STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

May 3, 2017 - 12:51 p.m. DAY 8
49 Donovan Street AFTERNOON SESSION ONLY
Concord, New Hampshire

{Electronically filed with SEC 05-10-17}

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

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE:

Chmn. Martin Honigberg
(Presiding Officer)

Cmsr. Kathryn M. Bailey
Public Utilities Comm.

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

COURT REPORTER: Cynthia Foster, LCR No. 14
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WITNESS PANEL
NATHAN SCOTT
LYNN FARRINGTON
SAMUEL JOHNSON
KENNETH BOWES
DERRICK BRADSTREET
JOHN KAYSER

(Resumed)

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COMMISSIONER BAILEY: I understand that the order of cross-examination has changed for a good reason, and we are going to proceed next with Mr. Thompson. And as part of his group, Mr. Baker has some questions after Mr. Thompson is finished, is that correct? Did everybody agree to that?

MR. NEEDLEMAN: That's fine with the Applicant as long as we stick to the plan that there won't be any overlap of questions between people in the same group.

COMMISSIONER BAILEY: Of course. All right. Thank you.

CROSS-EXAMINATION

BY MR. THOMPSON:

Q Good afternoon.

A (Johnson) Good afternoon.

Q For the record, my name is Brad Thompson. I live, my residence is in Stewartstown, New Hampshire, at 599 Noyes Road, and I am spokesperson for Abutters and Non-Abutters of Pittsburg, Clarksville and Stewartstown.

Probably, Mr. Bowes, about two and a half
weeks ago we were here and I was complaining about the Celtics losing. So the good news is the worm has turned.

A (Bowes) Yes, it has. Quite a game last night.

Q It was a good game. Maybe it's an omen.

As a start, I'd like to get a little bit of information to make sure I understand a couple things. We have electric current moving through these two lines, overhead and underground, from Canada to Deerfield by way of Franklin to get converted from DC to AC.

What is the procedure, educate me a little bit on what happens. You get somebody that needs electricity, and you've got somebody else that has it in Canada, how does the process work? Who switches the lights on or what makes something happen?

A (Bowes) So it's a little bit different with DC power as you've just identified. There's only two wires in this case. We're on AC systems. There's usually three wires that transmit at the transmission level. Also with DC power, there's much more precise control. So you can actually schedule amounts of power to flow over those
conductors over those wires, and it's coordinated between the converter station in Quebec and the converter station that you've mentioned in Franklin. So there would be a schedule of power flows along that cable. It could be up to the full power, 1090 megawatts for certain hours of the day, or it could be curtailed back to zero, no power flowing on those wires.

Q Um-hum.

A (Bowes) Where an AC system, the power flows along the paths and it divides among the resistance or impedance along those paths. So our connections with say, New York, or the AC connections with Canada, those are free flowing so there's always some amount of flow back and forth on those cables. Where DC, it's on/off or can be scheduled at any level that either company, well, in this case, Hydro-Quebec desires to transmit across the line.

Q Okay. So you get a hot, hot day and a lot of air conditioners are running or very, very cold day and you happen to have four guys that have got electric heat in their house, is it ISO New
England that determines we've got to have electricity and they notify somebody to start drawing it down quicker?

A (Bowes) So actually, Hydro-Quebec would bid into the market. They would bid into the New England market and say, usually a day ahead or could be longer in duration, but certainly a day ahead they would say we plan to operate the line at 500 megawatts between 6 in the morning and 6 at night. ISO would approve that schedule and then the next day they would expect that delivery to be made.

They also have the ability and they've done this in rare instances with the Phase II line, Hydro-Quebec Phase II line, is they've used it for emergency operations. There's a period of time August 2016 where it was a hot day, there were power plants in New England that were off line for whatever reason, and they scheduled above the normal 1200 megawatts on that line. They went up to 15, 1600 megawatts for a short period of time. They were able to do that because that line is rated in total for 1800 megawatts but operate at 1200. That's why I use
the example of 500 megawatts with the Northern Pass cable. They may order us to go up to the full output if there's an emergency situation.

Q How often are you transporting electricity at full output or full, I guess they call it full capacity?

A (Bowes) Great question. It's going to really depend on what the buyer wants. In this case, if they're selling into the open market, they would do it when it's most cost advantageous to them. If they have a bilateral contract which means they've signed a contract with another entity, for example, if they were to win the Massachusetts RFP then that would be much more prescriptive. They have to deliver certain hours of the day and certain quantities of day.

Q So there's what you might call a minimum required to be transported?

A There is no minimum transport. There is a maximum. 1090.

Q Can you build up the storage, have a supply of electricity? Is that such a thing as that?

A (Bowes) So in effect, that is exactly what's happening with this Project. The storage isn't
with electricity, it's with water. So Hydro-Quebec stores the water, and they choose to generate at certain times and that becomes the power flow that's not only to serve their native load but also to serve the New England requirements that they've bid into, but that's exactly in this case what happens. It's really the same with any hydro-type system. It's stored water and the energy is in the water, not in the electricity.

Q Is there a waste? You have too much and have to throw it away if you can't use it? Or you're limited in time?

A (Bowes) So there is not. It can only operate up to its maximum. It can't operate beyond that. There are some losses along the line and components along the line do have losses. The converter stations, typically around one percent losses. We've gone through some of the tech sessions and talked about what the losses are in the cable, what the losses are in the overhead lines. All told 3 to 5 percent losses is probably pretty good from the point in Canada to the delivery point in Deerfield.
Q  We're going to be referring to the heat.
A  (Bowes) Sure.
Q  We'll show by evidence if it hasn't already been established that apparently maximum heat when full capacity, temperature at the cables in the ground, I'm not sure about overhead, but in the ground, have been noted to be 70 degrees Celsius or 158 degrees Fahrenheit. Is that your understanding?
A  (Bowes) So the maximum operating temperature for the DC cable portion of the Project is 70 degrees C. We talked a little bit I think yesterday about AC cables typically operate about 90 degrees C so about 20 degrees Celsius hotter and then the overhead conductors operate at higher temperatures than that.
Q  Is the 158 degrees Fahrenheit continuous in our case the 7 and a half miles and then the 52 miles? In other words, is it just as hot in Bridgewater as it is in Bethlehem?
A  (Bowes) So I would say no. That's the maximum operating temperature for any single point along the cable.
Q  Assuming full capacity.
A (Scott) Can I provide an answer to that?
A (Bowes) Sure. Go ahead.
A (Scott) So typically how these underground cable systems work is the conductor of temperature itself can go up to 70 degrees Celsius and the system is rated so that at maximum load for the installation conditions, it will not exceed that conductor temperature. So for locations, let's say, where you're shallow, the conductor temperature would not be at that higher temperature because the conductor temperature is essentially, the cable itself is designed to meet that conductor temperature at the thermal pinch point of the system which typically is the deeper locations where you can't dissipate as much heat to open air.

So usually where it's operating at the conductor temperature, maximum conductor temperature is where the thermal pinch point of this system is which is typically deeper.

A (Bowes) So those in this case would be the HDD installations. Those are the thermal pinch points as Mr. Scott identified?
Q At full capacity, when that happens, we're close
to the 158 degrees.

A (Scott) For the conductor temperature at those thermal pinch point locations, yes.

A (Bowes) And probably a few degrees cooler at other points along the route.

Q Okay. We have a great deal of concern, as you by now know, Mr. Bowes, about the heat in the ground and a dirt road and your being able to make the statement and Ms. Farrington has said the same thing in her Prefiled Testimony and Mr. Johnson to a degree, you probably all agree, that when the Project and construction is complete that the conditions of our town dirt roads will be as good or better condition than they were when you first started work. Probably pretty hard for you to say no to that, but everybody agrees that that is part of the philosophy of Northern Pass, I'm sure?

A (Johnson) Yes.

A (Bowes) Yes. We have made that commitment.

Q Yes, I'm sure. At the very least, we can define three different types of conditions that are going to exist after the construction occurs. You have the direct burial where the ditch is
being dug down roughly four and a half feet.
Some material you put in the bed and then the
conduit. Backfilled with thermal mix to
dissipate the heat, then the concrete slab, and
then some times not and sometimes yes a separate
fill on top. So you have a condition there
where you've got heat down roughly 3 foot 5 or 6
inches the top of the conduits. Is that your
understanding? And I'll head back to you,
Mr. Scott.
A (Scott) That specific depth is approximately
what's known on the design --
Q Pretty much what they're trying to do.
A -- and we are coordinating with the DOT to
update that to meet their requirements.
Q Okay. So you have a situation where the known
commodity for sure is that there's two cables, 3
foot 4, three foot 5 in conduit that when at
full capacity are 158 degrees F.
A (Scott) If that were the thermal pinch point of
the system, yes.
Q Right.
A (Scott) For the conductor temperature itself.
Q Splice pits, and I'm going to err in on our area
called Bear Rock Road which is roughly three miles and hence there's nine splice pits, what is the planned depth of the splice pits? Top of the concrete cover?

