions that we touched upon on Friday afternoon.

First, if the TSA is terminated for any reason, and we went through a number of reasons on Friday, but if it's terminated for any reason before year 36, there are no payments into the decommissioning fund, correct?

A (Ausere) That's not accurate. If it is, if it were terminated early by Hydro-Quebec, generally speaking, Hydro-Quebec or excuse me, HRE, would be required to fund the decommissioning cost. Go ahead.

Q But that wasn't my question. I was focusing on the decommissioning fund itself. So that fund doesn't start until year 36, correct?

A (Ausere) Correct.

Q So if for any reason the TSA is terminated prior to the start of funding that fund, there's no money in that fund, obviously.

A (Ausere) That's correct, but I do want to emphasize, though, if it were terminated early
by Hydro-Quebec, in that unlikely scenario HRE
would still owe decommissioning costs.

Q  Understood, and we went through that on Friday.
And the second point is that if NPT defaults
under the TSA at any time during the 40 years of
the TSA, in that scenario, neither HRE or HQ are
obligated to pay decommissioning costs, correct?

A  (Ausere) There are certain circumstances under
the TSA where if NPT were to default then you
are correct, HRE/HQ would not owe
decommissioning costs, but those situations
would be really two examples that come to mind.
One is where the in-service date of the project
is delayed by five years because of NPT's lack
of following good utility practice. The other
example would be where if the line were to go
out of service for longer than five years and
that outage is due to NPT's not following good
utility practice.

Q  All right.

A  (Ausere) All right? Low probability scenarios.

Q  But they are probabilities, nonetheless,
correct?

A  (Ausere) They are theoretical possibilities.
Q  Okay. Now, in your Supplemental Testimony, you testified that the financial assurances provided by the TSA are better than a standby letter of credit because the standby letter of credit is capped at a fixed amount and has a set term. Do you recall that?

A  (Ausere) Correct.

Q  And would you agree with me that a standby letter of credit fixed amount can always be increased?

A  I'm thinking through. After the term of that standby letter of credit, you could increase. You could increase.

Q  And you can amend a standby letter of credit, can you not? It's a contract.

A  (Ausere) I guess you could, yes.

Q  In addition to increasing the amount, the term can be changed by a simply amending the contract, correct?

A  (Ausere) From what I understand, the terms for either a standby letter of credit or a surety bond are generally relatively short-term. So going 40 years out or plus, at least in my experience, I haven't seen that very often so
that's why I make that point in my testimony.

Q  Sure. But you would agree with me that both a
standby letter of credit and a bond, whether
it's a surety bond or payment bond, they can
have their amounts increased and they can have
their terms extended, correct?

A  (Ausere) I would agree.

Q  Mr. Ausere, are you also familiar with terms in,
whether it's a standby letter of credit where
it's common term to have the letter of credit
continue until cancelled?

A  (Ausere) No. I'm not familiar with that.

Q  Now, under the TSA, the Management Committee
consists of two individuals from HRE and two
individuals from NPT, correct?

A  (Ausere) Correct.

Q  And the Management Committee must agree on a
decommissioning plan in order to adopt one,
correct?

A  (Ausere) Correct.

Q  And if the Management Committee does not agree
on a decommissioning plan which would include
the costs of decommissioning, it has to go to
arbitration to be decided, correct? To break
that impasse?

A (Ausere) It does, but as we discussed on Friday, in that scenario, HRE is still obligated to fund the decommissioning fund.

Q Well, under that scenario, if the Management Committee never agrees on a decommissioning plan or decommissioning costs, there's nothing to apply the formula to, correct?

A (Ausere) We would apply the formula for the plan that's provided by NPT, and then once the disagreement, if there is a disagreement, is decided, then the fund would be trued up for whatever the arbitrated plan and the cost of that plan is.

Q If the Management Committee doesn't agree on a decommissioning plan, including the funding, doesn't that go to arbitration first to decide what the plan should be and what the level of funding should be?

A (Ausere) No. Actually, under the TSA, we, NPT would go ahead and collect and then once the arbitration or the disagreement is resolved, then the fund would be trued up, whatever the outcome is of that arbitration.
If there's early termination of the TSA, that would lead to disputes, including disputes over the decommissioning fund, correct?

(Ausere) There would be disagreement on the decommissioning plan in that scenario.

And if NPT enters into a new TSA with a party other than HRE, HRE and the new party have to then agree on an allocation of decommissioning costs, correct?

(Ausere) If NPT were to decide to continue operation of the line through a different party, yes. We would have to negotiate that.

All right. Okay. And of course, if there's a breach by either HRE or NPT of the TSA, that could lead to disputes including disputes over the decommissioning costs, correct?

(Ausere) That would, I mean, that requires speculation of the scenario. I can't answer that. I mean, that would be very speculative without what the circumstances are of the termination, et cetera.

You don't have to speculate to agree that if there's a dispute over whether HRE or NPT breached the agreement, that those parties are
going to have to negotiate that or some third party is going to have to decide that.

A (Ausere) Again, too speculative for me.

Q Well, let me ask you this question. Under any of these various scenarios, whether it's a breach by one of the parties, whether it's early termination of the TSA, whether it's dispute over how much HRE versus a third party owes for decommissioning costs, there are a number of possible scenarios under the TSA where disputes could arise in the future regarding the decommissioning costs and who pays what for the decommissioning costs. Would you agree with that?

A (Ausere) I could see, you know, there being a scenario where that could happen. The only thing I would point out is I think in any form of financial assurance there is that risk that there's disagreement over the application of the financial assurance.

Q But there's not the same risk if you have a standby letter of credit or a bond, is there?

A (Ausere) I don't know that I can agree with that. Again, depends what the circumstances
are.

Q Well, you're not going to have the risk with a standby letter of credit or bond that either HRE or NPT or even a third party coming in to take over use of the line would have disputes under the TSA. Those kinds of risks aren't going to arise with a standby letter of credit or a bond, are they?

A (Ausere) I can't say that because we don't have a letter of credit in place or a surety bond, for example. So it would depend what the terms of those instruments are.

Q Well, with either a letter of credit or a bond, any potential dispute is going to be with either the letter of credit or the bond itself. It's not going to be disputes regarding the TSA and whether its default under the TSA or whether some party owes a different amount under the TSA, correct?

A (Ausere) It could be with a different party, the dispute could be.

Q But the dispute is going to be with the entity providing financial security, whether it be the bank for a letter of credit or the insurance
company for a bond, correct?

A (Ausere) Correct. In this scenario.

Q But there's not going to be a dispute with the insurance company or the bond regarding the possible scenarios under the TSA. Correct?

A (Ausere) I would imagine that there's going to be an inner tie between when a Petition would draw down on the surety bond or the letter of credit with what the dispute is under the TSA. I don't think, I can't imagine they would be independent of one another.

Again, as I think it through, I mean there are risks, I think, with any form of financial assurance, be it letter of credit, a surety bond or a parental guarantee. We feel that we put a robust package in place by virtue of the TSA and the HQ guarantee. It is what we, we being Eversource, ultimately is relying on to recover its costs.

Q And given that there are risks for any financial arrangement, would you agree with me there are some additional risks in relying on the TSA for financial surety that don't exist if you rely on a standby letter of credit or a bond or an
unconditional guarantee?

A (Ausere) I can think of an example. You know, in the case in terms of what we have right now with the TSA and the HQ guarantee, the guarantor in this case is Hydro-Quebec, and Hydro-Quebec has an A plus credit rating which is very high up in the hierarchy of S&P's credit ratings. If I were to go out as an alternative and procure either a standby letter of credit or a surety bond either from a bank or an insurance company, they could easily have a lower credit rating, and in that case now I've introduced a new uncertainty which is the credit quality and the ability of that insurer to meet the obligation if it arises.

Q But you're focused on the quality of the insurer, whether it's HQ, the bank, or the insurance company, and presumably, any standby letter of credit or bond would come from a highly rated bank or insurance company. You wouldn't get one from certainly less than investment grade. My question was geared more towards not the risk inherent from any financial guarantee from the financial strength of the
guarantor. My question was more of, put that aside, under the TSA there are additional risks because there are additional scenarios which we have reviewed where disputes come up under the TSA that would not exist vis-a-vis the insurance company or the bank. Do you agree?

A (Ausere) Again, as I said earlier, I can't agree to that. Because there's, it is truly speculative. We're talking about a point in time far down the road, and what the terms are of these alternative forms of financial assurance are unknown to me. Because, again, it's a hypothetical. And I can't picture a scenario where there wouldn't be an interplay between the application of that financial assurance and what the dispute is under the TSA in this example.

Q Let me put a little more concretely just as one example. Under the TSA, if NPT defaults, HQ will have no decommissioning cost, right?

A In the specific circumstances I described earlier, if NPT defaulted, yes. There would be no, HRE would not be obligated to fund the fund.

Q Correct. If there were a standby letter of
credit in place, or a surety bond, and NPT defaulted on the TSA, we wouldn't have to rely on HQ for decommissioning costs. You would look to either the bank or the insurance company, correct?

A In that specific case, if NPT were to default, again, because of the contract, I agree in that you couldn't look to HRE or Hydro-Quebec to fund the decommissioning fund. In that case, I guess it would depend on who would be the counterparties to the LOC or surety bond. But I do agree with you that that is the scenario where HRE/HQ would not be responsible for the decommissioning costs, and as I said, on Friday, I think -- not I think. That would be a scenario where Eversource would step in.

Q Under this Application, Eversource is not legally obligated to step in, are they?

A Correct. Correct.

Q I'm going to shift gears for a minute and ask you some questions about the TSA globally. Now, it was signed in 2010 as you testified, and at the time the project was a 1200 megawatt transmission line all overhead with an estimated
cost of a $1.1 billion. Do you agree?
A I agree.
Q Then the TSA was amended in December 2013, and at that time, the project was still 1200 megawatts transmission line but there were 8 miles of underground and the cost was estimated to be $1.4 billion. Do you agree?
A I agree it was still 1200 megawatts, what the cost was and the miles of underground, I can't recall.
Q Maybe Mr. Bowes can recall.
A (Bowes) I'm sorry. Could you repeat that?
Q Sure. In December 2013, the proposed project was 1200 megawatts. At this point it included 8 miles of underground and the projected costs were 1.4 billion. Is that right?
A (Bowes) I believe that is correct. Yes.
Q And then, Mr. Ausere, in 2015, the project was changed to be 1090 megawatts. Now there were 60 miles of underground and 1.6 billion in projected costs. Was the TSA amended to reflect these changes?
A (Ausere) It was actually in terms of the reduction in the capacity of the line to 1090.
It was in that in the amendment we talked about on Friday, that was dependent, the effectiveness of which was dependent upon being selected in the three-state RFP, but because we weren't selected, that's not effective yet. So no, the TSA that's in effect today has not yet been amended.

Q Okay. That was the point I was trying to get to. So the TSA that's in place today has not been amended to reflect the current proposed project being a 1090 megawatt, 60 miles underground and $1.6 billion cost.

A (Ausere) Well, the cost actually isn't stated in the TSA nor is the miles of underground, but the TSA we do need to revise to reflect the reduction from 1200 megawatts to 1090.

Q And is the cost picked up in budgets that are submitted under the TSA?

A (Ausere) I certainly know that the costs are shared by virtue of our frequent meetings with Hydro-Quebec, but technically under the TSA, I believe we shared an initial construction budget at the early onset of the agreement, but we're not obligated in the TSA to start sharing, you
know, formal budget updates under the TSA until
the construction phase is begun.

Q Aren't you required, and I don't mean to test
your memory, I assume you have it in front of
you, and you can certainly look to refresh your
memory.

A (Ausere) Yes.

Q I think under Article 5, doesn't the Management
Committee have to approve the budgets, including
construction budgets?

A (Ausere) Yes.

Q So I think, my reading of TSA is that the
Management Committee has to approve any change
in the budget.

A (Ausere) Correct.

MR. IACOPINO: Just for everybody's
reference, that would be contained in
Applicant's 1, Appendix 16.

MR. PAPPAS: It's also Counsel for the
Public's Exhibit 16 as well.

Q Mr. Ausere, what's on the screen now is Counsel
for the Public's Exhibit 18, and this is the
letter that extended the approval date under the
TSA. Do you recall that?
A (Ausere) I do.

Q And that's in fact what paragraph 1 refers to. In paragraph 2, it refers to, it has a sentence that says, quote, notwithstanding the foregoing, prior to the approval deadline NPT and HRE shall file amendments to the TSA with FERC reflecting the terms and conditions of the amended and restated TSA for purposes of the Massachusetts RFP, and I understand that was done, correct?

A (Ausere) Wait. I'm sorry. Repeat your question. No. No. No. I was reading the --

Q That's fine. That's fine. We saw that in 2016 the TSA was amended for purposes of the Massachusetts RFP, correct?

A (Ausere) It was amended for purposes of the three-state RFP.

Q Three-state RFP. I stand corrected. Thank you. And then this contemplates that the TSA will be amended again for purposes of the Massachusetts RFP, correct?

A (Ausere) Correct.

Q And it goes on to say, or shall make a second amendment to the TSA to reflect changes to the approval deadline and other mutually agreed upon
changes, close quote. Do you see that?

A (Ausere) I do.

Q Is that essentially saying that whether it's the Massachusetts RFP or any other solicitation, the parties contemplate amending the TSA in the future?

A (Ausere) We potentially anticipate making an amendment to the TSA for purposes of the Mass. RFP to address the allocation of the revenue requirements under the TSA and let me elaborate on that. Let me elaborate by going back to the three-state RFP.

In a three-state RFP, what we anticipated doing was reallocating a portion of the revenue requirements or the payments due under the TSA from Hydro-Quebec to the electric utilities that were participating in the three-state RFP. So I think what we're doing here, not I think. What we're doing here is acknowledging that's a possibility for the Massachusetts RFP, but we're early into that process of deciding how to respond to the Mass RFP.

Q That was going to be my followup is, I assume one of the things you would amend the TSA would
be to reflect who would be making those payments, whether it's HRE, the tri-state RFP entity, the Massachusetts entity or any other future entity. Is that what's contemplated?