A (Scott) The top of the lid of the splice pit is what you're referring to?

Q Yes. The top of the part of the precast.

A (Scott) Sure. So I would refer you to our plan and profile drawings for the current proposed depths from grade. Does vary slightly. The minimum depth we're proposing is two feet. However, as we've started previously, we are updating to meet DOT requirements and that depth will likely increase.

Q Might go deeper?

A (Scott) Yes.

Q Would you say it's safe for me to make the assumption these splice pits when they're, after installed, and let's say after the cable is installed you have a cable coming into this vault, in laymen's terms you could call it a huge septic tank if people have seen a septic tank installed at their property, the conduit, the cable comes in at one end and goes out the
other, a different cable, and those two cables have to be spliced. The inside area, would you agree, is a little over 30 feet long, probably 5 feet wide, 5 feet high and about 9 feet inside measurements of the area?

A (Scott) I would disagree. I would refer to the detail drawings specifically for the alignment you're referring to, North C503, where there is some dimensioning prosecuting provided for these pits.

Q Okay. More exactly you're going to give that?

A (Scott) Yes. Sure. So the inside height shown on there is 5 feet 8 inches typical which would likely result in top to bottom measurements from the bottom of the slab on the bottom to the top of the concrete slab on top being closer to 8 feet tall. And the length, outside dimensions is 34 feet two inches. So inside dimensions would likely be around 32 feet. The width outside dimensions is 7 feet 10 inches so the inside dimensions are probably closer to 6 and a half feet.

Q Thank you.

A (Scott) Yes.
Q  Point being it's a pretty good-sized volume of air inside that tank.

A  (Scott) That will be filed with thermal sand.

Q  So the process, the process is the final product when complete is the cables, one cable coming in and another cable goes out, the process of splicing occurs and then it gets filled with the thermal fill?

A  (Scott) Correct. So to remove the riser rings to provide access from grade, we will fit the splice pit with thermal sand which is essentially filling all of the void space that would be air typically in a vault with thermal sand.

Q  Will this thermal material inside the vault be put in after the splicing occurs?

A  (Scott) Yes.

Q  So taking a couple steps back, Attorney Pappas went through the processes of we're going to dig a hole, and if DOT requires to go deeper, then the hole would be deeper probably beyond ten feet deep to the bed. And I'm not looking for exact numbers. I'm happy with give or take roughly ten foot plus down. I think we
established with Attorney Pappas that in the case of Bear Rock Road, it's going to take the whole road for that to occur. The road will be shut down. And we also established, do you agree, that it will take about a week per splice pit?

A (Scott) For the installation, yes.

Q Pretty much. So installation occurs where you set the bottom and you set the top. Backfill it? Is that when it's done?

A (Scott) Yes.

Q Cover it over?

A (Scott) Yes. And I'm not sure if we specifically decided if that pit will be filled with the thermal sand at that stage as well. That's definitely potential.

Q Gone through the next four or five steps of doing the trenchless and trench work and stuff, and you've got the cables ready to be pulled, and they go from manhole to manhole. What's the process there?

A (Scott) So once the civil installation is complete and they're ready to install cable, is that what you're asking about?
(Scott) Once they're ready to install cable, they will come back to the splice locations, cut grade again to expose the lid of the vaults, remove the lid, remove any materials that would have been placed inside of that vault such as thermal sand. Make the vault ready for cable pulling and splicing, and then proceed with the cable installation.

Q So doesn't make much sense to put the thermal sand in if you're just going to take it back out, you don't need it.

A It would be primarily to ensure that no gasses filled that entrapped space.

Q Okay. Do you take the top cover off when you go about pulling the cables?

A Yes. The entire lid would be removed.

Q So top cover comes off, you kind of backtrack back to where you got the bottom half of the tank in the ground.

A Essentially, you would be exposing to the lid of the vault from grade.

Q Do you know how much a half of one of these tanks weighs?
Q: If I told you, depending on the exact thickness and voids for conduit holes and so forth coming in, in the vicinity of 65,000 pounds? Would that surprise you?

A: (Scott) Not really.

Q: So what we, and initially, you bring a crane in?

A: (Scott) So the sizes of these splice pits will likely require the precast concrete members to be cast in more than one piece. The specifics of what those precast members would look like have not been determined at this time. So, for example, there's different ways to do it, but one of the ways would be to have that base slab be in multiple segments so three or four different segments that would be put together, same thing with the long walls. The end walls would likely be single members, the cap itself would likely be multiple pieces as well.

To get to your question, yes, you would require a crane to offload off of the truck, shipping those precast members into the pit, the excavation. And the size of the crane required would be based upon the size of the precast
members.

Q So, Mr. Pappas spoke yesterday, day before yesterday, I guess, and the process is that rather these precast tanks are in five pieces top and five pieces bottom or two or whatever, the fact is that it's a week of the road closure to bring the crane in to set the tank.

A (Scott) The entire process would be a week for the initial installation.

Q But we also need another week plus because I'll find evidence to bring forward that shows that an average splice of the two cables, and we'll talk about that in the Prefiled Testimony review, you said, takes a week.

A (Scott) Approximately.

COMMISSIONER BAILEY: Mr. Thompson? Excuse me. Off the record.

(Discussion off-the-record)

A (Scott) So if I could answer your question?

Q Sure.

A (Scott) The typical durations for the pulling and the splicing process typically for one cable to be installed so one single cable in one direction is half a day to a day once
mobilization and setup at the site has been completed which usually takes about half a day to a day. So to pull four cable segments is a range of two days to four days with most likely half a day to a day to set up. So about a week to pull all those segments and then another week to splice the two cables together.

Q So if I understand correctly, each splice pit, of which there are nine on Bear Rock Road, will tie up road closure for two weeks each.

A (Scott) During the cable installation process.

Q One week during the cable installation and splicing and another one digging the hole and setting the manhole.

A (Scott) So I believe what I've stated is that there would be a week period for the civil installation initially for the splice pit itself, and that at a later date, there would be, the cable installation would be approximately ten days for that duration.

Q Ten days. Two and a half weeks.

A (Scott) Two weeks.

Q Thank you. So far we've talked about the heat, Mr. Bowes. At this point in time, would you be
willing to make a statement that the condition of Bear Rock Road because of the heat after construction is complete will change and be irreversible?

A (Bowes) I'm not sure I understand what you mean by change and irreversible.

Q Will it be in as good shape or better as before construction started?

A (Bowes) So let me try to answer what I think the question is. If you're asking me will the thermal characteristics of the cable installation degrade the performance of the road?

Q Um-hum.

A (Bowes) My answer is no.

Q Okay. We'll get back to that later. Thank you.

We were dwelling on the issue of different conditions of the road. We talked about the trenchless condition with the thermal fills or the trench. The second condition is some condition of the splice pits being spaced every third of a mile roughly and the question of whether heat is given off from the top or out of that volume area, and I guess, Mr. Scott, that
was kind of what I was leading up to a few
minutes ago when I got waylaid. There's got to
be a pretty good amount of heat if the cable's
in that splice pit rather that's thermal fill
and the job is complete or at any given point,
in that volume of thermal sand. Isn't that
true?
A (Scott) Based upon the depths of the
installation, it would likely be less than other
locations.
Q Where does the heat go? I don't understand.
A (Scott) So if you refer to my Supplemental
Testimony Attachment A so this would be Exhibit
88, ABB has performed a study specifically to
the heat generated by the cable system and the
impact at grade.
Q Is the ABB study that response to a request from
New Hampshire DOT of the question of possibly
damage from heat in the roads?
A (Johnson) Yes.
Q Get to use my first evidence. Number CS 33.
Hopefully, I'm doing this properly. If not,
speak up. I guess I have to put on ELMO. Have
I got it?
This is the ABB report, and if you look at the top, I apologize for all the scribbling on this, but it kind of helps me out. The first statement is that the New Hampshire DOT expressed concern that the placement of the Northern Pass Transmission underground power cable will create an adverse surface condition on roads.

So directly above the cable placement. So DOT had a concern. I got a copy of this, this report, read it a number of times. And each time I read it, I felt like it was more an argument in favor of damaging the road than not. And I'd like to just point to a few points of issue. There are a lot of other points and graphs and statements that I'm open to any rebuttal on this, but it seems like a filler.

The bottom line is that I felt from reading this ABB report that it more supported my point that there will be damage, and that the road will not be the same when completed, and the reasons are that that heat will rise and cause abnormal frost conditions, freeze/thaw, and I'd just like to quickly run through a couple of
points.

Halfway down the first page where I got the word B, it says, all heat will dissipate from the conductor to the surface of the ground. This will create a temperature gradient from the conductor to the surface of the ground.

I assume that that means that we have a condition where, pretty basic, heat rises. And add to it that it's backfilling, and I guess this would go if it's inside a splice pit or if it's in the direct burials, there will be the fluidized thermal backfill, FTB, and this is going to help to dissipate. The word dissipate has been a key word used, and dissipate to me is spreading the electricity, heat, the heat, not the electricity, out into all directions including up.

Item D on the next page, the heat generated by the cable will dissipate to the surface because the surface is cooler than the earth.

MS. DORE: Mr. Thompson, did you file page 2 as a separate exhibit because we have only one first page for this exhibit filed as an exhibit.

MR. THOMPSON: I assumed I was filing the
whole exhibit.

A (Scott) This is also in my Supplemental Testimony, if that helps at all.

MS. DORE: Okay.

PRESIDING OFFICER HONIGBERG: I think people know where they are. You can continue, although it's not clear to me what your question is.

MR. THOMPSON: Yeah. I have to work on that.

PRESIDING OFFICER HONIGBERG: Well, you have to work on it soon.

MR. THOMPSON: I will. Now.

BY MR. THOMPSON:

Q Couple pages farther, twice a year the surface temperature is transitioning across the zero degree zone, fall and spring.

What I'm referring to there, Mr. Scott, is that you have freeze/thaw cycles, and what I'm really digging into is what we call the thermal break which is the line between cold and hot or in this case frost and the earth underneath, there's a thermal break, and that's going to move back and forth. Do you agree that at some
point the heat comes up and will outfight all of the cold, and frost will be all out of the ground?

A (Scott) I would refer to the last two paragraphs of page 5 which basically states that should not cause any noticeable impact at grade or to grade surface or subgrade.

Q I've read this a number of times, and when I got to that comment on page 5, that's where my problem occurred. So you've read this whole report and find the conclusion is --

A (Scott) Correct.

Q -- that there will not be an issue with the frost.

A (Scott) That it will not be an issue, and that also lines up with my experience on other underground transmission projects as well as, I believe, Mr. Bowes' experience as well.

Q We'll get to that. Thank you.

This says other statements like on page, I guess it's 6 or 5. 5, I guess. That refers to the ground freezing from the top down. The point that I intend to make is that the heat, and I know, Mr. Bowes, you've said that you
would not agree with me, but the heat is an
added feature that, according to the ABB report,
causes changes that didn't occur before of where
the thermal break is at any given time during
the course of the fall, winter and spring. To
clarify that question, do you agree that there's
a constant battle between cold and hot, and it's
going to move around, and my real point and
question is that's changing from what it was
before the heat was put in the ground.

A (Bowes) So I will try to pose a question and
then answer it. I'm not sure I can go with the
battle between hot and cold, but let me try.

    The report clearly states how the thermal
temperatures change throughout the year, and at
two points of the year they pass through zero
degrees C. The cable system will operate at a
much cooler temperature during the winter months
because of the background ambient temperature,
and it reaches its maximum temperature late
August, early September, as the temperature of
the earth surface is at its maximum temperature.

    The cable does have localized impacts on
the earth surrounding it, but as you can see by
the two graphs that are shown, and they actually provided a very nice visual to go along with their calculations in their statement, they show that that heat dissipates quite quickly away from the cables, and about two feet away from the cables there's negligible impact to the surrounding earth.

Q Well, were you privileged to listen to Mr. Rusty Bascom, an expert for the Counsel for the Public?

A (Bowes) I listened on the phone for the technical session, yes.

Q That is right. We had that on the phone. Good. Let me, I can dig out the evidence, CS number that I have. But he's going to make the statement that that heat will spread and dissipate to as much as 3 to 5 feet. Are you aware of that? Would you like to see it?

A (Bowes) I don't recall the 3 to 5 feet, but certainly I'm welcome to look at it.

Q This is CS number 18, Data Request of Earle C. Bascom, February 6th, 2017. I'll refer to page 2. No. Bottom of page 1. Right down here.

When asked would heat leaving the cable affect
freeze/thaw, right at the bottom. The last sentence, I would anticipate that the soil temperature around the cables within 3 to 5 feet in all directions would be above freezing if the power cables were operating at full capacity for an extended period of time.

Do you agree with that? Find it troubling? Contradictory maybe?

A (Bowes) So it's certainly contradictory. But I'm not sure that I disagree at this point until I understand the assumptions that he made that go into that. We have the study from ABB. We've also used Mr. Bascom on our projects, and he's designed, part of the design team for two projects in Connecticut that operate, they're AC cables, they operate at 90 degrees C. We have never had any thermal issues with those cables that he designed. So that's why I'm skeptical, but I'm not, until I understand the full context, I'm not going to say I disagree.

Q If any part of his statement is close to being valid, then it would certainly change the activity of the thermal break, of the freeze/thaw circle, of whether the frost is two
inches down or two feet down. And then probably
the big factor as it always is is the fighting
cold from the atmosphere.

A (Bowes) I don't disagree that the cable in the
direct vicinity of cables it will change the
depth of the frost.

Q Thank you. Okay. Mr. Scott, I'd like to pull
out your Prefiled Testimony. The original
Prefiled Testimony dated --

A (Scott) Yes, I have it. Exhibit 13.

Q -- dated October 16th, 2015. Refer to page 2,
line 11, you use the word constructability. And
you refer to it down near the bottom of the page
at line 30. Interesting word. Can you kind of
tell us why you use that word?

A (Scott) That's a term that's fairly typically
used for these kinds of projects. Essentially,
for me, the definition of that word is verifying
that the project can be constructed as designed.

Q Would you say it also kind of refers to ease of
construction, feasibility, logic that maybe it's
-- well, strike that.

A (Scott) More or less, yes.

Q Look at the simplicity of it or is it workable,
does it make sense?

A (Scott) Is there a better way to do it, yes.

Q Now, if you went on the site and saw something and it just seemed foolish to construct the way they've designed it, you'd call it unconstructability?

A (Scott) I would call it a constructability issue.

Q Yes. It would be -- right. It wouldn't be a positive constructability perhaps.

Page 3, line 21 and 22. I guess I just needed clarification here. You make the statement in the last sentence, "It is also possible that during the detailed design phase, alternatives to the trenchless installation may present itself at any given location."

I thought that, I guess, could you give me a couple of examples of where that would apply?

A (Scott) Sure. So when the Prefiled Testimony was made, we had not yet engaged a detailed design firm for the trenchless installations or a contractor so since then we have engaged both, and essentially what this sentence was getting at was that as design progresses, it's possible
that there would be locations where they would
say that trenchless installation is not required
at that location based upon surveyed information
or construction alternatives such as maybe
trenching through a stream during frozen part of
the year or being able to add grade at a
crossing. So those are things that are being
evaluated by the HDD and trenchless design firm
and the contractor, PAR.

Q So any given trenchless which is a HDD or pipe
jack or the other one, could be negated? Could
be eliminated?

A (Scott) Well, I would not phrase it that way. I
would say that this, the intent of this sentence
was to say that some of the proposed trenchless
installations could change as detailed design
progresses.

Q In other words, make it shorter or longer or
deeper or shallower?

A (Scott) Most likely, yes. And I think that the
location shown on the current permit Application
drawings are fairly accurate as to where
trenchless installations will be required.

Q What would be the process, if you wanted to do
that, would you, probably you as an engineer, design engineer, would be contacted because PAR Electric or whoever was in charge of the job super said hey, there's a better way of doing this, then what would happen? Would he come to you?

A (Scott) Sam, do you want to address the process that would be followed?

A (Johnson) So the PAR Electric has, as Mr. Scott just noted, has hired a detailed design engineer who is using not only field verification but also their years of experience to ascertain the location and depth of these HDDs. Really by the time -- and they are also involving the constructability, if you will, by interfacing with the construction companies that will actually perform this work at some point in the future. So by the time they get on the field, the plans themselves should be pretty concrete and pretty solid. There will be, of course, minor variations of a location of a piece of equipment, but we don't expect wholesale changes of the design once we get out to field conditions.
Q Good. Thank you. Page 5. I kind of hit on this a little bit, and I knew I was coming up with it. But on page 5, line 18, just need a quick definition, and I don't know, Mr. Scott, if you're the man, but page number 18 you use the two terms, thermally approved sand mixture and fluidized thermal backfill. We kind of know what the fluidized thermal backfill is. That's the 2 to 500 psi concrete, enough flowability to run down a shoot delivered by a ready mix truck and it goes around the conduit up to where the poured concrete protection slab is.

I assume the thermally approved sand mixture goes on top of the concrete pad when there's not a suitable alternative? In particular, the existing conditions?