A (Ausere) It would be specific to the Mass. RFP. I just draw that distinction. You said any entity.

Q Well, what the letter says is it refers to future amendment beyond the Mass. RFP and that's --

A (Ausere) It does say for purposes of the Massachusetts RFP.

Q But it goes on to say, or shall make a second amendment TSA to reflect changes to the approved deadline and other mutually agreed upon changes. That's a rather open-ended sentence, and so are you saying that this is only intended for the Mass. RFP and not for any other solicitations that may come down the road later?

A I think so because, again, we're early on in the decision-making process for how to respond to the RFP, and we may ultimately decide to take a different tack than we did in the three-state RFP. I would say more than likely we'll follow
the similar tack to what we did in the three-state.

Q  But whatever tack NPT and HQ decide to take, they're free to amend the TSA going forward, correct?

A  NPT and HRE?

Q  HRE, yes.

A  Correct.

Q  So that the TSA that's currently in place as part of this Application could be amended in the future?

A  (Ausere) If the parties agree to it, correct. We don't anticipate it, but --

Q  If NPT amends the TSA in the future, do you know whether NPT intends to come back to the SEC for approval of that amended TSA?

A  (Ausere) I do not, just not knowing what the requirements of the SEC, I can't speak to that.

Q  Okay.

A  (Ausere) I would say if, when we, I saw the language disappeared from my screen, but the, I will tell you the intent there is an acknowledgment that there's a good chance that we'll follow the similar approach that we
planned to in the three-state RFP which is reallocating or passing through some of the revenue requirements that otherwise would be due to HRE to, in this case, the electric utilities in Massachusetts.

Q Okay.

MR. PAPPAS: Mr. Chairman, I'm finished my questions of Mr. Ausere for the public session. I do have maybe 15 minutes of confidential questions that we can take up at the appropriate time.

PRESIDING OFFICER HONIGBERG: Fair enough.

MR. PAPPAS: I'll now move to, assume you want me to move to the next witness?

PRESIDING OFFICER HONIGBERG: You're questioning a panel. In fact, Mr. Bowes has already given you a couple of answers as you've been asking Mr. Ausere so you're up with the panel.

MR. PAPPAS: Okay.

BY MR. PAPPAS:

Q Good morning, Mr. Bowes.

A (Bowes) Good morning.

Q Let me start by asking you some questions about
Eversource or NPT's technical ability to
construct the line. One of the topics for your
panel today. Now, as I understand it, the
overhead portion of the line was designed by
consultants hired by Eversource, correct?

A (Ausere) Yes. Burns McDonnell had designed the
overhead portions of the line.

Q As I understand it, Burns & McDonnell were given
Eversource's existing design criteria that they've used in the past?

A That is correct.

Q And Burns & McDonnell designed the overhead
portion using Eversource's existing design
criteria?

A (Bowes) If it was applicable, yes. They also
borrowed from Hydro-Quebec's design criteria for
portions of the overhead DC line.

Q Okay. And as I understand it, consultants also
were retained by Eversource to design the
underground portions of the line, correct?

A (Bowes) That is correct.

Q And for the underground portions of the line,
the consultants didn't use existing Eversource
criteria but used criteria from the industry or
their experience. Is that right?

A (Bowes) I would say partly, yes. Because it's a HVDC underground line, Eversource does not have any of that on its existing transmission system. However, many of the requirements for civil construction do come from Eversource standards.

Q Okay. Now, with respect to Eversource's technical ability to operate the line once it's in place, I assume you expect the line to be subject to ISO New England oversight.

A (Bowes) That is correct. Yes.

Q And I assume that the line will be operated by existing Eversource personnel?

A (Bowes) Yes, it will.

Q And will it be operated by existing Eversource criteria, maintenance and operation criteria?

A (Bowes) Yes, it will. In fact, I know I filed that in the other portion of my testimony with the construction panel.

Q Right.

A (Bowes) The requirements of Eversource's maintenance program.

Q Yes, I'm going to, because you sit on two panels, this morning is going to be more of a
general, more of a high level review, and when you come back to visit us again for the full construction panel, we'll get into more details.

A (Bowes) That is fine. I realize it's somehow confusing with two panels, but I'll do my best to answer all the questions in both sessions.

Q Feel free. Okay. So for, I assume then that there are portions of the underground line where Eversource does not have, certainly doesn't have personnel in place in New Hampshire for maintaining underground transmission lines; is that right?

A (Bowes) I wouldn't characterize it quite that way. The person responsible for maintenance of the transmission and distribution systems in New Hampshire today will also assume those responsibilities in the future. Some of the components are slightly different. However, the underground system in Manchester, New Hampshire, is maintained today by Eversource, New Hampshire, people. So I would anticipate that that would be the same type of talent and resource that would do that in the future.
off the record for just a second.

(Discussion off the record)

BY MR. PAPPAS:

Q Does Eversource anticipate maintaining operations and maintenance crews up north where there are 60 miles of underground transmission line?

A (Bowes) So the initial responders would certainly be from that general area. I would say if there was a major repair or major maintenance to be done, then it would be coordinated probably out of our Hooksett facility.

Q And you feel confident that given the new 60 miles of underground a fairly significant distance from your Manchester/Hooksett facility, that you have adequate resources in that area to maintain and operate the line and address emergencies?

A (Bowes) I'll answer it in several parts. The first thing that would be done would be there's real time monitoring and control of the transmission assets which include the underground portion, the converter stations, the
substations. That takes place today, 24 by 7 by 365, out of our Control Center in Manchester. So that would be the same in the future for this line. The maintenance personnel are on the clock 24 hours a day as well, so they would be responding immediately if an event occurred or an alarm occurred. So that would be unchanged. And we have substations in the North Country today where that takes place.

As far as a long-term maintenance program, I think Mr. Quinlan mentioned that that would be for several days per year. The system would be maintained. That would probably be coordinated out of the Hooksett office and be bringing experts probably from the manufacturers themselves.

Q Would that also apply for emergency repairs that require expertise, you'd have to bring in some experts from the manufacturers?

A (Bowes) Certainly during the warranty period we would. Beyond that, it's to be determined. We maintain thousands of miles of transmission lines today so I would anticipate it would be the same as what we do for the rest of the
Okay. So let me ask you some questions about managerial ability to construct the line. And as I understand from your testimony, the essential matrix is as follows: That Eversource has retained Quanta to be essentially the general contractor?

A (Bowes) For the construction portion, yes.

Q And ABB will be responsible for the underground portion, is that correct?

A (Bowes) Partially correct. So ABB is both the cable manufacturer and also the converter station manufacturer. So they will be responsible for construction of or the design, engineering and construction of the two converter stations, the one in Hydro-Quebec and the one in New Hampshire. They also have the responsibility to install and splice, well, actually, manufacture, install and splice the cables.

Q And who's going to be responsible for the 53 or so HDD/microtunnel; is that going to be ABB as well?

A (Bowes) No, that be PAR or Quanta.
Q And PAR Electric is a subsidiary of Quanta?
A Yes, it is.
Q And as I understand it, PAR will be the owner's agent, NPT's agent, to oversee construction, correct?
A (Bowes) That is correct.
Q And so you'll have Quanta as a general contractor, you'll have ABB as you just described their role, you'll have PAR, one of Quanta's subsidiaries being Eversource's, owner's representative, and presumably on top of all that comes Eversource?
A Yes. And this will be described in the testimony. I believe it's actually due today. So there is one other nuance to that is Burns & McDonnell is the owner's engineer. So they will have responsible for the design review, approval of changes, community outreach, some inspections as well under contract to Eversource.
Q That leads me to my next question which is construction monitoring. Who is going to be responsible for overseeing the construction monitoring?
A So right now Eversource is maintaining a portion
of that, and we are contracting with Burns & McDonnell for a portion of that.

Q Okay. So for monitoring, whether it's Quanta or ABB's work or PAR's work under Quanta, it's either going to be Eversource or Burns & McDonnell to monitor those folks during construction?

A (Bowes) To monitor the contractors, yes. Now, obviously, the general contractor, PAR, will have oversight in the field and construction inspection as well.

Q Are they going to be doing that as their role of the owner's agent or in their role as one of the contractors or both?

A (Bowes) As the role of one of the contractors, the general contractor.

Q As the owner's agent, what is their role?

A (Bowes) So they would be acting on our behalf to do the construction, the community outreach, obtaining necessary permits, any of the functions related to the construction activities. Monitoring the work of subcontractors, and coordinating an overall project schedule, and ultimately responsible for
the project cost.

Q Okay. And would they also be monitoring the work of their own workers?

A (Bowes) Yes, they would.

Q Okay. Now, as I understand it, the 52 miles underground is the longest underground construction project for a transmission line that Eversource has undertaken; is that correct?

A (Bowes) So it's the longest civil construction portion. It's not the longest cable project.

Q And when you say civil construction project, tell us what you mean by that.

A (Bowes) So you characterized it as 52 miles. That would be the longest single segment. That would be 104 conductor miles with two conductors. We have done longer projects with conductors. In fact, the Middletown-Norwalk project was 144 miles.

Q Now, do you anticipate construction over a two-year period?

A (Bowes) For which portion? The entire project?

Q The entire project.

A (Bowes) I would say two to two and a half years, yes.
Q Okay. And during that period, Mr. Ausere's testimony includes Eversource undertaking approximately $9.6 billion of infrastructure projects total. Do you recall that?

A (Bowes) Yes, I'm not sure the time period was identical, but I do remember 9.6 billion. I think it was over four years possibly.

Q And as I understand it, that is the largest, certainly from a dollar amount, the largest amount of construction projects that Eversource has undertaken or overseen in recent history. If not its entire history.

A (Ausere) This individual project, you mean?

Q No. I mean the total of $9.6 billion in projects. That's the largest amount, from a dollar perspective, of projects that the company has overseen?

A (Ausere) Over that four-year period?

A (Bowes) I think it could be. It may not be the longer transmission expenditure over a four year project.

Q I was looking at total projects, not just the transmission portion.

A (Ausere) It could be. We'd have to check.
Q Okay. During all of these projects, I assume much like the Northern Pass project, Eversource is going to have to manage, in addition to construction, its outreach to towns and public entities, businesses, first responders, residents and so forth?

A (Bowes) Yes. That is true.

Q And they'll have to manage the claims process and everything else that goes on with the project, correct?

A (Bowes) Yes. Hopefully, the claims process is relatively small, but --

Q Okay. Given the size and scope of both the Northern Pass project as well as all the other projects during this two, two and a half year time period, has Eversource done anything to increase its management capability to manage all these projects?

A (Bowes) So I would say yes, we have. We maintain groups in each of the states, each of the service territories where we use a project management organization. We have project controls in place, project estimating, project scheduling, cost analysis, and highly trained
project managers that have responsibilities for project schedule, scope and budget. So we implemented that approximately ten years ago and we do staff it based upon the needs of the company. We've extended that to the recent acquisition merger we had with NSTAR Electric as well so those organizations are now combined, and an example of my involvement with this project was adding additional technical and managerial capability to the phase through siting, permitting and, ultimately, construction.

Q Did you bring in more staff to do that?
A (Bowes) We certainly have brought more staff on as Eversource, yes.

Q And is Mr. Fortier the project manager for the Northern Pass project?
A (Bowes) He's actually titled the project director, but, yes, in essence, he has the project management responsibilities.

Q Does he have project management responsibilities for any other projects during this two, two and a half year time period?
A (Bowes) He does not.
Q Okay. So let me shift gears and ask you some questions about something that Mr. Quinlan suggested I ask you about rather than he.

A (Bowes) Okay.

Q In Counsel for the Public's Exhibit 42, and you don't have to look at it, I'm just going to give you the context of what --

A (Bowes) Okay.

Q -- of what he passed to you. Counsel for the Public's Exhibit 42 is a Draft Memorandum of Understanding with towns along the project route, and one of the sections in there deals with damage to roads, and Mr. Quinlan testified that that included damage to roads during construction. So I want to ask you some questions about the NPT's interaction with towns to deal with damaged roads during construction.

A (Bowes) Would that be possible to get that up on the screen, that section?

Q Sure. When I asked Mr. Quinlan, I was referring to Article 3 that's now on the screen.

A (Bowes) Yes. I see it.

Q Okay. And he testified that this article covered damage to roads during construction,
both from either construction vehicles or having to deal with the underground construction and restoring roads to their prior condition. Do you recall that?

A (Bowes) Yes, I do.

Q Okay. So let me start with the construction part, the underground portion. Now, as I understand it, the company's commitment is to return the roads to as good or better condition as they existed before construction.

A (Bowes) I believe that's a statement he made, yes.

Q And the underground portion is going to be buried approximately 7 feet below the road surface?

A (Bowes) The bottom of the trench, I think, in most cases will be 7 feet or less if that's what you mean by --

Q Yes.

A (Bowes) Yes.

Q And are you familiar with the reconstruction or repair standards for the towns where the underground portion will be built on town roads?

A (Bowes) I would say I'm not specifically.
However, we would follow the State DOT requirements unless there was some other requirement. I'm thinking in the North Country there are some dirt roads where we will have to work with the local road agent to make sure the repairs are done in an adequate manner and that the final grading and final restoration is complete.

Q Okay. Typically, road repair standards have things such as the type of gravel to be used, correct?

A (Bowes) Yes, they do.

Q And the fluidized bed backfill material, do you know if that's acceptable to replacing removed gravel?

A (Bowes) In general, it is not. It happens beneath where the gravel and the road surface would be repaired. In fact, that's one of the comments that New Hampshire DOT has had is that they're looking for a certain depth of that gravel mixture on top of the fluidized backfill.

Q When a road is constructed, do you know how deep typically in New Hampshire they go for the subsurface of the road?
A (Bowes) 30 inches or more. Sometimes 36 inches.

Q Do you know that -- that's the subsurface. Do you know how deep they go for what's known as the subsubsurface?

A (Bowes) I do not.

Q I'll represent to you it's deeper than 36 inches. Do you know whether or not the fluidized backfill material is acceptable for what's known as the subsubsurface of a road in New Hampshire?