A (Scott) So, again, when my Prefiled Testimony was made, the trench cross-sections at the time showed thermal sand around the conduits. Since then, the current permit Application drawings show fluidized thermal backfill around the conduits. So as far as I know the only proposed locations where thermal sand would be used is inside of the splice pits.
Q And if they decide to fill above the concrete protection slab --

A (Scott) That would likely be thermal fluidized thermal backfill or other approved backfill mixes.

Q Good.

A (Scott) And, again, that is something that is being coordinated with the DOT to get those mixes approved.

Q Page 7. Line 29. 29? Wrong page. No wonder. Use the expression small switching station. By "small," I assume you're referring to, am I correct, in the square footage area and not the heighth?

A (Scott) I'm referring to general --

Q This is of a transition station.

A (Scott) This is for a transition station. I'm referring to typical substation sites, dimensions. This is small by those measures which, I guess, is my personal opinion of large or small.

Q Would you call a transition station, any of the 6 that we have on this Project, small?

A (Scott) Certainly.
Q Would you call it small in heighth?
A (Scott) Depends on your definition of height, small.
Q That's true. Within the fence there's some sort of, I forget what they call it, a tower something or other?
A (Scott) A dead end structure?
Q Yes. The thing that's up in the air?
A (Scott) With the overhead intercepts?
Q Yes. How tall is that?
A (Scott) I'd have to defer to Derrick for that.
Q Give or take.
A (Scott) One moment.
A (Bradstreet) I'm just going to look real quick. 80 feet.
Q Eighty feet. And that's within the 8-foot woven wire fence with the three rows of barbed wire around the top fence?
A (Bowes) Correct.
A (Bradstreet) Yes.
Q And, roughly, Derrick, then the line, I assume, goes from there up to the first tower? Going wherever you're going with the electricity?
A (Bradstreet) Right.
Q So you've got 80 feet, give or take, and then going up to it.

A (Bradstreet) The next structure would be in the range of 80 feet also, but we can pull specific heights.

Q To get the cable overhead going?

A (Bradstreet) Yes.

Q My next comment I've already hit on, but I just want to verify. The bottom of page 8 refers to the time spent for splicing. The original splice was a 1200 megawatt cable you indicated might take as long as a month for splice, but by going to the 1090 kilovolt, it's roughly a week. Still the case, I assume? That's the actual splicing of the cables after the cable has been laid.

A (Scott) After the cables are pulled, then one week for splicing, yes.

Q But that clearly adds to a solid two weeks of, in the case of Bear Rock Road, at least, a skinny road, and certainly probably North Hill and Old County, that each splice pit will be closed, road closure for at least two weeks, one week at a time.
A (Scott) Approximately. Yes.

Q Thank you. Okay. Last thing is on page 9, line 8. Safety. You agree with your statement, and I'm sure everybody here does, that safety is a key element of the underground design.

A (Scott) Correct.

Q And certainly of the underground construction and the whole process.

A (Scott) I wouldn't say that's only underground construction. Construction generally, yes.

Q You want to cover safety a little bit? How you handle it? And I don't know if it's an area of your expertise or somebody else, but --

A (Scott) I could let Mr. Kayser discuss during construction. From the constructability perspective, usually I'll look at space available to construct for workers to be present. Take that into consideration.

Q Thank you. And whoever would like to speak to it, perhaps a little bit about the safety program, how you communicate, how you keep track of things? Going to be, seems to me, pretty monumental with the number of different roving construction crews all over the place. And I
mean, really, all over the place. And also that there's different areas of definition. I mean, overhead is a lot of different issues different from underground or whatever.

A (Kayser) Yes. So PAR will be responsible for the safety program and as part of that, each of their subcontractors will have to submit to them safety programs for the work that they're doing. So each contractor, whether they're an overhead line contractor, a clearing contractor, the underground contractors will have to have safety plans.

And as part of that, for everything they're doing, they do pretask analysis. So they'll look at each part of the work they're doing, identify the types of work, what safety precautions they need to take, what personal protective equipment needs to be done with that. And also there will be a safety oversight from the owner looking at that and monitoring some of the safety plans that are submitted by the contractor.

A (Bowes) I would also like to add some context to the overall Eversource safety program. Today in...
New Hampshire, we have 25 active transmission projects. Some of them are very large like Merrimack Valley Reliability Project. Some are located at a single substation. So we have multiple crews out there today working, and we have a safety oversight program with both our construction inspectors and also our line supervision. So if it's a substation group, that substation group has a supervisor that's expected to take safety as their number one priority for the job. We also have an independent safety group. They will be assessing the performance of Northern Pass Project.

So in addition to the 25 transmission projects we have ongoing today, we have 40 distribution crews, PTSD crews out working today, and we probably have at least 20 contractor crews working today. That doesn't include probably 10 to 20 vegetation management crews going as well.

So we have well over 100 work sites active today in New Hampshire. Northern Pass will be a large incremental load to that. We expect that
we will handle that in the same way we handle the day-to-day operations for Eversource. And I think we established yesterday that there was maybe 20 or 25 work locations would be ongoing at any one time with Northern Pass. So about 25 percent of what we have today in New Hampshire and tomorrow in New Hampshire.

Q You mentioned PAR. Are they involved in any of these projects?

A (Bowes) Yes. They are. They own two New Hampshire affiliates today, and they do the transmission construction and maintenance as our general contractor today in New Hampshire, and they and predecessor companies have for, well, more than the 32 years I've worked at the company. Their name has changed a couple times, but they've managed all of the construction and maintenance activities on our transmission network for more than 30 years.

Q Now, I'm confused a little bit. What's the relationship between PAR and Quanta?

A (Bowes) So similar to the relationship of Eversource and PSNH, Quanta is the parent or holding company, and PAR is a wholly owned
subsidiary that does, in this case, overhead and underground construction and maintenance activities. They have a host of other wholly owned subsidiaries as well as does Eversource.

Q So when, I assume that there's some kind of a contract, you put a deal together with Quanta, do you check their safety records?

A (Bowes) We do.

Q CS number 36, evidence, is a report that I stumbled upon and I'll show it.

Having been in the construction and manufacturing business for 45 years, I understand the importance of safety. This comes, I discovered this while searching Quanta, headquarterd in Texas?

A (Bowes) Yes, I believe that's true.

Q This is a report from Quanta of penalties assessed from 2010 until now numbers 31. It's broken down into 7 Wage & Hour violations which doesn't sound very good, and even worse, workplace safety or health violations. 24 of them. Totaling a little over $1,000,000. If you look at the breakdown, there are a number of them that are PAR Electric. And there's other,
I guess, subcontractors or Quanta that add up to the total. But a number of times PAR Electric is mentioned here. Does that concern you at all?

A (Bowes) Yes, it does.

Q Have you seen this? Were you aware of it?

A (Bowes) So each year with each one of our contractors we review various injury rates as well as their insurance claims that they make for workplace injuries, and we have an internal metric that we track, and we require all of our contractors to stay below that metric, and if they exceed that metric we call in the senior management and have the discussion with them around, and it's not just for the work crews that work at Eversource but for their entire company like you've just shown, and we sit down with them and understand what they're doing to correct their safety record.

We have had issues with Quanta or PAR in the past, and we've done that exact process, as we have with, whether it's a tree clearing company or whether it's an electrical maintenance company, we're very cognizant of how
they are performing both on our system as well as on a national basis.

And for the most part, I will say that contractor safety record equals that of the Eversource companies, and we pride ourselves on being a very safe company as well. But they typically perform at the same level or better than our company does.

Q And I'm sure that they're a very large company with a ton of exposure.

A (Bowes) As is Eversource.

Q Yes. To be rosy clean is pretty difficult. You try, but --

A (Bowes) I think it's the expectation we have, zero incidents, and certain little zero injuries, and in this case, usually there's some sort of violation that goes with OSHA, and oftentimes, there's an injury behind that as well. And we don't take that lightly.

Q Certainly it's concerning and needs to be watched, and that's the reason for having the good safety program at all levels out in the field, correct?

A (Bowes) Yes. I agree with you.
Q Something that, to switch, as they say, to
switch gears, I've heard that expression quite a
bit, not sure what it means, but to change
subjects, I have a personal issue of a business
located a few hundred feet from Transition
Station number 4. It's called Bear Rock
Beverages, and it is three glacial spring water
wells. Have we talked about this already so
you're a little knowledgeable of it?

A (Bowes) We have, but not as part of the
hearings.

Q Have you looked into it at all since I've
brought it up at testimony?

A (Bowes) I would say just a little bit. I
understand it's really not an active company at
this point.

Q True.

A But I did make some public commitments to you,
and I'll be glad to reaffirm those today is that
we will put a monitoring program in place that
will monitor those glacial springs before,
during and well after construction to ensure
that we have no adverse impact on those springs.

Q Do you agree that nearby blasting has a
potential to be a problem affecting the quality of not only my water but any water?

A (Bowes) I will agree that it does have that potential.

Q And it should be monitored.

A (Bowes) We typically set, and Mr. Kayser can go into more detail as well, we typically set up a monitoring program for wells within 500 feet. I believe yours may be a little bit outside of that distance. And like I said, we've agreed that we will monitor those three wells, I believe it's three, as well as part of our construction program.

Q Just to take that subject a step further, I have a, I think it's a report through Department of Environmental Security submitted and written by a gentleman named Brandon Kernen in 2010, and I'd just like to verify that you would take a stand of what his philosophy is by reading the first couple of -- it's probably pretty hard to read. Maybe you can see it. But the philosophy here, and I'd like to hear from all of you that certainly you take the attitude ensuring safe and adequate drinking water supply requires
maintaining the quality and availability of present and future water supply sources because in the long run, it is less expensive and more protective of public health to prevent contamination than it is to treat it, treat water to meet health standards. It is less expensive to use existing sources.

The key thing to me there is less expensive and more protective of public health to prevent contamination than it is to treat. Your answer would be treat and not protect. Is that what you told me a few minutes ago? By monitoring and then doing something about it if it happens?

A (Bowes) I'm not sure I understand the full context of the report. I would be glad to review it. If there's mitigation measures in there, I will certainly review them. I'm just not privy to that report.

Q Certainly available. My approach, and I guess I'd ask you if you agree, my philosophy here would be that our world needs to take better care of many of our assets of which one is water, and by taking what I would consider a passive, well, I'm not sure it's passive, but
approach of "we'll fix it if we break it"

instead of let's not let it happen, how you feel?

A (Bowes) So, again, if you could narrow the context of the question. I'm certainly in favor of clean water and clean air and clean power sources. So there's a, I'm in favor of all three of those, but the specifics, I think, have to be what we speak to.

Q Okay. I can get specific. The real issue for me is the location of Transition Station number 4 and an enormous amount of blasting. Let me start off by asking, were you involved in the or who was involved, if not you, in the decision of Transition Station number 4 being located where it is?

A (Bowes) So it did happen before I became part of the Project. I know it was a joint exercise with Burns & McDonnell to locate the overhead portions and the underground portions of the line. It also went to availability of land, and once we had this parcel of land, the most suitable location on that parcel to construct the transition station. I did not select the
actual location though.

Q Mr. Muntz, your predecessor, make that decision?
A (Bowes) I think it was a Project decision. I know Burns & McDonnell was involved in the routing back in 2010 and '11 and then again in 2013 as the route changed.

Q Would you say, maybe Mr. Bradstreet, constructability, are you familiar with Transition Station number 4's location and the plans?
A (Bradstreet) Yes, sir. Both.

Q Would you call it a positive constructability site? Easy to work with?
A (Bradstreet) I would say there are definitely challenges on the site, but we don't feel they are challenges that we cannot overcome.

Q Have you considered alternatives or do you feel there's no need for alternatives?
A (Bradstreet) As the Project was looking at the underground route, this site was the selected appropriate site.

Q Right. Did it have anything to do with the fact that it was the closest access to get back on property owned by Renewable Properties or
Renewable whatever they are?

A (Bradstreet) That was a factor. Yes.

Q That was the first piece of property.

Certainly, there's plenty of land. I mean, Renewable Properties owns thousands of acres now, don't they, in Clarksville and Stewartstown?

A (Bradstreet) I don't know the number, but there's many properties.

Q Mr. Bowes, is it the same answer for the decision to bury the 7 and a half miles from Wiswell Road in Clarksville along all the town roads plus the state highway Bear Rock, up to Heath Road where the transition station before was?

A (Bowes) The same answer as my involvement, you mean?

Q Yes.

A (Bowes) Yes, I would say it is. Again, I reviewed that route. It's certainly constructible. It is not without its challenges as well. We went through some of those yesterday. We're going to have to do some lane closures and some road closures to do that. So
it does have challenges.

Q And I don't know how the process works, but was consideration given to an alternative of instead of combination of overhead and underground burial, the route that it goes, of just coming out of Halls Stream and getting on to Route 3 or the railroad tracks, and going at least down to south of Groveton where you could hook up with the existing Public Service right-of-way?

A (Bowes) So I believe that was one of the route alternatives that was explored.

Q Was there a reason it wasn't picked?

A (Bowes) I believe the Project routing was originally the overhead to the west. Then they looked for an overhead to the east and then ultimately overhead rights were not available, an underground segment was added.

Q Because of the unavailability of overhead land, you went to the underground 7 and a half miles?

A (Bowes) Yes. There was one constriction where we could not get the available rights.

Q But the Route 3 or railroad track due south just didn't make sense. It was considered but negated.
A (Bowes) That's correct.

Q When I sit on my deck, having my first cup of coffee in the morning, and I look directly across Bear Rock at where I know this transition station is going to be, and then coincidentally the lines go directly away from me, why is it that I'm looking right into the sun which is east? When I would think the strategy should be if you wanted to get from Halls Stream Pittsburg to Deerfield, you'd want to go south? I mean, due east where I am.

A (Bowes) It was, again, based upon the available land rights that we had as well as the routing that we chose, based upon a number of factors, including environmental impacts, the visibility impacts, and if it could be constructed within that area. This is a constructible route that we have chosen, and we have the available land rights secured to do that.

Q Whoever wants to answer, would you define the blasting and removal of give or take 30,000 cubic yards just out of the Transition Station number 4 and hauled off to some point make sense constructability wise?
Do you want to go into it?

Yes. Mr. Johnson talked about this a little bit on Monday, I believe.

Yes.

The cut and fill quantities at Transition Station 4, there's about 30,000 cubic yards of cut and approximately the same amount of fill. So the plan would be to utilize the material that's cut at that location and to use that as the fill material to develop the site.

And your previous question, Mr. Bowes, about the wells and the protection, part of the contractor's blasting plan will take into account proximity of the wells to where they're doing their blasting. So as they're developing their plans for our approval, that will be taken into account, and they will plan accordingly due to those locations.

Did you say the cut and the fill are going to give or take offset each other?

Yes. Approximately. I think Sam had talked about that Monday. I think it's within a thousand cubic yards.

Have you seen the plans? Transition Station
number 4?

A (Kayser) Yes, I have.

Q I brought a full set, but I've also got some copies of it, and it shows proposed cut and fill areas, and I need a little bit of definition as to where the fill part is. I can certainly find the cut part. CS 37. Okay. These are from the plans. It's a rolled-up set of plans from the original Application in October of 2015 of Transition Station number 4, and I have the full set if anyone wants to look at it, but here is the site.

Can you tell, and this is downhill, this is uphill. And the lines, all those lines represent elevation changes. There's a road out here. Name of that road, John? Heath Road. Help you out. Heath Road. In fact, maybe it's time if we can switch over to -- no. I'm sorry.

Going to backtrack and show you another plan that kind of -- right here. This is the old CS number 37. Great. Great. Just to orientate people, and the Committee hasn't been up there. The day of the snowstorm when you came up, this was the place that got cancelled.
because it was probably not a smart thing to do, but, hopefully, you'll get to see it later this summer. The yellow dotted line coming up the valley is the Bear Rock Road and the buried line. As you get up, this is a little road here, this road here is Noyes Road that goes up to my home which is up here. And you come around the corner, this road going out is Heath Road, this is a continuation of Bear Rock Road into East Colebrook and this is Noyes Road going up over the mountain.

The six locations here is this is number 4 is the Transition Station number 4. This number 1 is the glacial spring waters. Number 2 is outcroppings of ledge on the side of the road which is about 420 feet. Right there. The point that I was making is that this is the site of the Transition Station number 4, and then you can clearly see the transmission towers going away. All four of those happen to be 90 footers. Also Williams Road, also known as Holden Hill Road goes up on a mountain to a couple residents.

First question --
PRESIDING OFFICER HONIGBERG: Mr. Thompson, you say this is CS 37?
MR. THOMPSON: Yes.

PRESIDING OFFICER HONIGBERG: It looks different when we're pulling it up on the --
MR. THOMPSON: I had two of them. One blown up of the other. And I can show you the other one. This one just is a little clearer.

PRESIDING OFFICER HONIGBERG: Well, you go ahead. I think most of us can see it on the screen.
MR. THOMPSON: That one just, I found afterwards. It's just bigger.

PRESIDING OFFICER HONIGBERG: What you just started to put out is what we have as 37. And is what you're saying, what's on the ELMO right now is a subset of what's in your left hand?
MR. THOMPSON: It appears to me just a larger. It's easier to read and easier to explain.

PRESIDING OFFICER HONIGBERG: You work with whatever works.
MR. THOMPSON: Okay.