A (Bowes) I believe it is, but DOT has asked us to do some test facilities to verify that, and I think they have limited experience with that type of backfill. I think they'll find that it is not only acceptable, it may actually be superior to some of the subsurface materials that are used today.

Q Okay. And are you also familiar that typically when a road is constructed new, how it is they compact the gravel, both the subsubsurface as well as the subsurface?

A (Bowes) In general, yes.

Q And they generally use large machines like rollers and so forth?
Q And when the construction is installed for burying the line, the gravel that's put back in will be compacted primarily with hand compactors, correct? It's not big enough cut to put a machine in.

A (Bowes) Yes. So the trench is going to be about 2 feet 9 inches wide so there will be, still a mechanical compactor, but it won't be the same size as a roller used for the entire roadway.

Q Right. It's a hand machine, correct?

A (Bowes) I guess you would call it that. It's still a mechanized machine, but it's operated by a person, not by a, well, I guess they're both operated by a person, but it's inside the trench so it's going to be a much smaller machine than a large roller.

Q Would you agree with me that those smaller machines don't have the same ability to compact the road as the large rollers do?

A (Bowes) So they have the necessary capability to do it. Certainly, it's not a question of sufficiency, but, clearly, a heavier machine would compact it more.
Q So after the construction is done and the gravel is compacted by the hand machine, it's not going to be compacted the same level as the rest of the road that was compacted with a large roller. Would you agree with me?

A That is probably correct. Some of these roads, I'm not sure I could state what the compaction standard was when they were built, if any, certainly in the North Country.

Q After the gravel is replaced, compacted, then the two, two and a half, however wide the cut is, is then patched with asphalt if it's an asphalt road or gravel if it's a gravel road.

A (Bowes) a temporary repair is made if that's what you're talking about, yes.

Q Well, eventually, is the intent for a permanent repair to just patch the disturbed area or patch curb to curb?

A (Bowes) So that's a very good question. The temporary patch is only over the cut in the road surface, about 2 feet 9 inches to three feet. That will be the temporary repair. The entire road lane would be the milled and paved. In certain cases, restrictions are that you have to
go curb to curb. So that would be dependent
upon the final ruling from the New Hampshire
DOT.

Q Let's say, for instance, in a town, if the town
requested curb-to-curb repair, would the project
do that?

A (Bowes) If it was on a town road that will be
subject to this agreement that we have with each
town. In general, we would do one lane, but in
many of the projects we do, we end up doing curb
to curb.

Q Now, would you agree with me if you do only a
lane, you're going to leave an open cut between
the new pavement and the existing pavement?

A At the midpoint, yes, or centerline.

Q And that open cut is susceptible to water
entering into the area?

A (Bowes) I suppose it is the same as any cut
would be in the roadway.

Q Right. But you don't have that open cut if it's
curb-to-curb repaving, correct?

A (Bowes) I would say yes. That's accurate.

Q Okay. And that water that enters the road then
goes into the subsurface and into the gravel
whether it's the subsurface or the subsubsurface, correct?

A (Bowes) I guess it ultimately would migrate, yes.

Q And is it your understanding or experience that that water, particularly with freezing and thawing, often is what creates cracks and potholes and other defects in the road surface?

A (Bowes) So I think it's also the, where the travel takes place. Typically in the center lane, there's much less travel and thus fewer potholes in the middle of the road. Usually are in the traveled lane. But in general it certainly could lead to that.

Q Are you familiar with studies regarding utility cuts into paved roads?

A (Bowes) I would say not necessarily studies but certainly a lot of experience with that.

Q Okay. So I will represent to you that there are lots of studies about the effect of utility cuts in paved roads. Have you had an opportunity to review any of those?

A (Bowes) I have not.

Q Are you familiar with the National DPW
Association's view, published view, on the effect of utility cuts in paved roads?

A (Bowes) I am not, but I'd be glad to review it if you have a copy.

Q I have a copy but not with me. Are you familiar with the ASTM's standards regarding utility cuts in paved roads?

A (Bowes) Somewhat, yes, I am.

Q And you're familiar that ASTM considers a utility patch to be a defect in a paved road?

A Again, that would be in the travel lane, it would be a cut for a perpendicular crossing. In this case, we're talking about parallel.

Q Are you familiar that ASTM, whether it's in the travel lane, whether it's in the middle or wherever it is in the paved road, ASTM considers any utility cut in pavement to be a defect?

MR. NEEDLEMAN: Tom, do you have a document you could point to to show him what you're talking about?

MR. PAPPAS: I don't have it with me, but I'm asking if he's familiar. He indicated he was familiar somewhat with ASTM so I'm following up. He wasn't familiar with the study so I
didn't follow upon those, but if he's familiar with ASTM, I'm just following up on his familiarity.

A (Bowes) My understanding is they did classify things differently depending on the location of the cut and the type of cut.

Q Are you familiar with either studies or ASTM that have found that utility cuts in paved roads diminishes the useful life of the road?

A (Bowes) That I would believe, yes.

Q Would you agree with me that if the restoration is curb to curb, you're not, it's far less likely to have the problems than if you have less than curb-to-curb restoration because you don't have the same open-edge cut or other issues?

A (Bowes) Yes, and that has been my experience as well. This weekend I had the opportunity to travel over a project that we'd done, actually the Bethel-Norwalk project about ten years ago, and I just happened to be at a recreational event with my son, and traveled over the same roadway, so Route 7 in Norwalk, Wilton and then some smaller state roads and town roads in
Redding, that's a location we did ten years ago. Same type of trench size and scope. It was, there was no visible trace of any settling, of any compaction issues, of any paving issues, and, again, that was a curb-to-curb paving that had been done. So ten years after there was no visible impact of where the transmission line had been constructed. There was no issues with the road.

Q And that was a curb-to-curb repair.

A (Bowes) That was, yes.

Q So let me switch gears and ask you a few questions about the Phase II line that Mr. Quinlan talked about in his testimony. And just to put it in context, the Phase II line is that line that starts in Canada and goes through Vermont, enters New Hampshire at Monroe, New Hampshire, and then goes through New Hampshire down into Massachusetts, correct?

A (Bowes) Yes, it is.

Q And Counsel for the Public Exhibit 10 which I'm not going to ask you to look at, but that's the Exhibit I showed Mr. Quinlan where Eversource looked at the Phase II line as part of its
consideration for routing the Northern Pass project, correct?

A (Bowes) Yes. Could we put that diagram up on the screen?

Q If you'd like.

A (Bowes) I would.

MR. IACOPINO: What number is it?

MR. PAPPAS: 10.

Q That's the exhibit that I showed Mr. Quinlan.

A (Bowes) I thought you were talking about the pictures.

Q The pictures. We can do that as well. Would you want the picture of the route or the line itself?

A (Bowes) The picture of the route would be great. I think you're going to routing issues and constraints? Okay.

Q Okay. So what's on the screen now is Exhibit 11 and the pink line is the Phase II line. Do you see that?

A (Bowes) I'm seeing some kind of different colors, but it's certainly the one that looks like two shades of color to it, one in Vermont and one in New Hampshire that's slightly
Q Pink might be a little bit different in Vermont, but it's that pink line. Do you see that?
A (Bowes) Yes, I do.
Q Okay. As I understand it, well, first of all, as I understand Eversource owns a portion of that, does it not?
A (Bowes) I believe we have an interest in the line, yes.
Q As I understand it, Eversource investigated whether it could add another transmission line within that right-of-way, is that right?
A (Bowes) I would say it was Eversource and Hydro-Quebec for their portion of it.
Q Okay. And Eversource and Hydro-Quebec determined that they could not add another line within that right-of-way, there wasn't room; is that correct?
A (Bowes) That is correct.
Q As I also understand it, Eversource did not look into whether the line that exists could be reconfigured in order to increase the voltage; is that right?
A (Bowes) So you're talking about the New
Q  Correct. New Hampshire portion.
A  That's correct. The limitations we saw were on the Vermont segment of the line primarily, and HQ had limitations north of the border on their segment of the line as well. That's really what made us look at alternatives to that corridor. Specifically, in the Vermont section, there are several conservation areas. They're listed in the Section 2.4 of the DOE. Includes the Kingdom State Forest, Silvio O. Conte National Wildlife Refuge, West Mountain Wildlife Management Area, Victory State Forest, and the Victory Basin Wildlife Management Area. If you go back to that diagram?
Q  It's up in Vermont. I got that.
A  (Bowes) Again, that's a portion of the issues we had in the Vermont portion.
Q  Yes.
A  (Bowes) In the Canadian portion Hydro-Quebec also had limitations on their right-of-way.
Q  Um-hum.
A  (Bowes) And it would have to be necessary physical separation of the two DC lines existing
HQ Phase II and now the new, if you want to call it the new Northern Pass DC line. And they would have to expand the right-of-way there. When they originally built the Phase II project, they had significant siting and permitting issues on their segment of the line, and for them to expand the right-of-way in Canada, they would have to do some takings, not only of property but also of many buildings. So they discounted the Canadian portion of the line, they informed us and we worked mutually on the Vermont section of the line. So those were ultimately the limitations that we did not go further with. But you're also correct with the existing right-of-way in New Hampshire, we didn't believe that there was room to put a fourth transmission line.

Q Yes.

A (Bowes) Which is right here. Correct.

Q And that's why I've got now Exhibit 12 on the screen. Currently, there are three sets of towers in that right-of-way, correct? And we're seeing one segment of that?

A (Bowes) Yes. Tower sets A and C are the
original 230 kV infrastructure that connected some of the hydro in the North Country, ultimately down to the Boston area. Towers A and C are circa 1930s. And tower set B is the HQ Phase II line which was built in mid 1980s, and that's a 450 kV DC line in the center of the other two.

Q My question is, for the Phase II New Hampshire portion only, as we're in New Hampshire and I'm focusing on the New Hampshire portion only, for the Phase II New Hampshire portion only, am I correct that it's technologically possible to reconfigure these lines to add a 345 kV, in other words, upgrade the amount of power that can come down these lines?

A (Bowes) So National Grid has applied to ISO to have the up rate of those lines studied. So I would say it's premature to say it's technically feasible. Constructability wise, certainly, you could remove these structures and put new ones up. You could replace these structures in kind, you could reinsulate the structures, you could reconductor the structures. So many things could be done on the right-of-way.
Q And those many things could be done in order to increase the amount of power you could send over these lines.

A (Bowes) Again, pending the ISO studies, right, and where they would terminate, actually goes into Massachusetts. So I'm not confident of what would happen in the Massachusetts segment of the line.

Q Let me ask you just a couple of questions about the Coos loop.

A (Bowes) I actually have a copy of your presentation. Number 46.

Q Okay.

A (Bowes) If that's where we're going.

Q No, actually, but good guess.

My question is simply this. Certain portions of the upgrades are within the NPT $1.6 billion estimate, correct?

A (Bowes) Yes.

Q And there is also a small portion of the upgrades that it's anticipated will be funded by the Forward NH Fund; is that right?

A (Bowes) I think that's probably a question that Mr. Quinlan answered, and I'm unclear what his
response was in that.

Q  Okay.

A  (Bowes) My understanding is that Northern Pass, the project is funding those upgrades.

Q  On the screen now is Exhibit 47. And if you look at the very bottom and just to refresh your memory, this is an internal document by Mr. Fortier of Eversource, and at the bottom under summary it indicates that the NPT project upgrades of approximately $52 million plus a $1.2 million worth of additional upgrade, do you see that?

A  I do.

Q  And he indicated that that would be paid for by the Forward NH Fund. Do you see that?

A  I do, and I think Mr. Quinlan has since said that that will be funded part of the project. That is the segment of the transmission corridor from just west of Paris substation into Paris substation, about half a mile or 6 structures, and I think he's committed that that would be just done as part of the project and not funded from another mechanism.

Q  Okay. That's actually when I get to my point is
I want to get what the commitment is. As I understand the commitment, it's to do what is necessary for the Coos loop as part of the project.

A (Bowes) And in this case the entire 115 line from Paris substation through Lost Nation over to Whitefield, and then there's some upgrades right outside of Whitefield as well. That's all part of the Northern Pass project.

Q And those upgrades outside of Whitefield helps in terms of being able to send power to the New England grid, correct?

A (Bowes) Yes, it's another constraint that's physically outside of that loop.

Q Okay. And there also needs to be an ISO New England study, what's known as an I.3.9 study on stabilization. Is that right?

A (Bowes) So there would be another study done that would look at what other constraints that are remaining on the loop. We believe that there are some voltage stability issues, and Mr. Quinlan spoke of that. There may be equipment that would be necessary inside Berlin substation or at some other location, and I believe he
committed to funding that as well.

Q Okay. And that's that SVC?

A (Bowes) Potentially, it's a static bar compensator. It's a dynamic device that adds reactive power to the system. There are other alternatives to that, a simple capacitor bank could suffice or there may be no necessary improvements pending that ISO study.

Q And my understanding, that's why I wanted to confirm from you, that whatever that ISO study concludes, whatever is necessary in terms of stabilization, NPT is committed to doing that as part of the Northern Pass project.

A (Bowes) That is what Mr. Quinlan committed to, yes.

Q Thank you. Last topic. And this may test your memory a bit. But would the plans that were submitted with the Application, do you know how many of the towers were lattice towers either in numbers or percentage?

A (Bowes) So I know what they are today. But how many have changed since the original? I'm not sure that I can answer that. I know Mr. Johnson could.
Q Okay.
A (Bowes) I have the numbers of what they are today and actually it was a data request. We broke them down by town as well.
Q Um-hum.
A (Bowes) As of today there are 686 lattice structures, 237 monopole structures and 186 H-frame structures.
Q And when you stay as of today, that is as of the data request response?
A (Bowes) Correct, which is, I guess that's actually about a year ago. It's 4/27/2016.
Q Right. So my next question to you is, you might have anticipated, is do you know if that has changed in the last year?
A (Bowes) I don't know positively yes or no. I think it has. I think the number has changed significantly since we filed as well. I think we've added many more monopoles.
Q I will wait to ask that question again once the construction panel comes up.
A (Bowes) And we will now be prepared for you.
Q I assume you will. Thank you, Mr. Bowes and Mr. Ausere. I have no further questions in
public session.

PRESIDING OFFICER HONIGBERG: All right. Next up. Is Municipal Group 1-North. Anyone?

(No audible response.)

PRESIDING OFFICER HONIGBERG: Municipal Group 1-South. Mr. Whitley?

MR. WHITLEY: Thank you, Mr. Chair. I was going to use the podium so I'm going to need just a second to set up. Would now be an appropriate time to take a little break?

PRESIDING OFFICER HONIGBERG: Well, off the record.

(Discussion off-the-record)

PRESIDING OFFICER HONIGBERG: No, Mr. Whitley. Just set up and we'll --

MR. WHITLEY: Plow ahead?

PRESIDING OFFICER HONIGBERG: Yes. Mr. Whitley?

MR. WHITLEY: Thank you, Mr. Chair.

CROSS-EXAMINATION

BY MR. WHITLEY:

Q Good morning, Mr. Ausere and Mr. Bowes. My name is Steven Whitley, counsel to several towns along the route. New Hampton, Littleton,
Pembroke, Deerfield, and the Ashland Water and Sewer Department, and I'm also the spokesperson for two of the Muni Groups, 3 North and 1 South.

Mr. Ausere, I wanted to start with you. And I had a question about municipal taxes. And I've pulled up on the screen there and I hope that you can see it, but that is your Prefiled Testimony, Applicant's Exhibit 7. And if you look down towards the bottom of that page, you'll see a question there, how are NPT's revenues determined under the TSA. You see that question there?

A (Ausere) I do.

Q Among the items that you provided in response, you list municipal taxes. I believe it's on line, let's see, 25. Do you see that?

A (Ausere) I do.

Q So the burden of paying these taxes, NPT is compensated for that by the payments under the TSA.

A (Ausere) Correct. NPT pays the property tax expenses, and under the formula rate with HRE recovers the cost of those property taxes.

Q Okay. And the formula rate, does it require a
certain methodology or set any sort of a ceiling
or a floor on what amount of those municipal
taxes would be paid back to NPT?
A (Ausere) Not to my knowledge.
Q And I understand that the TSA was reviewed and
approved by FERC, is that correct?
A (Ausere) Correct.
Q To your knowledge, does FERC require any sort of
methodology or put any sort of ceiling or floor
on recouping municipal property taxes through
this formula rate?
A (Ausere) Not to my knowledge.
Q I believe the other day, were you here the other
day for Mr. Quinlan's testimony? And I said the
other day. I meant Friday. Sorry.
A (Ausere) I was here Friday, but I was not in the
room the entire time. So it depends.
Q Okay. Well, I posed a question to Mr. Quinlan
which was, I'm going to pose a similar one to
you. Mr. Quinlan indicated that municipal
property taxes are part of the transmission
tariff that is distributed to all ratepayers in
the regional grid. And so I don't know if you
were there for that portion of his testimony?
A (Ausere) I don't recall that so I might have been out of the room during that.

Q Well, my question is, it appears that Northern Pass is getting compensated twice for the municipal taxes because Mr. Quinlan indicated that they're considered a transmission cost and so they're part of the tariff that everybody pays for in their electricity rates in the region, and I believe you just indicated that the TSA states that the municipal property taxes are also part of the formula rate that NPT receives from HRE.

A (Ausere) So in this case, property taxes related to Northern Pass project are recovered through a tariff that's actually with HRE. That's approved by FERC.

Q When you say in this case, you mean the TSA?

A (Ausere) In the case of Northern Pass. So property taxes are municipal taxes arising from Northern Pass Transmission are recovered through the revenue requirements that HRE pays. Again, I wasn't, I don't think I was here for Mr. Quinlan's testimony so I can't speak to that, but other transmission projects, Reliability
Projects that Eversource undertakes in New England or other utilities undertake in New England, they have similar formula rates, but in that case, for those Reliability Projects, even though it's a similar formula rate and a similar tariff, the payer is different. In those projects, the New England ratepayers ultimately are charged for the projects. In this case, the payer is HRE. There's no double payment as you might, as you seem to suggest.

Q I understand your answer, but is there any document you can think of or point to where either FERC states affirmatively or anywhere in the TSA where it states affirmatively that if these taxes are paid some place else that there's no obligation to pay them back a second time?

A (Ausere) It would be the TSA and the formula rate attached to that TSA. Under that contractual arrangement, HRE is obligated to pay for municipal taxes arising from the project. And likewise, for our other projects, those are different assets, different facilities. You know, under those tariffs, property taxes
associated with Northern Pass could not be
recovered from that. You can only recover it
one time.

Q Right. Right. But I guess my question was, in
the TSA, correct me if I'm wrong, but I don't
believe it states in the TSA that the amount of
the property taxes is potentially offset by any
monies that NPT gets from regional tariff. I
don't know if you have the TSA in front of you
up there?

A (Bowes) I would say, I think things are
backwards here. Northern Pass assets wouldn't
be collecting taxes for other assets. Quite the
opposite. For example, the lease payment that
NPT will pay to PSNH would offset PSNH expenses.

Q Let me ask it this way then. In the TSA,
Mr. Ausere, do you have the TSA up there in
front of you?

A (Ausere) Now I do.

Q I believe this is Applicant's Exhibit 1,
Appendix 16. So if you could turn to the
Appendix at the back which talks about how the
formula rate is calculated, I believe that
starts, I don't have a Bates-stamped copy, but
it's Attachment B. You see that?

A (Ausere) I do.

Q Okay. And on Attachment B, you go to page 4, and I'll put it on the ELMO here so we can all see what I'm talking about here. You see that on your screen there?

A (Ausere) I do.

Q And you see there the Roman heading is Calculation of Revenue Requirement. And you see G, which I bracketed there, says Municipal Tax Expense. Correct?

A (Ausere) I see it.

Q On the following page, page 5, of the same exhibit. Wrong page. Apologies. One second. Here we go.

So page 7. Municipal Tax Expense. Again, bracketed in G, there, equal owner's electric total municipal tax expense. So my question again, is where is the affirmative language in here language in here that states that if NPT is getting compensated from a regional tariff that it doesn't have to be compensated from HRE under this revenue requirement?

A (Bowes) NPT is not part of a regional tariff.
Q I'm sorry. Say that again, Mr. Bowes?
A (Bowes) NPT is not part of a regional tariff.
Q Okay.
A (Bowes) The PSNH transmission assets would be.
Q Okay.
A (Bowes) As I mentioned on item L on the visual
description you just provided, item L is
actually the lease payment from Northern Pass to
PSNH which would again, in essence, offset the
cost of PSNH. They would have to take it in as
a revenue credit.
Q Okay. Thank you. Mr. Bowes, I want to turn to
your Supplemental Testimony which is Applicant's
Exhibit 10. Just give me one second and I'll
pull it up.
A (Bowes) I have it.
Q Let's go off the record real quick.
   (Discussion off the record)

BY MR. WHITLEY:
Q Okay. Mr. Bowes, you said you had your
Supplemental Testimony in front of you?
A (Bowes) Yes, I do.
Q Okay. Thank you. So what I have on the screen
there is page 2 of your supplemental. If you
could turn to lines 14 through 17.

A (Bowes) Yes, I have them.

Q And in response to the question there in the middle of the page, you talk about economic feasibility or viability of the project. You see that question and answer there?

A (Bowes) Yes, I do.

Q And you start out by saying that a project like Northern Pass has to be able to attract investment from a market participant, and you've done that here because your market participant is Hydro-Quebec. Correct?

A (Bowes) Yes.

Q And then you go on to say that their investment decision to get involved was based on being able to recoup their investment and some acceptable return. You see that?

A (Bowes) Yes.

Q So I wanted to know if you had any knowledge as to what the acceptable return is for Hydro-Quebec.

A (Bowes) I do not know what their internal hurdle rates are or what they look at for an acceptable investment. This was really in the context of a
cost discussion and how much additional cost 
would Hydro-Quebec be willing to pay for this 
project.

Q So it was more of a general statement and not 
related to any specifics of Northern Pass or 
Hydro-Quebec?

A (Bowes) That is correct.

Q Okay. If you could turn now to page 3 of your 
testimony. Let me change the screen here. Page 
3, the second full paragraph. I wanted to ask 
you some questions beginning there. Do you see 
that portion of your testimony?

A (Bowes) I do.

Q You start out by saying that increase in 
required project investment has been accompanied 
by a decrease in expected revenues. You see 
that?

A (Bowes) I do.

Q Can you quantify what that decrease is in 
expected revenues?

A (Bowes) So I believe it goes on to further say 
in that paragraph, if the wholesale market is 
just a representative of what has happened in 
the market as far as revenues goes, that's
dropped approximately 50 percent.

Q And that drop is due to natural gas prices being so low?

A (Bowes) Primarily. Yes.

Q Okay. So were the expected revenues calculated on the basis of the wholesale market as opposed to some other market mechanism?

A (Bowes) For this example I used that as a proxy. I do not know what Hydro-Quebec plans to do for a revenue stream.

Q Okay. And why did you choose this example then?

A (Bowes) Again, it was to show the applicability of adding cost to the project. It's really, is part of the overall testimony around an all-underground alternative and it not being cost effective for Hydro-Quebec to pursue.

Q Okay. So some of the examples in this paragraph then, again, are general in nature and not related to any specifics with regard to Northern Pass?

A (Bowes) So I would say that the two of them, the increased cost of the project from 1.1 to 1.6 billion is a hard fact.

Q Right. Right. I think I meant, and I didn't
mean to interrupt you, but I think I meant in
terms of your discussion about Northern Pass's
or HQ's tolerance for risk and what kind of
revenues it could expect. I mean, I understand
that the increase in the project cost is a
pretty hard figure. The reduction in the
capacity over the line is a pretty hard figure.
So I mean other than those.

A (Bowes) So I would say those are the two
founding facts in the document. The rest is
either a forward-looking potential price in the
wholesale market in 2019, a change versus, say,
2010 when the project was kind of estimated for
the first time. So the rest is more how much
risk and what other market opportunities would
Hydro-Quebec have to pursue to make this project
feasible.

Q Okay. And I believe you just said that you
weren't aware of what other projects they would
have to pursue to make this feasible.

A (Bowes) I think it was markets, but, yes, and
there's obviously one I think I say here either
in this paragraph or in another one that talks
about potentially the capacity market,
potentially a clean energy market of some sort.

Q  Your statements about market opportunities for Hydro-Quebec are general and Illustrative in nature and not based on any specific constraints that you're aware of.

A  (Bowes) That is correct.

Q  Okay. On that same paragraph, line 16 through 18, you say you're using, again, the wholesale energy market here as an example, and you make the statement that energy revenues that HQ receives would not cover the cost of the revenue requirement. You see that?

A  (Bowes) I do.

Q  So you don't know how short or how much more money HQ would have to make in other market opportunities due to the shortfall.

A  (Bowes) So for this forward-looking example, we could certainly calculate that. In a confidential session, we could talk about what the first year revenue requirements would be.

Q  Okay.

A  (Bowes) But to answer your question, I would agree with you that that is just one potential opportunity that Hydro-Quebec would have in the
markets.

Q Okay.

A (Bowes) It was really, again, an illustrative example to show if much more cost is added to the project, it would no longer be feasible.

Q Okay. And thank you, by the way, for reminding me about the confidential nature of some of the information. I'm not intending to elicit that right now so if I ask a question that that is a component of just remind me and we can deal with that in a confidential session.

A (Bowes) Sure.

Q In line 19 through 20, I guess, is the next sentence, you say HQ would seek to cover the shortfall with other sources of revenue. And then you provide an example, one example of the forward capacity market. Do you see that?

A (Bowes) Yes, I do.

Q But you end the sentence with, it would face a significant risk of loss. Can you explain that more significant risk of loss?

A (Bowes) I guess that means if it were not able to find other market opportunities is really the context there.
Okay. So the loss, the risk of loss doesn't stem from the forward capacity Market is what you're saying?

That is correct.

And so what kind of a loss were you envisioning when you wrote that?

(Bowes) So if Hydro-Quebec were not able to participate or find other sources of revenue, it would have to make a determination using just in this case the wholesale energy sales.

And as you mentioned earlier, the wholesale energy market wouldn't get you there.

(Bowes) It doesn't appear to in the first year. Over the course of the project, they may find that an acceptable risk. I don't know.

Okay. Other than the forward capacity market, what other sources of revenue are options?

(Bowes) So certainly bilateral contract would be the primary one. Those might include an RFP like the Massachusetts RFP, some future clean energy RFP or just a sales into the market for more hours of the day than was included in my calculations.

Okay. Any others?
Q Okay. When you say wholesale market, does that, to your mind, include merchant sales?

A (Bowes) I'm not sure if I understand what you mean.

Q I'm just trying to understand what your, whether your response included merchant generators or merchant distributors of power.

A (Bowes) So that would be a bilateral contract, you mean? With another entity?

Q Yes.

A (Bowes) Yes, it would include that.

Q Okay. What about environmental attributes?

A (Bowes) That is what I said when I mentioned the clean energy RFPs or something like that. They could seek, depending on the jurisdiction, they could seek some sort of clean energy allowance or credits. I think in most of these states today, large hydro is not specifically called out for renewable energy certificates.

Q On line 22, you talk about NPT and HQ need to explore new market opportunities which would require a cost competitive profile. Do you see that?
A (Bowes) Yes, I do.

Q Those new market opportunities, is that the same options that we've just been discussing now?

A (Bowes) I think it is in general. I mean I can't predict what will come out in the future. When the project was conceived, there was no three-state RFP, there was no Massachusetts RFP, and potentially for Rhode Island or Connecticut RFP. So there may be other things that emerge in the future that Northern Pass or HQ could provide services to.

Q Okay. So when you use that language, again, you didn't have any specifics in mind, it was a general category?