PRESIDING OFFICER HONIGBERG: As long as
everybody is on the, see what you can see I
think it will be all right.

BY MR. THOMPSON:

Q First question I have is getting back to --
A (Johnson) So, Mr. Thompson, if you would just
put the last picture back up really quickly?
Q Yes.
A (Johnson) The transition station is actually
located where the green rectangle is at DC40
4C-2. So you have an asterisk and a box on
number 4?
Q Yes.
A (Johnson) So the actual location is more to the
right where the green rectangle is.
Q Are you sure of that?
A (Johnson) Yes.
Q How come all the CS cold drilling is down in the
corner?
A (Johnson) It may seem that way, but that's what
it is.
Q Okay. So it's up the road 200 yards. We'll
assume that's the case.
A (Johnson) Thank you.
Q I question it, but that's fine. Doesn't make
much difference. Although it does put me
farther away certainly from the glacial spring
water wells so --

Looking at an elevation view of the plan,
you can kind of tell, this is the road down
here. My first question is how close is the
edge of the fence to the right-of-way. And you,
I don't know if scaling this will work or not,
Mr. Scott, but --

MR. ROTH: Brad? Brad? Over here. The
road there, is that Heath Road?

MR. THOMPSON: Yes. It's Heath Road. It's
a spur to the left off of Bear Rock Road.

A (Scott) So you want a measurement to the
right-of-way on Heath Road?

Q Yeah, the right-of-way on Heath Road just up to
where the front face of the fence is.

MS. DORE: For the record, we're looking at
page 2 of CS 38.

A (Scott) It's between 85 and 90 feet at the
closest location.

Q Right. I'm going to show the next plan. I can
show you on a separate plan from this one that
the two cuts that I'm going to show you, one is
a cut up and down the hill and the other's across. This is the one across.

MR. ROTH: Mr. Chairman, may ask a question?

PRESIDING OFFICER HONIGBERG: You want to go off the record for a second and talk to Mr. Thompson? Why don't you go off the record and talk with Mr. Thompson.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: We're back on the record now, Mr. Thompson.

BY MR. THOMPSON:

Q Back on the record. It's important to note that this photo is the proposed final product per the plans.

A (Johnson) To clarify, this is part of the Alteration of Terrain Permit Application, and it is the Supplemental drawings that were submitted in December of 2016.

Q Okay. Not from the original which I said.

A (Johnson) You may have the original but I'm looking at the December 2016.

Q Okay.

A (Johnson) Substantially the same.
Q A cut going up and down shows -- this is sideways. Going up into the site. Shows the dotted line up above which is the existing grade and we're down here on Heath Road looking up. And then it shows a proposed finish grade clearly well below the existing grade. So that would tend to beg the question where is the fill. And before I ask the question, here is a detail looking up and down from Heath Road where you'd be standing down on Heath Road, there's some swale ditches, this is where the location of the fenced-in area, and then this gigantic site wall, retention wall, on the back.

Again, the dotted line is the existing grade, and this configuration is your finish grade. Where are you going to use 90 percent of the ledge on a cut and fill? At first when I heard that answer, I went back and took a look at the detail of this back wall thinking you were going to use the rock out there, but it's very apparent from the existing plans that that's exposed ledge. It's going to have the effect, I think, of, say, the exposed ledge that one sees above Exit 29 on Interstate 93 in
Thornton where you've got the steep cut ledge on the left. This brings me back to asking the question again of constructability. What is the sense of building a monument like this? This thing --

PRESIDING OFFICER HONIGBERG: Hang on, hang on. So far you've asked where is the fill.

MR. THOMPSON: Okay.

PRESIDING OFFICER HONIGBERG: Why build it this particular way. And a couple of others. Where do you want to start to give them an opportunity to answer one of those questions? Because I think those are all potentially interesting questions. I just want to get them in an order.

BY MR. THOMPSON:

Q Let's start with the first one. We know where the cut is. Where's the fill? 90 percent of 30,000 cubic yards.

A (Johnson) So Mr. Thompson, I apologize. I'm looking for the axis-to-axis cross-section of where this was taken so I'm struggling.

Q Can I give you the full set of plans?

A (Johnson) Sure.
PRESIDING OFFICER HONIGBERG: Wait. Wait. They're looking right now.

Q Let them go?

PRESIDING OFFICER HONIGBERG: Yes. I have a question for you, Mr. Thompson. It's on the record so I want to make sure that we all understand what's being looked for right now. I think the way you set this up is you say I see a lot of cut going on, but I don't see the fill, and you want them to reconcile and tell you what's being filled roughly, right?

MR. THOMPSON: That's the first question.

PRESIDING OFFICER HONIGBERG: Okay. So that I know they're looking for. What's the next question?

MR. THOMPSON: The constructability, does this make sense, is it logical.

PRESIDING OFFICER HONIGBERG: All right.

MR. THOMPSON: And it will lead to a whole group of more questions.

PRESIDING OFFICER HONIGBERG: Sure, but if we can get them understanding what it is you want to know to set up the next line, that will
help you and it will help them and I'm hoping it will help us.

MR. ROTH: Mr. Chairman, would it also be helpful for the record to reflect what it is that the witnesses are looking at?

PRESIDING OFFICER HONIGBERG: Until they find something, I'm not sure. And I'm going to credit Commissioner Bailey for giving me that answer.

PRESIDING OFFICER HONIGBERG: Let's go off the record.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: Why don't we take a ten-minute break, and you guys find what you need to find.

(Recess taken 2:26 - 2:42 p.m.)

PRESIDING OFFICER HONIGBERG: We're back on the record. The witnesses, I think, have found what it is they're looking for. Mr. Johnson, are you going to be speaking?

A (Johnson) Yes.

PRESIDING OFFICER HONGIBERG: Why don't you proceed.

A (Johnson) We went back to the Alteration of
Terrain Application, and we found the cut and fill document for this particular transition station, and Mr. Thompson is correct. I was incorrect in my original statement on Monday or yesterday, whenever I made that statement. I mixed up two transition stations in this case. For the most part, this will be an all cut and no fill transition station.

Q Thank you. So the next question -- there's a number of them. At your answering to my question at discovery, 30,000 cubic yards, last night I sat down with an estimator that I have, and we figured out that the blasted ledge with voids for air will make up a -- would you accept the fact that it will make a pile 20 feet high, 220 feet long by 220 feet wide? Want to take my word for it or would you like to figure that one out?

A (Johnson) Sure, I'll take your word for it at this point.

Q And by the way, that's a square rectangle, not a mountain. Where is all this going?

A (Johnson) 20 by 225 to 225.

Q 20 high. 220 by 200.
A (Johnson) Okay.

Q That's an area --

A (Johnson) That's big. Couple football fields.

Q We figured out with rock trucks, you know what a rock truck is?

A (Johnson) I do.

Q 42,000 loads.

A (Johnson) Okay. That seems excessive to me.

Q Or if it was 15,000 -- no. Forget that. Where is it going? Where are we taking it? And I know you haven't told us about where these staging areas are, but this is a, whatever it is is going to be a huge volume, and it's got to go somewhere. Keeping in mind that we have fragile roads.

A (Johnson) Sure. So I can't tell you the final disposition of the cut that's coming out of here. I will say that our calculations have it more in the order of 5,000 trucks depending on the size of trucks that you choose. It's still significant. I can tell you that PAR Electric as the bidder of the program was aware of this cut when they bid it, and, ultimately, they will have a destination, if you will, for this rock
to go. Whether they're going to sell it to a
Pike Industries to help as roads base or give it
to Pike Industries or an equivalent of or
something of that nature, I just don't know
where it will end up.

Q Probably the point being any questions I ask
about that right now are up in the air because
you're kind of a little bit lost for where it
really is headed based on the new information.

A (Johnson) Not necessarily. I wouldn't know from
any of the stations where it would go.

Q The roads, not only the roads that are having
excavation done, we've talked many times about
Old County to Creampoke, North Hill to Bear
Rock, the access roads going coming in, the rest
of Bear Rock down to 145 and Creampoke Road from
the intersection with North Hill and Old County
down, you're probably familiar with those roads
coming in to get to the site?

A (Johnson) I am.

Q Would you say they're a continuation of the same
type of fairly skinny roads?

A (Johnson) I would agree.

Q I guess one question to ask is have you
inspected those two access roads for bridges and what might exist?

A (Johnson) I have not at this time.

Q Okay. Probably -- okay. You're traveling on Bear Rock Road or, let's say, Creampoke Road coming in from 145, you meet a vehicle coming the other way, you're in a car or pickup, is there a tendency to slow down to pass more commonly than you normally would?

A (Johnson) Yes. It's my experience --

Q The reason for that?