A (Bowes) So I guess as I've thought about it as you posed the question, I guess there are other ancillary services in the ISO New England market as well. There's frequency regulation, there's reactive power, black start capability. There may be other things that HQ would be interested in pursuing that would provide other sources of revenue besides just energy sales.

Q Okay. Among the various options that we've talked about so that's forward capacity market,
the wholesale market, and environmental attributes if you consider those distinct, is there one of those that to you has more risk?

Q (Bowes) Could you repeat that again just so I'm clear?

A (Bowes) What were the three? I want to make sure I get to the three that you asked.

Q Well, I don't want to put words in your mouth so I want you to answer, please.

A (Bowes) So I would say the ancillary service market is well defined, the forward capacity market is well defined, although it varies based upon year to year.

Q And Mr. Bowes, when you say well-defined, does that mean it has a high risk or a low risk?

A Lower risk. So I'm thinking there's definition around it so if you qualify for it, then you receive a certain amount of revenues for that. So I think those two markets are defined although they do vary in time. I think the
clean energy market is probably the higher risk just because there are fewer solicitations today where Northern Pass or Hydro-Quebec could bid into those. I think right now there's just the one official one in Massachusetts although other states are exploring or have the legal authority but have not issued an RFP.

Q And where does the wholesale market fit into this spectrum of risk?

A (Bowes) I would say, again, that is pretty prescriptive so I think the forward prices and the cost of fuel are things that Hydro-Quebec would have some certainty over. I mean, they know their portfolio, especially on the hydro side and what they have available, and I think they have a very good, I mean they've participated in the New England markets for more than 30 years now. So I think, I would say they're probably very astute at how to be successful in those markets. So I would say that's not necessarily a high risk.

Q Okay. Would you put the wholesale market then before the ancillary services?

A (Bowes) Yes.
Q Okay. Okay. So on this kind of spectrum that we've been discussing, and that's my word, the wholesale market would be, would have the least amount of risk.

A (Bowes) I would say so, yes.

Q Okay. Do you have any specific knowledge as to how Hydro-Quebec intends to make up the majority of their revenue in connection with the project? And by that I mean, which market opportunity?

A (Bowes) I do not.

Q Okay. I want to step back for a second, Mr. Bowes. Earlier this morning in response to Attorney Pappas, the two of you were discussing the MOU that was attached to Mr. Quinlan's testimony and the issue of road repairs came up. Do you recall that?

A (Bowes) Yes, I do.

Q Mr. Pappas asked you about the standard of repair on locally maintained roads. Do you recall that exchange?

A (Bowes) Yes.

Q And I believe your response was that the repair would be per the DOT manual. Do I have that?

A (Bowes) Or requirements, yes.
Q  Okay. And do you understand that DOT has jurisdiction over locally maintained roads?

A  (Bowes) I do not.

Q  Okay. So in referencing the DOT manual, you're making an assumption that DOT has jurisdiction over locally maintained roads?

A  (Bowes) I was not.

PRESIDING OFFICER HONIGBERG: I'm not sure that's what he said, Mr. Whitley. In fact, I'm fairly certain that's not what he said.

MR. WHITLEY: Okay.

A  (Bowes) The context I was trying to describe is how we would repair the roads to a DOT standard is really the purpose of the comment, I guess.

Q  No, no, and I understood that that was the intent of your response. My question, and I probably didn't say it very well, was if suppose a town does, suppose a town requests a repair that is beyond what the DOT manual specifies. Would NPT then work with the town to make sure that the repair was done consistent with the town's standards if they're different from DOT's?

A  (Bowes) I think that's probably best outlined in
this MOU process so that we clearly understand if there are requirements that are more stringent than the New Hampshire DOT depending on what they were. I think it's possible. But without knowing, it's almost you're giving me a hypothetical that I'm not sure I can respond to without knowing the specifics of what you're asking.

Q Okay. I have one more question, Mr. Bowes. I think I'm going to go to the ELMO, please. You see that, Mr. Bowes?

A (Bowes) I do.

Q This is a press release that you see at the top there is dated April 12th. This is going to be Joint Muni 82. I have copies which I can distribute to the SEC once I have a chance to make a couple additional ones, and we'll update the Service List with the inclusion of this exhibit.

Have you seen this press release before, Mr. Bowes?

A (Bowes) I have not.

Q Okay. What I want to ask you about is the third paragraph. So if you'll just take a second and
feel free to review the whole thing, by the way. It's fairly short, but I'm going to ask you a question about the third paragraph so just let me know once you've had a chance to review.

A (Bowes) Okay, I've done that.

Q So the third paragraph there, just in a general sense, the press release is announcing HQ, at the top there it says HQ will submit requests for the study of additional interconnections with Maine and Vermont. And then the third paragraph states, beyond NPT, there are other possible options for increasing experts to New England. Do you see that?

A (Bowes) Yes, I do.

Q Okay. And my question is, are you aware of any sort of exclusivity arrangement that NPT has with HQ to be the source of power into the New England grid?

A (Bowes) For NPT, yes. I believe it's an exclusive arrangement at this point. For others, there's nothing I can add.

Q But what I mean by that, does NPT have an agreement with HQ that would prevent HQ from finding another source to get the power into the
New England grid?

A  Could you maybe rephrase that or repeat it at least?

Q  Sure.  Sure.  So I'm asking if you're aware of any sort of an agreement that would prevent Hydro-Quebec from finding another way to get power into the New England grid.  So, in other words, Hydro-Quebec would not have to use the Northern Pass line but perhaps could use some other line?

A  (Bowes) Yes, I believe the agreement with HQ and NPT is specific to the line that we're siting in this proceeding.

Q  And maybe we're talking past each other.  I don't mean the proposal that's before the SEC. I mean, are you aware of anything that prevents Hydro-Quebec from using a different transmission line that hasn't come before the SEC necessarily to get the power into the New England grid?

A  (Bowes) I have no knowledge of that. No.

Q  Okay.  Mr. Ausere, did you just hear that exchange with Mr. Bowes about this press release that's in front of you there?

A  (Ausere) I did.
Q  I'd like to pose the same question to you. Are you aware of any such agreement that would prevent Hydro-Quebec from using an alternative to Northern Pass to get the power into the New England grid?

A  (Ausere) I am not. I would say here that it looks like they're also talking about incremental opportunities.

Q  What did you say?

A  (Ausere) Just reading the press release, it looks like Hydro-Quebec is talking about additional opportunities above and beyond Northern Pass, and I'm not aware of a restriction around either.

Q  Okay. That's all I have. Thank you, gentlemen.

PRESIDING OFFICER HONIGBERG: We will take our break now. We'll try and limit it to ten minutes and come back as close to 11:15 as we can. Next up I have Ms. Fillmore, Mr. Tanguay.

MS. FILLMORE: Yes, Mr. Chairman.

(Recess taken)

PRESIDING OFFICER HONIGBERG: Mr. Tanguay.

You may proceed.

MR. TANGUAY: Thank you, Mr. Chairman.
CROSS-EXAMINATION

BY MR. TANGUAY:

Q May it please the Committee, my name is Shawn Tanguay with the Law Firm of Gardner, Fulton & Waugh. We represent approximately 8 municipalities as Intervenors in this matter. We are also the spokesperson for Municipal Group 2.

The line of my questioning is going to be having to do with Mr. Bowes' Prefiled Supplemental Testimony emanating from March 24th, 2017. It's also identified as Applicant's Exhibit 10.

Mr. Bowes?

A (Bowes) Yes.

Q As I understand it, your Supplemental Testimony back in March of 2017 included a report from Burns McDonnell, the engineering firm; is that correct?

A (Bowes) That is correct.

Q And you adopted that report as part of your Supplemental Testimony, isn't that true, sir?

A (Bowes) Yes, it is.

Q As part of that report from Burns McDonnell,
there was an Executive Summary that sets forth a
couple of bulleted points and the top being that
the project is currently still estimated at $1.6
billion. Do you still stand by that number,
Mr. Bowes?

A (Bowes) Yes.

Q And part of the purpose of this report was to
look at alternative routes and determine what
costs, if any, there would be in terms of
additional costs to the project if alternative
routes was decided on, is that correct?

A (Bowes) Not really. It was to estimate an
all-underground project cost.

Q Okay. And as part of that determination, in the
Executive Summary, Burns McDonnell also came up
and indicated that, and I'll just state it as in
the Executive Summary, compared to the proposal
on the past project route, the increase in cost
for an all-underground route is approximately $1
billion; is that correct, sir?

A (Bowes) Yes, it is, and just to be clear,
although Burns McDonnell prepared the report, it
was prepared at my direction, and, actually,
they did the work that I laid out for them to
Q Okay. And you stand by the numbers within the report; is that true, sir?

A (Bowes) Yes, I do.

Q So moving on to another section of the report that's titled Engineering Estimates, the engineering firm provides for us historical cost estimates, and I'd just like to go through those.

A (Bowes) Do you have a page number?

Q On the report itself, it's page 9.

A (Bowes) Yes, I have it.

Q If you go down to the historical cost estimate, Mr. Bowes, it says in the second paragraph, in 2010 the project cost estimate was approximately $1.1 billion.

MR. NEEDLEMAN: Could I interrupt for one minute? I'm sorry. I just want to confirm that we're looking at a public document.

MR. TANQUAY: This is the redacted version of the engineering report.

MR. NEEDLEMAN: Okay. Thank you.

BY MR. TANQUAY:

Q Do you see that Mr. Bowes?
A (Bowes) Yes, I do.

Q Then in the following paragraph, it says, in 2013 the project's cost estimate had risen to approximately 1.4 billion with the change in the routing of the northern section and the addition of the 8 circuit miles of underground.

The question I had was with the increase of approximately $300 million from 2010 and 2013, what amount of that constituted the additional cost of the 8 miles of underground?

A (Bowes) You know, subject to check, and I'm not sure that that is in this report, but I would say approximately 100 to $125 million.

Q So then further down in the next paragraph, it says, with the Forward NH announcement in 2015, the project's cost estimate rose to approximately 1.6 billion with the additional 52 circuit mile length of underground cable.

Is it safe to say that the $200 million increase in cost was entirely associated with the burying of the 52 miles?

A (Bowes) I'm pausing because it also changed the technology. So it was different type of cable. It was a different type of converter. The
ancillary projects, specifically the SVC at Deerfield, also changed as part of this. So, you know, on a high level look, it's the cost of the undergrounding, but there were many other components inside that that also changed within the project. It went from a 1200 megawatt project to 1090. The converter technology was changed. The cable technology was changed. And the cable technology probably is the largest single differentiator. The original cable which included the 8 miles up north was a mass impregnated cable which means there are actually 6 conductors. So the associated size of the duct bank was very different as well as the number of cables. With the new cable technology, there are only two cables so the corresponding size of duct bank is much smaller as well as you have a third the number of circuit miles of cable.

Q So would it be fair to say that given the change in technology that the addition of the 200 million from 2013 and 2016 is an accurate number to identify the additional cost of the 52-mile underground cable?
A (Bowes). No, as I just explained. I answered your question ahead of it, but, no, there's many other components in there. It's not just the 52 miles. It's the whole change in technology.

Q If we just take the $200 million from 2013 to 2016 as the additional cost of inserting underground cable to 52 miles, I'll represent to you that I get approximately $3.8 million per mile for underground. I then decided, then I took that number and I applied it to 132 miles which is the remaining miles of the project, assuming you take out the 60 miles of underground, and I get the number to that is a little over $500 million. Can you explain your discrepancy given the fact that Burns & McDonnell is saying it's going to cost a billion dollars for the additional 132 miles?

A (Bowes) Sure. It basically goes back to what I explained before in some detail. The mass impregnated cable which was the original design at 1200 megawatts, the availability of that cable and the feasibility of that cable, we could not do that for 52 miles. So we had to change the technology, specifically for the
HVDC, which created changes on both the Quebec side as well as the US side. So the converter stations were different technology. They went to a voltage source converter. That allowed us to do additional underground as a change in cost in that technology. As I explained, the civil construction would be very different now. Instead of burying 6 conductors with the physical separation that requires and the size of the duct bank would be much larger, we are able to go to a two-conductor technology with XLPE cable. So thus the duct bank got much smaller, the cable, the amount of miles of cable, 52 miles times 2 is 104 versus 52 times 6 which is well over 300 miles. So the amount of cable is much less with this new technology.

There was another upcost increase because the converter or technology required a change in the SVC, a change within Deerfield substation as well.

So I guess what I'm trying to explain to you, it's not appropriate to do the simple math the way you calculated. The number of miles divided by the 200 million. There are many
other factors involved, and this estimate is a bottoms-up estimate. So we started with each of the component of the project, the substations, the overhead line, the underground line, and built an estimate. We then compared it to the contract prices we had from contractors already under contract for this project. And then we did a third thing is we compared it with like projects that Eversource has done across New England, both in Massachusetts and Connecticut. So it's kind of a third check on it.

The first one was an engineering ups estimate, the second was comparing to our contract prices and the third was a verification against existing projects. So I'm very comfortable in the number of $1 billion is an accurate number.

Q  Going to your Supplemental Testimony on page 2, you indicate, and I quote, NPT's cost is increased by over 500 million from 1.2 billion to 1.6 billion. The primary driver of this increase is the addition of underground transmission cable.

So is that still a fair and accurate number
that the underground cost is approximately $500 million for the project?

A (Bowes) At the highest level, yes. But a lot of the details, as I just explained are, you do have to actually look to the details to see what the routing is as well as the construction techniques, the civil construction being a large portion of it. But in essence a $500 million number from the original project to today's project is an accurate portrayal, and, in essence, the largest portion is the underground.

Q So the $500 million is essentially the additional cost for the underground construction, is that correct?

A Again, at the highest level, yes, but you have to look to the nuance and the detail to get there.

Q Turning your attention back to the Burns & McDonnell report on page 27, Burns & McDonnell provided a grid trying to show comparison of other underground projects around the area. But in particular, my interest was the first line of that grid which is Northern Pass Transmission. It has a total cost of underground for $617
million. Can you explain where that number comes from?

A (Bowes) Sure. That's the cost of the underground trenching, the transition stations and the underground cable to build this project.

Q But I thought you had just testified that $500 million was the actual cost of the underground project.

A (Bowes) So there are some cost offsets here as well. So you're no longer building the overhead portion of the line for that same 60 miles so you have to subtract the overhead costs as well. So the net would come out to be about $500 million.

Q The other interesting thing I noticed in the Burns & McDonnell report is it has the cost of underground construction at being approximately another billion dollars to bury the entire line. The one thing I did not see was any analysis of future cost of maintenance. Could you explain why that wasn't added into the report?

A (Bowes) It wasn't part of what we asked them to look at. There was a Life Cycle Cost Analysis provided as part of discovery. It actually
comes out of work I did with the Connecticut Siting Council so the costs are in the record for operating and maintaining underground sections of a line. I would use the 345 kV AC costs that are in that report as a very good proxy for what the cost for this 320 kV DC line would be.

Q Would it be fair to say that the cost, the future maintenance cost of underground utilities is cheaper than the annual cost of overhead construction?

A (Bowes) So the O&M costs may be lower in certain areas. The largest one is vegetation management. So that's the largest ongoing cost for an overhead transmission system. The issue comes in is that when a repair does occur for an underground cable, it tends to be very costly. So those tend to be sporadic in nature, fairly rare, but when they do occur it can be certainly well in excess of $10 million to do that repair. If you look at that Life Cycle Report from the Connecticut Siting Council, it actually shows that the underground cable system total Life Cycle cost is higher than an overhead system by
about two times.

Q  Thank you.

     MR. TANQUAY:  I have nothing further, Mr. Chairman. I concede my time to Ms. Fillmore. We also may have questions on the confidential portion regarding Mr. Bowes.

     PRESIDING OFFICER HONIGBERG:  Okay. Ms. Fillmore, are you going to come up here or are you going to work from out there?

     MS. FILLMORE:  I'm going to work from out here if that's okay.

     MR. IACOPINO:  Mr. Chair, before she does, Mr. Bowes, you referenced this Life Cycle report. Do you know if it has been marked as an exhibit? You said it's in the record. I understand it may be in the discovery. But do you know if it's been or if counsel can help, whether that report has been marked as an exhibit?

     A  (Bowes) I do not know.

     MR. NEEDLEMAN:  I don't recall. We can check at a break.

     MR. IACOPINO:  Thank you.

     PRESIDING OFFICER HONIGBERG:  Now
Ms. Fillmore.

MS. FILLMORE: Thank you, Mr. Chairman.

CROSS-EXAMINATION

BY MS. FILLMORE:

Q I just have a few questions, and they are primarily for Mr. Bowes. Sorry, Mr. Ausere. And they have to do with the Project Labor Agreement.

In your Prefiled Testimony of February 26th, you reference that the PLA requires contractors hire New Hampshire labor first. Do you recall that?

A (Bowes) Yes, I do.

Q And I'd like to bring your attention to the Project Labor Agreement itself. Page 2. I will represent to you that on page 2 of the Project Labor Agreement, Article 1 lists the priority for hiring under the PLA. Do you have a copy of that?

A (Bowes) Yes, I do. I'm not sure it's the same vintage that you have.

Q Okay.

A (Bowes) I don't think the Article 1 has changed.

Q I believe it says Purposes.
A (Bowes) Yes.

Q Okay. Fabulous. So just to summarize, in that Article 1, it states that priority will be to hire New Hampshire-based union workers first. Is that correct?

A (Bowes) Yes, it is.

Q And then there are three other categories after that?

A (Bowes) Yes. Nonunion New Hampshire companies, then priority 3 is neighboring states; Maine, Vermont and Massachusetts. And then priority 4 is union contractors that are travelers or people outside of the region.

Q Thank you. So union workers who live in New Hampshire are the first hiring priority; is that correct?

A (Bowes) Yes, it is.

Q Okay. Article 17 which is actually on page 24 of the Project Labor Agreement, which is now on the screen, Article 17 is titled Miscellaneous Provisions, and it includes various things like how to amend the agreement, which state's law applies. Are you familiar with that section?

A (Bowes) Not specifically, but I can review it.
Q Okay. Well, what I'd like to bring your attention to is paragraph 6 E which is the very last paragraph before the signature page. It would be at the bottom on the screen.

A (Bowes) Yes, I see that.

Q Okay. Can you read that section, please?

A (Bowes) So this defines New Hampshire-based union workers.

New Hampshire-based union workers as used hereto shall mean, 1, union member whose primary residence is in New Hampshire. 2, union member whose primary residence is outside of New Hampshire but who is a member of a New Hampshire union.

Q Thank you. So a moment ago I asked you if union workers who live in New Hampshire would be the first priority, and you responded yes. Do you recall that?

A (Bowes) Yes.

Q And does the paragraph that you just read state that a union worker who is not living in New Hampshire but who holds a card from New Hampshire could also be considered in the first priority group?
A (Bowes) I believe it does, yes.

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

PRESIDING OFFICER HONIGBERG: Next up, I believe, Municipal Group 3. Attorney Pacik?

CROSS-EXAMINATION

BY MS. PACIK:

Q Good morning. Attorney Pasik from the City of Concord.

Mr. Bowes, just to start with you, I have a couple of followup questions. Attorney Pappas had asked you, as well as Attorney Whitley, about the Department of Transportation and their oversight of local roads, and you agreed that the DOT does not have jurisdiction, right?

A (Bowes) I don't believe that's correct. I was using that as a standard.

Q I believe you also said you're not aware of the different requirements of the municipalities that the proposed project may go through in terms of excavation?

A Not specifically, I'm not.

Q So you don't know whether towns or cities have damage fees, for example, if somebody does a cut in the roadway?
A: I do not.
Q: Okay. And you had indicated that you expect that the best way to deal with that is through a MOU?
A: (Bowes) Through the stipulation process, yes.
Q: And those have been sent to municipalities, and at this point I believe you've received one response so far from Franklin?
A: (Bowes) I believe that's correct. Yes.
Q: And you understand that there's nothing that guarantees that municipalities are going to be able to work out a stipulation with Northern Pass. You understand that?
A: (Bowes) Yes, I do.
Q: And to the extent that there is no stipulation, you understand that those towns do have rules and regulations, right?
A: (Bowes) Yes, I do.
Q: We'll probably go into the costing a little bit in the confidential section, but just in generally speaking, I understand that when you did the original costing, you had just done a high level geotechnical boring at that point. Is that right?
A So maybe you could be a little more specific?
Q Okay. So I understand that the estimated cost is 1.6 billion, is that correct?
A (Bowes) For today's project, yes.
Q And when you came up with that, I understand that at that point you had not originally, you had not yet completed all the geotechnical borings.
A That is correct.
Q And since that time, those have been completed?
A (Bowes) For the underground portion and for the transition and substation portion, yes.
Q And I understand from your technical session that you actually, the results of the geotechnical boring show that there was less ledge than was originally anticipated?
A (Bowes) That is correct.
Q That means that the price of the undergrounding will cost less, at least in terms of labor, when it comes to the underground work, right?
A (Bowes) With all things being equal, yes. That would be true.
Q Okay. And I understand that there was a cost, though, associated with -- let me just make sure
I have my terminology correct. The fluidized thermal backfill. Right?

A (Bowes) Correct.

Q So that was going to make the cost of the project potentially, that was going to cost more than you had originally anticipated.

A (Bowes) I believe it's a different technology than we had originally estimated so I think there was a change in technology for the backfill. So I think that was part of the cost increase, and depending upon the depth of trench in the final DOT permission is received, that may also be a factor in this.

Q Okay. So at this point my question is, we had requested updated costing from you based on the new information that you received on the geotechnical boring results and the use of the fluidized thermal backfill, and that was not provided to us on the basis that it had not yet been done.

Are you planning to provide that information to the parties and to the Site Evaluation Committee?

MR. NEEDLEMAN: Danielle, you can specify
which data request you're referring to?

Q Could you pull up Exhibit 84? It's not been marked and provided yet, but I do have it and we can distribute it to you. It's been marked as Joint Muni 84. So it was Technical Session 10/20, and we asked for a revised cost estimate, and the response was that you do not have one for the project. Will you be making that cost estimate available?

A (Bowes) So I think once it's prepared, it could be available. I think it's going to depend upon the final DOT permissions, both for the fluidized backfill as well as depth of trench and final contractor pricing as well.

Q Okay. So my understanding from what you just said was maybe. We don't know?

A (Bowes) Well, it certainly can be provided, but it's certainly not ripe at this point until those other things take place.

Q Okay. So as you sit here today, you don't know whether by the end of this proceeding we will have an undated cost estimate?

A (Bowes) I'm anticipating the final DOT permit approvals well before that. So that would
certainly allow us time to do a final cost estimate.

Q Okay. So just to be clear because when I first asked you that question it was, I felt like the response was a little noncommittal. Will updated cost estimate be provided?

A (Bowes) I believe you actually asked Mr. Johnson that data request. I did not respond to it.

Q Okay. You're here to talk about some of the costing though, right?

A (Bowes) Yes, I am.

Q So what would your response be to my question?

A (Bowes) I think it would be ready probably within 30 days after final DOT approvals.

Q And do you anticipate that to be during these SEC proceedings?

A (Bowes) I hope so. Yes.

Q Okay.

PRESIDING OFFICER HONIGBERG: Off the record.

(Discussion off the record)

MS. PACIK: I think I'll save the rest for confidential. Thank you. Oh, maybe not.

Mr. Chairman, I do have an unusual request.
On the PLA, Attorney Fillmore had a couple questions. I can either try to ask them or if I could defer to Attorney Fillmore to ask those questions, that would be appreciated. I can ask it if you'd like.

PRESIDING OFFICER HONIGBERG: I think it's fine. Ms. Fillmore, do you need your notes back or do you remember the question you wrote for Ms. Pasik?

MS. FILLMORE: I don't need my notes. I should have read them the first time.

RECROSS-EXAMINATION

BY MS. FILLMORE:

Q Just to quick followup, Mr. Bowes. So the section that you just read was in Article 17, the miscellaneous section with the definition of New Hampshire-based union worker, is that correct?

A (Bowes) Subject to check, I believe so.

Q I'll represent to you that it is. Is there a reason that that definition was placed in the miscellaneous section at the end of the agreement rather than in the paragraph that defined New Hampshire-based union worker?
A (Bowes) Not to my knowledge. No.
Q So would you say that based on that definition, a union worker holding a New Hampshire card who lived in Massachusetts could be hired as a New Hampshire-based union worker ahead of someone who actually lives in New Hampshire?
A (Bowes) In the same priority one category?
Q Yes.
A (Bowes) I don't know. I don't know the actual union rules for hiring within a state or local first, and I know some of the locals cross both New Hampshire and Massachusetts. So I don't know the answer to that.
Q Assuming for the sake of this question that the union rules wouldn't prevent it, merely under the definition of in this agreement, could a New Hampshire-based worker who holds a New Hampshire card but lives in Massachusetts be hired as part of that first priority?
A (Bowes) Yes, but after all the New Hampshire workers were hired.
Q Does it say that in that section?
A (Bowes) It says 1 and 2, yes. In that section. 1 being New Hampshire workers first, 2 being
workers that have a card for New Hampshire.

Q I've brought that back up on the screen.

A (Bowes) I read it as a priority here, 1, and then 2. That's how I read it.

Q Does it say in that order?

A (Bowes) It does not.

Q Thank you. I'm really finished this time, Mr. Chairman.

PRESIDING OFFICER HONIGBERG: Ms. Pasik, did you have anything else?

MS. PACIK: No. Thank you.

PRESIDING OFFICER HONIGBERG: Next up is Grafton County Commissioners. Anybody here?

(No audible response)

PRESIDING OFFICER HONIGBERG: Attorney Reimers, you'll be next. Just while he's getting ready, just so everybody's clear about the confidential sessions, first off, obviously, those who haven't entered into appropriate agreements, any members of the press will have to leave and we'll turn off the speakers to the other rooms, but I just want to make sure people understand that the topics that are to be covered during that session are the confidential
sections of whatever documents, whatever
information has been developed and is to be
used.

Now, many of the questions that get asked
during such a session don't call for the
disclosure of confidential information in a
particular exchange, but it's not an invitation
to go back to nonconfidential topics that have
already been covered. So to the extent that
someone moves in that direction, you should
expect to be stopped. So during the
confidential sessions, you're to focus on the
confidential information, and if anybody has
questions about that as it's going you can get
some clarification or perhaps in advance you
could confer with Attorney Iacopino or
Administrator Pam Monroe. Off the record.

(Discussion off the record)
PRESIDING OFFICER HONIGBERG: Mr. Reimers,
you may proceed.

CROSS-EXAMINATION

BY MR. REIMERS:

Q Good morning. My name is Jason Reimers. I
represent the Society for Protection of New
Hampshire Forests.

Mr. Bowes, this is a followup from an earlier question. When asked about Eversource's interest in the Phase II line, I believe that you and Mr. Quinlan both said that you believe that Eversource has some interest. Does Eversource, in fact, have an interest in that line?

A (Bowes) I don't think I have anything more to add. I believe we do, but I've never seen a document if that's what you mean.

Q Okay. Who would know that? You know, for sure? Yes or no?

A (Bowes) I'm sure our Vice President of Supply would know that.

Q Is he or she a witness in this case?

A (Bowes) I don't believe so. Mr. James Daly. I don't think he's a witness in this proceeding.

Q Mr. Bowes, in your Supplemental Testimony on page 1, line 28, you state, quote, the review of potential alternatives for this project and alternative designs for this project are not properly before the Site Evaluation Committee in this proceeding. My question is, what analysis
did you personally do to arrive at that legal conclusion?

A  (Bowes) It's just my understanding from conversation with our lawyers that we put forth an Application with the SEC, and they rule on that Application.

Q Mr. Bowes, I'm looking at page 3, line 24, of your Supplemental Testimony where you state NPT must judge where the tolerance of potential investors for increased cost and risk will be exhausted. Its senior management's belief that the project is at or near that point by virtue of acceptance of an additional $500 million in project costs for the construction of 60 miles of underground line to avoid visual effects in most areas of special scenic and recreational value.