A (Johnson) Well, I vividly recall a logging truck that had no intention of slowing down so I purposely slowed down to get out of the way, if you will. I have passed --

Q Was it red?

A (Johnson) It was a blur. How's that?

Q That leads to visualizing, if you have somewhat of a conflict with two fairly normal size vehicles, what happens when two trucks meet?

A (Johnson) So I have passed, and I have an SUV and I've passed a pickup truck or an equivalent SUV on Bear Rock Road at speed with no issues whatsoever. It would depend where you are on
Bear Rock Road, I'm sure.

Q True. I'd look to move on to you, Ms. Farrington.

A (Farrington) Sure.

Q Through conversations with other attorneys and people up here asking questions, where would you say we're at in terms of road closures on Old County Road -- in particular, the town roads of Old County Road, North Hill and Bear Rock relative to the construction going on at different items like HDD and splice pits? Can you give me a feeling of what we're going to experience as residents in that area?

A (Farrington) I guess the Project as a whole has tried to decrease the number of road closures and detours. Limit the time of them and spacing in a manner that it will be a rolling closure. Any access to homes will be provided some way or another, but I'm not sure I fully understand the --

Q If you take the, let's just take the roughly three miles from North Hill to the Transition Station number 4, there are nine splice pits and five HDD cuts, drills.
A (Farrington) Okay.

Q We can do the numbers, but we've established
that each splice pit is going to take two weeks
of closure. Could be more than one at a time.
It's always up for debate. So if that's the
case, you've got 9 times 2 is 18 weeks. You've
got 6, 5 HDDs at 2 to 4 weeks, call it 3, 15
weeks. So now we've got 15 and 18, 33. Six and
a half months, I guess.

A (Johnson) If I may add one thing before Ms.
Farrington answers that question, we discussed a
little bit yesterday that there are potentially
some mitigation measures that we can do to
reduce the number of splice pits that will
require a full road closure. Currently, you are
correct that there are nine splice pits. As
part of the working with the DOT, we are trying
to move those splice pits off the roads into the
ditch line, and the DOT has also given us
permission to temporarily expand the roadway to
allow for a lane of traffic to pass. So it
would be an alternate way of passing, but it
would prevent the road from being closed
completely for each of those splice pits. So we
are continuing to evolve. So I guess what I'm saying is those nine may decrease significantly, hopefully to zero by the time that the final DOT plans are approved. So go ahead, Lynn.

Q Meaning no disrespect --

A (Johnson) Sure.

Q That isn't very comforting for a resident or abutter of Bear Rock Road of not knowing what will happen. You say we're going to try to do it. If it was a possibility and understanding the ramifications, wouldn't you have already done it?

A (Johnson) So part of our earlier design restrictions were not putting any of our infrastructure in wetlands. So the DOT has provided us an opportunity to move our structures into low value wetlands which there are a significant number along this road which is a design constraint that we did not have or it's the release of a design constraint that we had before. This affords us an additional two to three to four feet that we could move the splice pits that would allow for enough traffic width, ten-foot minimum that is required for
passing.

Q You've seen those roads.

A (Johnson) I have.

Q Maybe it's time for a couple of the photos? We can go to that photo of North Hill, please? Moving into the right-of-way off the edge of the road, some of this is tarred and some of it is dirt.

A (Johnson) Yes.

Q Tree removal necessary?

A (Johnson) We would hope to not have tree removal.

Q If they were in the right-of-way and it was a conflict between taking a tree and getting it off the road?

A (Johnson) We would have to work with the landowner to ascertain whether or not we could remove that tree without damage.

Q (CFP Exhibit 245) Have you got it on your screens?

A (Johnson) We do. Yes.

Q Care to identify where this is? Anybody? Probably not. It's, if you're coming off of Old County Road and we talked yesterday extensively
about a pipe jack across the brook. Just as you start on North Hill Road. About 200 yards up around the corner you're looking what would probably be, should be south, southeast, on North Hill Road. What do you do with that when there happens to be a splice pit just about where the photographer was standing, is standing to take this picture?

A (Johnson) So is this on North Hill Road?

Q North Hill Road.

A (Johnson) Clearly, the road would be closed.

Q And North Hill Road, quite honestly, offers a possibility for a section because this is in the section that's unmaintained.

A (Johnson) Correct.

Q So it could certainly be totally shut down and people just -- you would agree with that?

A (Johnson) I agree with that.

Q I wouldn't argue with it either. And that's one of the places you're talking about possible winter construction?

A (Johnson) That's correct.

Q It's not that drastic up on Bear Rock Road.

It's a two-lane road, but the vegetation comes
in the side. Have you seen ditches or breakdown lanes up there?

A (Johnson) There are no breakdown lines. In certain cases, there are ditches, but they're relatively small.

A (Bowes) But this is also a probably good example of if we did have to remove trees the type of trees that we are removing as well. You see in the distance there's a fairly mature pine tree? That's not what we're talking about having to work with. It would be more like the scrub, looks like a scrub --

Q I agree.

A (Bowes) -- maple here in the foreground. So there could be some of that to get us off the road. Clearly --

Q People certainly don't get us nervous about a little brush up there as you do down here. By the way --

A (Bowes) I have nothing to add to that.

Q Something I forgot to do. The plans that you looked at and took a break to look at on Transition Station number 4, these are, in fact, the original documents that were produced by
Northern Pass; is that true?

A (Kayser) Yes.

Q Your architects and draftsmen.

A (Bradstreet) They were in the initial Application, that's correct. They've been since revised and resubmitted.

Q For the record, stamped by State of New Hampshire license, and it's got a date on it of October 1, 2015.

A (Johnson) That is the original Application.

Q Let's now go to 100 first. I'd like to just kind of clear up a couple things that the six of you probably understand, but perhaps the Site Evaluation Committee needs to be just clarified a little bit.

Okay. What you're looking at is the beginning page of the Application made to the DOT on December something.

MS. MERRIGAN: This is the November 30th, 2015, underground maps.

Q Right. Just for clarification with the Committee, Wiswell Road is up here in Clarksville. This is the Clarksville/Stewartstown town line. You
traverse across some big pastures, and then about a quarter of a mile down Route 145 on to Old County Road to where it intersects with Creampoke about halfway down, and then continues on North Hill which takes you to the corner of North Hill and Bear Rock. Bear Rock Road and just so if there's any question, Bear Rock Road from 145 which is the outer line on the left, Bear Rock Road comes in about a mile to North Hill and then up about two squares past where it says Creampoke Road which is also McAllaster Road. At a point right there, that's State Road. We call it New Hampshire State Highway Bear Rock. And that's one of the two places I was talking about that's the access in from 145 to get to a lot of this. The other real access is either come in on Old County 145 on to Old County from the north or half way there's a dotted line which is Creampoke Road coming in from 145, and they're really the only accesses in. About two thirds of the way up, Bear Rock turns from asphalt to dirt, and the last, you see Dead Water Road, about two squares back is where it turns to dirt and the last five or six
squares, pages, are dirt and those are town, that's a town road. So Bear Rock in particular is a paved state road, turning to a dirt town road. Then going back to CS 37 --

MS. DORE: Mr. Thompson, just for record we're looking at Counsel for the Public Exhibit 177 page 27. That's what you were just looking at.

MR. PAPPAS: Yes.

Q Thank you. Right. Good. Bear Rock Road comes up into the valley, swings up to where this transition station is, and then you've got three alternatives. The right and there's Noyes Road we talked about goes up the hill, Bear Rock continues out straight and Heath Road goes up the hill and that actually continues all the way through to Big Diamond Pond. They're all dirt roads, and they're all, lead to Class VI unmaintained roads. The point being -- and do you question the point, Mr. Bowes? That Bear Rock Road can easily be called a dead end road?

A (Bowes) I can agree with that, yes.
Q: Let's see. Let's go to, while we've got them up, 17.

MS. MERRIGAN: For the record this is Counsel for the Public 177 Map C117.

Q: This is the first area I'd like to dwell on for a few minutes. This is right at the beginning of Bear Rock Road where it leaves Old County Road and Creampoke, and I think it was Mr. Pappas that spent some time on this, Attorney Pappas, concerning the pipe jack that occurs here, and it's the only pipe jack in the North Country, I guess maybe the only one, there's one other one. If you look at the bottom of the page, and leaving Ms. Farrington, getting back to you, Mr. Scott, underground pipe jack, you've got some, what would appear to be constructability problems with this pipe jack. Do you look at it as being a challenge or is this pretty much run of the mill?

A: (Scott) For a pipe jack, this would be a fairly simple one.

Q: Even though you've got to go in the ground some 25 to 30, 35 feet?

A: (Scott) That's pretty typical for pipe jacks.
Q  Typical?
A  (Scott) Yes.