I have several questions about this, these statements. First, are you included in the senior management referred to?

A  (Bowes) I am not.

Q Who are you referring to?

A  (Bowes) Mr. Quinlan, and our CEO, Mr. James Judge.
<table>
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<tr>
<th>Q</th>
<th>The two of them? That's who you're referring to?</th>
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<tr>
<td>A (Bowes)</td>
<td>And there's probably others as well on a Management Committee.</td>
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<tr>
<td>Q</td>
<td>And who are the potential investors you refer to?</td>
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<tr>
<td>A (Bowes)</td>
<td>In this case it's Hydro-Quebec.</td>
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<td>Q</td>
<td>Is there any reason why it's plural?</td>
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<td>A (Bowes)</td>
<td>I think it was more just a general statement, not a specific statement.</td>
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<tr>
<td>Q</td>
<td>Based on recent press releases, is it possible that Hydro-Quebec is already past the point of tolerance for cost and risk?</td>
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<tr>
<td>A</td>
<td>I would say no.</td>
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<tr>
<td>Q</td>
<td>What do you base that on?</td>
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<tr>
<td>A (Bowes)</td>
<td>On the joint press release by our two CEOs.</td>
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<tr>
<td>Q</td>
<td>You also state that the 60 miles of underground line would, quote, avoid visual effects in most areas of special scenic and recreational value. Can you think of an area of special scenic and recreational value where the visual effect would not be avoided by burying the 60 miles?</td>
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<tr>
<td>A (Bowes)</td>
<td>I think there's areas. Certainly</td>
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</table>
there's some state parks that we've identified that Counsel for the Public has identified as well where we could possibly do more mitigation for the overhead portions of the line.

Q Would Little Diamond Pond in Coleman State Park be one example that's not avoided?

A (Bowes) That would be one, yes.

Q What I'm showing you is the existing photo from Mr. DeWan's report, and I'll show you now his photo simulation.

So you agree that the visual effect is not avoided at this State Park?

A (Bowes) Not completely. No.

Q And this is an instance, I believe, that those are monopoles shown there?

A Subject to check, I believe they are.

Q When you say subject to check, will you be checking all of these, is someone keeping a list of all these items that are going to be checked?

A (Bowes) Certainly the construction panel will have that level of detail and would have the system in place to look at structure by structure. I just don't have it with me today.
I actually don't think that's what "subject to check" meant for this witness or most of the other witnesses. I think most of those other witnesses are using that phrase to say I'm going to assume what you just told me is true for the purposes of your question.

MR. REIMERS: Okay.

PRESIDING OFFICER HONIGBERG: If you want someone to confirm, you're going to need to ask that that happen, okay?

MR. REIMERS: Okay. Thanks for the clarification.

BY MR. REIMERS:

Q Mr. Ausere, I'm showing you your Prefiled Testimony at page 3 and I've highlighted lines 14 to 15 where you say that HRE will pay NPT for firm transmission service pursuant to a FERC-approved cost based formula rate that will enable NPT to recover the costs of development and construction plus a return on investment over a period of 40 years.

So under the TSA, HRE will pay every cent that it costs to develop and construct the project; is that right?
A (Ausere) Yes. Under the TSA, HRE will pay NPT for the cost to develop and construct the project, yes.

Q Plus 12.5 percent, 12.56 percent interest?

A (Ausere) The 12.56 is a return on our investment. And actually, so that's a return on equity. And that's actually, 12.56 applies while the project is under construction. Once the project goes into service, the allowed return on equity under the formula rate in the TSA, it's actually indexed to the allowed rate of return on transmission projects that are regulated by ISO New England and FERC.

So if today's allowed ROE in New England were to stay steady, the 12.56 would decline to I think it's 11.74 percent and that's allowed return on equity.

Q 11 point what?

A 74.

Q Have you calculated how many dollars this 12.56 percent interest during the construction phase will amount to?

A (Ausere) I have not, but it's embedded in the overall cost of the project.
Q  Should I assume the same for the 11.74 percent?
A  (Ausere) No, that's different. The 12.56 applies just during construction.
Q  I'm sorry. Should I assume that you haven't also calculated in real dollars how much the 11.74 percent will end up being?
A  (Ausere) I have not personally, but I'm sure others in the company have.
Q  Okay. And does that 11.74 percent interest rate run through the 40 years?
A  (Ausere) It does unless the FERC/ISO New England further adjusts the allowed return on equity. Remember I mentioned earlier that it's actually indexed to whatever the allowed return is.
Q  Attached to your Supplemental Testimony is an updated version of your Prefiled Testimony. In that updated testimony, you state that Eversource has paid approximately $190.5 million through December 31st, 2016, in development costs. Is that correct?
A  (Ausere) It sounds right, but can you point me to the page?
Q  Sure. Page 6, line 27, and this is Applicant's Exhibit 10. The Attachment to that.
A (Ausere) Give me one second. Yes, I'm there.
Q Okay. Do you agree that Eversource through the end of last year has paid $190.5 million?
A (Ausere) Eversource has invested 190.5 million through the end of last year into the project.
Q And these development costs include legal fees, environmental, engineering and communications costs? If you look on to the next page, I think you discussed that.
A (Ausere) Correct.
Q Are there other categories of development costs besides those four?
A (Bowes) I can think of one. Land purchases.
Q Land purchases? By NPI?
A (Ausere) RPI. Yes. I agree with that.
Q And those are the only costs that HRE is not obligated to pay for. Is that right?
A (Ausere) Actually, so you're referring to the land that's owned by RPI?
Q Correct.
A (Ausere) NPT will lease land rights from RPI, and then in turn NPT will recover those lease costs from HRE.
Q Okay. So HRE will pay all of the lease costs
under the TSA?

A  (Ausere) Correct.

Q  Earlier and on Friday you were questioned about the TSA, and you've discussed the press release issued by HRE and by Eversource and HQ. What legally binding document has HQ or HRE agreed to pay for a $1.6 billion project?

A  (Ausere) The answer to your question is the legally binding agreement is the Transmission Services Agreement.

Q  The one that you testified is for a 1200 megawatt project?

A  (Ausere) And how I get there is that the TSA's in full force and effect, and Hydro-Quebec, through our frequent meetings with them, they understand the current configuration of the project, i.e., the 1090 megawatts as well as the cost associated with that project.

Q  Is there a legally binding document that obligates HQ or HRE to pay for that $1.6 billion project?

A  (Ausere) Yes, the TSA.

Q  The TSA mentions a 1200 megawatt project, is that correct?
When this project was a 1200 megawatt project, the projected cost was approximately $1.4 billion, right?

I believe so.

That is correct.

The project as proposed before the Site Evaluation Committee is a 1090 megawatt project estimated at $1.6 plus billion; is that right?

Correct.

But you rely on the TSA as being the legally binding document under which HRE will pay for the $1.6 billion current project. Is that right?

Or whatever the project ultimately costs. And I say that because it's a formulaic rate that doesn't hinge on a particular cost.

Okay. Dawn, I want to use the ELMO, please. Have either of you seen this letter?

I saw a letter attached to Mr. Quinlan's testimony. I'm not sure if it was this one or not.

Okay. This is a letter, I'm not sure if it's attached to, actually I think it is attached to
Mr. Quinlan's testimony or a version of it. Do you see at the top where it's addressed to the Town of Sugar Hill?

A (Ausere) Yes, I do.

Q It's my understanding that letters were sent. You've got the date at the top of the first page. I'll represent to you that letters were sent to all of the municipalities along the proposed route that were similar in form and information provided. Do you see the numbers that are in bold in the middle of the screen? The number is, I think it's 16 million?

A (Bowes) Yes, I do.

Q Do you know what that 16 million represents?

A (Bowes) The capitalized cost of the investment in that town.

Q Is that the cost of construction?

A (Bowes) It's the total project cost. So it's more than the construction. It's all the development costs we just went through, the 190 million we've spent to date. That gets turned into the capitalized cost of the project.

Q Okay. So it's the cost of -- can you repeat that? When I asked you whether it was the
construction cost, you said I believe it's the
construction cost plus the development cost?
A (Bowes) Correct. If we start construction,
hypothetically, January of 2018, it would
include all of the project costs since inception
until that time.
Q Okay. Would that be the correct term for a
project cost?
A (Bowes) Yes. And I did check Mr. Quinlan's
testimony, it's actually the Town of Allenstown
is in his so it's a very similar document but
it's not this one.
Q Okay. So the term "project costs," when we
refer to 1.4 billion or $1.6 billion, are we
referring to project costs?
A (Ausere) I believe so. All costs associated
with putting the project into service.
A (Bowes) Yes. That is true.
Q Okay. So if there's $16 million of project cost
in Sugar Hill, do you know how many miles --
first of all, Sugar Hill is an underground
portion; is that correct?
A (Bowes) Yes, it is.
Q Do you know how many miles of the proposed route
would run through Sugar Hill?

A (Bowes) I do not. I can certainly get this information to you.

Q I could represent to you that it's 1.7 miles. So if you divide $16 million by 1.7 miles, would you accept that that's approximately $9.4 million?

A (Bowes) I'll accept that, yes.

Q Would you like me to get you a calculator?

A (Bowes) No, thank you.

Q Actually, I think I'm going to get one anyway because it would be useful.

Okay. Mr. Bowes or Mr. Ausere, let's just verify that I'm correct. Can you divide 16 by 1.7, please?

A (Bowes) Yes. I have 9.411 and several other digits.

Q Okay. I'm going to round it off to 9.4.

A (Bowes) Fine.

Q So would you accept that based on this Sugar Hill letter, the cost of undergrounding in Sugar Hill are $9.4 million per mile?

A (Bowes) No.

Q Why not?
Because, as we just said, it includes all the project development costs for that town.

Would you agree that the total project costs in Sugar Hill which is a town through which the Northern Pass would be buried, the project costs are $9.4 million per mile?

(A Bowes) No.

Can you explain why?

(A Bowes) Because in that cost that we're going through, actually today, there are costs associated with the project that aren't specific to Sugar Hill. So those costs would be spread across all of the project itself. It's not a cost per mile for underground transmission.

Are you saying that that $16 million cost is specific to the 1.7 miles in Sugar Hill?

(A Bowes) No.

Then what is that $16 million figure, how was that arrived at?

(A Bowes) So it's the project cost allocated to certain portions to the town of Sugar Hill and also the direct costs of construction in that town.

So that 16 million is larger than just the
project cost?

A (Bowes) Yes.

Q And when I asked you about project cost a little while ago, I thought that was all the costs.

A (Bowes) It is.

Q What costs then are you talking about in addition to the project cost that are Sugar Hill specific?

A (Bowes) The direct construction. In your case, the 1.7 miles of underground transmission. Those would be costed and associated with Sugar Hill. In addition, those project costs that we talked about, just hypothetically, through 2016, that 190 million would also be allocated, some directly to Sugar Hill, some indirectly to Sugar Hill, depending on their makeup. For example, the overhead leases would not be allocated to Sugar Hill.

Q So the total costs in Sugar Hill are $16 million. Is that right?

A (Bowes) Total cost, yes.

Q And if you divide that on a per mile basis, the total costs are 9.4 million approximately per mile.
A (Bowes) Okay.

Q Can you do another calculation on there?

Multiply 9.4 times 192. What do you get in billions of dollars?

A (Bowes) So in billions, it's 1.8. In millions it's 1804.8.

Q So if, and I know this is an if, but if the Sugar Hill costs were the same along the entire 192 miles of the route, and I know that's a hypothetical, would it, the total cost, project cost plus town specific cost to bury the entire route would be the number you just stated, $1.8 billion?

A (Bowes) So you're asking me to assume that that cost is the same across all towns all miles.

Q Correct.

A (Bowes) And it excludes the project development costs and it excludes the substations.

Q And why do you exclude the project development costs?

A (Bowes) Well, you're correct. You would not need to exclude the project development cost.

Q That's part of the project cost.

A (Bowes) Yes. So it would just be the
substations that would not be included in this.

Q And that's because there's no substation proposed in Sugar Hill.

A Correct.

Q So you would take that $1.8 billion, add the cost of the substations and that would be the total project cost to bury it if the whole route were like Sugar Hill.

A (Bowes) Yes.

Q Going back to this January 26th letter agreement between NPT and HRE, will you look at that paragraph that begins, NPT and HRE mutually agree?

A (Ausere) I see it.

Q Okay. So the first line, NPT and HRE mutually agree to extend the approval deadline from February 14th, 2017, to December 31st, 2020, for all purposes under the TSA.

Then it says, notwithstanding the foregoing, prior to the approval deadline, NPT and HRE shall file amendments to the TSA with FERC reflecting the terms and conditions of the amended and restated TSA for purposes of the Massachusetts RFP or shall make a second
amendment to the TSA to reflect changes to the approval deadline and other mutually agreed upon changes.

This says, to me, that prior to the approval deadline of December 31st, 2020, the parties shall do one of two things. They're either going to amend the TSA to reflect the terms of the Mass. RFP or they shall make a second amendment to the TSA to make changes to the approval deadline. Is that right?

A (Ausere) Right.

Q Why if the Northern Pass doesn't win in the Massachusetts RFP will it be necessary to amend the approval deadline of December 31st, 2020?

A (Ausere) I'm not sure I follow your question.

Q Well, that second sentence, beginning with notwithstanding the foregoing, it says prior to the approval deadline, so that's prior to December 31st, 2020, NPT and HRE shall file amendments to the TSA to reflect the terms and conditions of the Massachusetts RFP, right? Or shall make a second amendment to the TSA to reflect changes to the approval deadline and other mutually agreed upon changes.
So that "or" tells me that there's two things. There's two potential amendments. You're either going to amend it with regard to having been successful in the Massachusetts RFP or you're going to amend it to reflect changes to the approval deadline and other changes. So that says to me that if you're not amending it after having won the Massachusetts RFP, you're going to be amending the approval deadline.

A (Ausere) Yes.

Q My question is --

A (Ausere) Go ahead.

Q If you're not successful in the Massachusetts RFP, why will the approval deadline be changed?

A (Ausere) So we acknowledge we could go one of two paths here. The amended and restated TSA filed with FERC or a second amendment to the TSA. I think what we're acknowledging there is we haven't determined with Hydro-Quebec how we're going to bid in yet to the Mass. RFP. You heard me earlier testify that we could go down a path where we essentially change the payor from HRE to the Massachusetts EDCs for certain of the revenue requirements under the TSA. That was
the approach that we took for the tri-state RFP. If we take that approach, we're contemplating here and in calling it an amended and restated TSA, that would be a sufficiently material amendment to the TSA that we'd have to take that to FERC.

Now, if we don't go that path, in the Mass. RFP, there still could be items that we'd want to amend to the TSA and one thing that, well, an example that comes to mind is there are some housekeeping items that we would want to amend in a TSA. For example, the fact that the TSA still refers to a 1200 megawatt project. That is an example of something that we will change in the TSA to refer to 1090 megawatts.

Q Okay. So you said that if you don't go the route of the Massachusetts RFP, there's still, I think you said could be items we'd want to amend to the TSA, and you mentioned housekeeping items. The language of that second option after the "or" is shall make a second amendment to the TSA to reflect changes to the approval deadline and other mutually agreed upon changes. It seems to be specific language regarding
reflecting changes to the approval deadline.
And then I can see how the housekeeping parts
would be under that second clause, and other
mutually agreed upon changes. Why, I guess,
does it specifically refer to amending the
approval deadline again?

A (Ausere) I'm not aware of any intention to
change the approval deadline from December 31st
of 2020. So what I believe we're doing here is
saying when we do amend the TSA, either amend it
and restate it or just do a simple amendment, if
you will, then we'll bring this letter agreement
into the body of the TSA itself. I'm not aware
of any intentions to make the approval deadline
different than 2020.

Q Despite what it says in that letter.

A (Ausere) I don't know that the letter says
different than that, but as I've acknowledged,
I'm not a lawyer.

Q I'd like to ask, I think I'm asking Mr. Bowes
questions about Applicant's Exhibit 80 which is
the attachment to your, the underground
alternatives paper by Burns McDonnell.

A (Bowes) Yes, I have it.
This is Applicant's Exhibit 80, and I believe I've got here the redacted version on the screen.

Barry, let me know if you see me going into confidential material, but I haven't seen any redactions in the portions I plan to use.

MR. NEEDLEMAN: I think as long as you're using the redacted version it's fine.

So Burns & McDonnell discussed alternate underground rules; is that right?

One of those alternatives is US Department of Energy Alternative 4 A?

And Alternative 4 A would bury the line alongside I-93?

And Burns & McDonnell includes an analysis of the DOT regulations, the New Hampshire DOT regulations, regarding I-93 but does not state that the Applicant's approach to DOT about the feasibility of burying the line along I-93.

Would you agree with that?

That is true.
<table>
<thead>
<tr>
<th>Q</th>
<th>Did the Northern Pass or the Applicants directly inquire to the New Hampshire Department of Transportation about burying along I-93?</th>
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<tr>
<td>A (Bowes)</td>
<td>Yes. I personally did.</td>
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<td>Q</td>
<td>Describe that conversation, please?</td>
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<tr>
<td>A (Bowes)</td>
<td>So I attended a meeting, I think it was March 1st of 2016, and it was the project team, one of our monthly meetings with the DOT, and we had a discussion around use of the I-93 corridor.</td>
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<tr>
<td>Q</td>
<td>On page 21 of that report, Burns &amp; McDonnell discusses two memoranda of understanding in a Federal Court case involving the construction of I-93 through Franconia Notch. Have you read that section?</td>
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<td>A (Bowes)</td>
<td>Yes. I have.</td>
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<tr>
<td>Q</td>
<td>And Burns &amp; McDonnell state, quote, &quot;AMC and SPNHF are entrenched opponents to Northern Pass.&quot; Do you see that?</td>
</tr>
<tr>
<td>A (Bowes)</td>
<td>I haven't found it yet.</td>
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<tr>
<td>Q</td>
<td>I can't point you to where it is. We lost the signal on that. It's at the bottom of page 21. Very last line.</td>
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<tr>
<td>A (Bowes)</td>
<td>Yes, I see it.</td>
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Q Are you aware that the Forest Society is a party to that, those memoranda of understanding?
A (Bowes) I believe you are.
Q And are you aware that the Appalachian Mountain Club is another party to those memoranda?
A (Bowes) I am not sure of that.
Q Are you aware of the Applicant's ever approaching the Forest Society or AMC about agreeing to amend the memoranda of understanding to allow burial through Franconia Notch?
A (Bowes) I do not know.
Q Do you know who would know whether the representative of the Applicant approached the Forest Society or AMC?
A (Bowes) I do not.
Q But you're unaware of any such overture?
A (Bowes) That is correct.
Q On page 23, Burns & McDonnell, looking at the first full paragraph beginning with furthermore. And in the middle of it begins, "New Hampshire DOT has expressed no interest in doing so."
   Let me back up. Burns McDonnell says, "Furthermore, because Northern Pass is not a highway construction project or a party to the
Notch agreement, Northern Pass would need NHDOT
to propose appropriate changes to the Federal
Court approved documents. NHDOT has expressed
no interest in doing so for a project that is
not related to its highway maintenance or public
safety."

When did New Hampshire DOT, quote, unquote,
express no interest that Burns & McDonnell is
referring to?

A (Bowes) I do not know.

Q At the bottom of page 23, burns McDonnell was
discussing a then House Bill 626 while it was
still a bill and there's a paragraph that
begins, with NHDOT's input, much of I-93 has
been included in the legislative discussions for
future availability as a utility corridor.
Notably, however, Franconia Notch and the
Franconia Notch Parkway are specifically and
consistently excepted from any such
consideration.

Do you know whether the final version of HB
626 which was signed into law excepted Franconia
Notch or Franconia Notch Parkway from
availability as a utility corridor?
A (Bowes) I do not.

Q I just want to ask you a few questions about the Portland Natural Gas Pipeline. Can you describe the communication, if any, that the Applicants have had with the owner of the Portland Natural Gas Pipeline concerning the colocation of the Northern Pass facility within the shared right-of-way?

A At the highest level I can, yes, and we can get, obviously, much more detail at the construction panel. At the highest level, we've been in contact and talks with the pipeline company, and we're in the process of doing an interference study which I think is complete at this point to ensure that there would be no adverse impact from either the AC or the DC transmission line to the pipeline structures.

Q Are there currently any written agreements to between the Applicants and Portland Natural Gas regarding collocation?

A (Bowes) I believe the only written agreements that I'm aware of are between the gas pipeline and Public Service New Hampshire for the original installation of the pipeline. I don't
believe there are any additional or new agreement in place with Northern Pass.

Q Thank you both very much.

PRESIDING OFFICER HONIGBERG: Next on the list would be Attorney Birchard. Do you have questions?

MS. BIRCHARD: Yes.

PRESIDING OFFICER HONIGBERG: How long do you think you have?

MS. BIRCHARD: 15 minutes.

PRESIDING OFFICER HONIGBERG: Why don't we do that.

CROSS-EXAMINATION

BY MS. BIRCHARD:

Q If it please the Committee, I will remain seated. We did have a number of questions on the subject of decommissioning for Mr. Ausere that have already been asked by Counsel for the Public so our remaining questions will be directed to Mr. Bowes.

Mr. Bowes, this pertains to your Supplemental Testimony, and is a follow-on to your earlier discussion with Attorney Whitley.

In response to a question from Mr. Whitley
earlier, you stated an all-underground alternative would not be cost effective for HQ to pursue. But what your Supplemental Testimony says at page 3 is something a little bit different. It says that HQ and Northern Pass are exploring new market opportunities, and that for this reason you need a cost-competitive profile. And here I'm quoting from page 3.

By cost-competitive profile, what you seem to be saying is that, for example, in the context of the Massachusetts RFP or another RFP, HQ and Northern Pass Transmission would like to be able to produce bids that are lower than those of their competitors; is that correct?

A (Bowes) I guess as a general statement, I would say yes.

Q Thank you. TDI Clean Power Link which is a known competitor of the proposed Northern Pass Transmission line has elected to underground its proposed transmission line. Isn't that correct?

A (Bowes) They have for the portions in the United States. There is no interconnection in Canada.

Q Thank you. Does this mean that if all other things were assumed to be equal, the Northern
Pass Transmission project would have a leg up over the TDI project or some other buried project if they were both competitors in the same RFP or the same venue?

A (Bowes) I can certainly speak to what Northern Pass has for advantages. I'm not sure I can speak to TDI and their commercial terms or --

Q Sure. I guess what I'm asking you to do is to assume all other things are equal so it could be TDI or it could be another underground buried project and you are competing in the same RFP. By electing not to underground the project, would you have a leg up in that RFP process?

A (Bowes) Could you give me some more particulars around the size of the project, the location of the project, the supply for the project? I mean it's --

Q Sure. I guess I would ask you to assume everything is equal. Everything is equal except for this one factor.

A (Bowes) So the difficulty I have is that, for example, TDI went into the queue with Hydro-Quebec in the fall of 2013 for an interconnection to the HQ system to wheel power
from Labrador. So if that's the assumption I'm making for the TDI project, that they're going to wheel across the HQ system, somehow miraculously get a new transmission line built from the HQ system to the Vermont border, maintain their --

Q Mr. Bowes, that's not necessary. I think I've already said this could be some other hypothetical underground project as well. TDI was an example, but I'm positing to you that I would like you to assume it's an underground project that is in all other respects equivalent to the Northern Pass transmission line. And the reason I'm asking that is because I'm trying to get at the idea of the cost-competitive profile that you've referenced in your Supplemental Testimony.

PRESIDING OFFICER HONIGBERG: Mr. Needleman?

MR. NEEDLEMAN: I'm going to object. I think the witness has just made clear that it's not possible to make that "all things equal" assumption.

PRESIDING OFFICER HONIGBERG: Okay. That
may be true, but I'm not sure yet that you've articulated all of the assumptions you wanted to make. So what do you want him to assume is the same about the two lines?

MS. BIRCHARD: My focus is on what is not the same, but in terms of what is the same, I would ask you to assume that they both have qualifying energy source and are equivalent in size, otherwise qualify for the terms of that RFP, whatever that theoretical RFP is, in equivalent manners.

PRESIDING OFFICER HONIGBERG: So the difference is one's aboveground and one's all underground?

MS. BIRCHARD: Correct.

PRESIDING OFFICER HONIGBERG: One is Northern Pass and the other one is all underground? Do they cost the same?

MS. BIRCHARD: No. I think what I'm getting at here is the issue of cost-competitiveness, and I'd like to have Mr. Bowes address the question of whether or not they would cost the same and what factor --

PRESIDING OFFICER HONIGBERG: Oh, I don't
think there's any way he could have understood that from what you've done to that point. So you want him, so why don't you then tell him what it is you want to focus on. Cost differential to the two.

MS. BIRCHARD: Well, correct.

BY MS. BIRCHARD:

Q So, Mr. Bowes, assuming you have equivalent projects and the one factor that is different is that one is underground and the other is not, which, you know, you've indicated is the decision of HQ and Northern Pass Transmission in this instance, can you tell me whether or not you believe that Northern Pass Transmission would have a leg up in that competitive process?

A (Bowes) So to make things simple, if I can, why don't I assume the original Northern Pass project at 1090 was an all-overhead project with a cost of approximately $1.1 billion. The same interconnection in Canada, the same system impact study in Canada, the same power supply from Canada. And then I compare it to an all-underground Northern Pass at $2.6 billion, same 1090 megawatt, some interconnection in
Canada, same power supply in Canada. Those two projects, one at 1.1 billion, one at 2.6 billion, the 1.1 billion project would be more cost-competitive.

Q Do you agree that there are certain external costs or externalities that derive from the company's decision not to underground more completely in New Hampshire?

A I'm not sure I understand.

Q Are there external costs such as, for example, landscape and cultural heritage impacts, or commercial and property value impacts that derive from the company's decision not to underground more fully in the State of New Hampshire?

A (Bowes) So I guess I would answer that, I believe that an underground line has less visual impacts than an overhead line. I may get others in the room that disagree with that and the impacts of an underground line. That's my understanding of it. I think it's intuitively obvious that you don't see an underground transmission line. So the specific things around visual impacts would be lower with an
Thank you. And there have been a number of mitigation efforts we've already discussed at this hearing that do also relate to the decision not to underground more fully, including related to property values and other issues, is that correct, Mr. Bowes?

MR. NEEDLEMAN: I'm going to object. I don't understand that question.

PRESIDING OFFICER HONIGBERG: Do you understand the question, Mr. Bowes?

A (Bowes) No.

Q I'd be glad to repeat it in simpler terms.

A (Bowes) Okay.

Q So previously I asked a multi-part question which is are there multiple external impacts and you answered one of those which was yes, there are visual impacts that arise from the decision not to bury the project more completely through New Hampshire. Is that correct?

A (Bowes) That's the one example you gave, and I agreed with it, yes.

Q Thank you. Thank you. I appreciate that. In addition, my original multi-part question also
gave the example of commercial and property value impacts. So I was referencing the fact that those have already been discussed at this hearing, and there's some acknowledgment that mitigation or other efforts may be necessary to attempt to address those external impacts of the decision not to bury; is that correct?

A (Bowes) So Mr. Quinlan spoke to that issue. I don't think I have anything more to add.

Q Thank you. That's all of my questions. Thank you very much.

PRESIDING OFFICER HONIGBERG: All right. We're going to take our break. Let's go off the record for just a second.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: We'll break until 1:30.

(Lunch recess taken at 12:41 p.m. and concludes the Day 3 Morning Session. The hearing continues under separate cover in the transcript noted as Day 3 Afternoon Session ONLY.)
CERTIFICATE

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

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

Dated at West Lebanon, New Hampshire, this 19th day of April, 2017.

___________________________
Cynthia Foster, LCR