Q  Do you build this pit with trench boxes or sheathing or --
A  (Scott) Typically, it's an engineered shoring system.

Q  I'm sorry. I didn't hear that.
A  (Scott) Typically, it's an engineered shoring system stamped inside. Shoring design.

Q  Has CS coal done some exploratory drilling here? Do you know what kind of conditions you have?
A  (Scott) Not off the top of my head.

Q  If it were ledge and you had to create that pit, would that present problems? Constructability?
A  (Scott) It would be more challenging.

Q  But it could be done?
A  (Scott) Yes.

A  (Johnson) For the record, we did do borings at each of those locations. The engineers have shown no qualms about doing this type of construction here.

Q  Would you ever consider instead of as an alternate that you talked about to trenchless digging of building up the road? Lay the
conduit in the road and build the road up?

A (Scott) I believe that was discussed in previous sections, but I'd have to defer to Mr. Johnson for any developments there.

Q You've actually thought about that, Mr. Johnson?

A (Johnson) Yes, sir. When our constructability engineers first looked at this, that was a consideration. However, because we're applying the Department of Transportation's Utility Accommodation Manual rules or regulations, if you will, which state that you must go underground, this was a viable way to go underground. Certainly, if we were to meet with the Town of Stewartstown and the Road Agents, this could be something that we could discuss as an alternate construction method.

Q Well, you just opened up a huge can of worms. You'd go back to the Town of Stewartstown and the Road Agent to see what they say. But don't they have no say? Isn't the SEC giving the permits out? Why all of a sudden can we go to the Town and talk to the Selectmen or the Road Agent?

A (Johnson) We have every intention of discussing
this Project with the Road Agents because they have institutional knowledge of things that would help us during the construction process. We will in effect not be asking for approvals, but we will certainly consult with them to see if there's a better methodology or a better way or a timing of season or other things. There may be plans that the Road Agent has to improve the section of road. We would certainly coordinate our activities with any of those type of ongoing activities that the Road Agent might have going on. But, again, we would not be seeking approval from the Road Agent.

Q Pretty much the same would apply if you ran into a situation where there was a culvert there was really a need of replacing, you'd go to the town Road Agent or the Selectboard and talk to them about it in the same fashion, do you think?

A (Johnson) Potentially, yes.

Q I say that because it's mentioned in Mr. Scott's Prefiled Testimony that something like this might happen. I forget where it was, but I could find it, but it would make sense if the thing's all caved in and full of dirt and mud
and everything, why not replace it rather than
trying to go around it, but the process would be
to go to the Road Agent and talk to him about
it. Then what? Do it?

A (Johnson) So the SEC is evaluating the case that
we've put before them, and, ultimately, we'll
put in whatever is put before them in a denial
or an acceptance. If there are in the future
exceptions that we have agreed to, I believe
that as part of the conditions of their
approval, there will be a mechanism for us to go
back to them for small adjustments such as this
and that they could rule on that, again in a yay
or nay situation that would be amenable to all
parties, including the DOT and the DES or
whatever agency might be involved.

Q But the SEC would definitely be part of the
decision?

A (Johnson) They would have to be. They would
have to approve any changes that we make to our
plans.

Q Would you expect they would take your
suggestions because you're more knowledgeable or
as a combination of suggestions of the Road
Agent plus Northern Pass? I guess, my problem being that the SEC hasn't seen this issue or are privy to it. They're going to make a special trip up to check it out? I mean, and really what I'm asking is doesn't the Selectboard and the Road Agent know better about it and they should be making the call?

A (Johnson) We have put forth a plan and are requesting a permit based on what our engineers who have been on site and have the years of experience and knowledge. If we get further down the road and there's a better solution that is amenable by all parties, I'm quite certain that the delegated authority that the SEC gives to whichever agency, they'd love to hear from us. It's a win-win for everybody.

Q Thank you. Ms. Farrington. So we've established that we probably aren't sure of how many road closures there will be, how often and probably two and a half years and so forth.

A (Farrington) I think we know the worst case scenario and are hoping to improve on it, yes.

Q Let's talk about the detours. In particular, the big one. Maybe, can we go to the next map
which would be the one after the --

Going to bring up another map of a section
up on Bear Rock Road. Happens to be in front of
McAllaster Road. You've spent some time up
there now. Are you familiar with where
McAllaster Road is off of Bear Rock Road? Well,
Ms. Farrington, but Sam?
A  (Johnson) Yes.
Q  That's where McAllasters' farm is.
A  (Johnson) You can see it from the road. It's up
the hill, yes.
Q  They milk about 70 Holsteins twice a day. It's
an ongoing active dairy farm, one of the two in
Colebrook.
A  (Johnson) That's correct.
Q  Two in Stewartstown. Okay. What I want to do
here --

MR. PAPPAS: Brad, why don't we identify
what's on the screen first.
Q  Okay. You're looking at Bear Rock Road. If you
look at the, first of all, look at the abutters
in the middle of the page. The abutter at the
top of the page is Roderick McAllaster.

MS. MERRIGAN: One moment, Mr. Thompson.
For the record, this is Counsel for the Public's Exhibit 177, Map C136.

Rod and his family and son and their wives run this dairy farm. You can see to the right McAllaster Road which is a dirt road going up to the hill to the farm probably 500 yards up on the hill. Dead end road. If you look at the cut below, you see that there's, first of all, you can see that coming off the left-hand side of the page is the trench, directly goes into a splice pit, comes out of the splice pit and see the circle on the lower right, that is the location of the beginning of an HDD. You see the circle dotted line in the upper right corner, that is the HDD, and it goes on to the next page, I don't know. Typical one. Four or 500 feet, I guess. Something like that.

My point here, though, I'd first like to bring up is the HDD is directly in front of McAllaster Road. There's a possibility of getting by to the right. Unlikely, it takes some road building, but it may be possible to sneak out that side. Otherwise, there's going to be a pit there, and then another pit the
other side of McAllaster Road, the 400 feet of HDD is unobstructed because that's where it goes underground, but in our estimation, we've got a situation here where access to McAllaster Road will be closed for the 2 to 4 weeks during HDD construction. Mr. Scott, agreed? Make sense?

A (Farrington) Okay. Sorry. Can you say that again?

Q All set? You agree.

A (Farrington) Yes. We were just looking at the details of HDD.

Q Ms. Farrington, so if you continue up Bear Rock Road about two miles, by the way, this is part of the state highway, paved part. You consider up about two miles is up in the area where I live. So if I want to go to Pittsburg or Vermont or Stewartstown and I want to go this way, what is my detour if I'm at my house out at the end of Bear Rock Road?

A (Farrington) You'll need to go south on Bear Rock Road down to East Colebrook Road and Route 26.

Q And then around to 145 and off to where I want to go.
Q Probably wouldn't be coming back up Bear Rock Road. Any idea how much that route is mile-wise around through Colebrook back up on 145 to the junction of Bear Rock Road?

A (Farrington) I think we agreed it was more than five miles.

Q Sixteen miles.

A (Farrington) Okay.

Q Are you aware of the Class VI road on, continuation of Bear Rock heading towards East Colebrook Road?

A (Farrington) I am.

Q Do you have a concern of vehicles passing over that road? Have you ever driven it?

A (Farrington) I've driven what I could in my Jetta. I think the road would need to be improved to allow for a detour route along it, yes.

Q Single lane road?

A (Farrington) Would we improve?

Q No, the way it is now.

A (Farrington) I was there during the winter. It was fairly narrow. Yes.
Q So for the average person, and we have some very average people up that way, for instance, Ms. Eileen Placey at 79 years old, or the Kaufmans, Marty and Janice Kaufman who live a quarter of a mile away from us at Bear Rock at 82 and 83 driving their Jettas or whatever they're driving, you've really got to improve that road in order to make it passable. Certainly you'd need to have two lanes, would you think, would be a priority?

A (Farrington) Absolutely. We'd need it passable for emergency response vehicles, anyone driving the detour route and the construction vehicles.

Q How do you go about getting this done? Part of the road is in Stewartstown and part of it is in Colebrook? You just fix it? Or I mean, that's not going to happen. Who do you talk to? Where do you get permission? How do you start? Who's going to design it? When does it get done? I'm sorry. Too many questions?

PRESIDING OFFICER HONIGBERG: Yes. Which of those questions do you want them to start with?

MR. THOMPSON: I think it's one big
question.

PRESIDING OFFICER HONIGBERG: Then why don't you let them address it.

A (Bowes) I'll start and maybe Sam and others can join in. So my understanding, as part of the SEC Application we're asking to improve this road. So when we do that, we'll work with the Road Agents of both those towns, have a discussion, and I'm pretty much the way things are done up north, you get the two parties together, or in this case the three parties together, and you come to an agreement, probably very quickly, about improving those local roads.

The real question in my mind comes is do you want the improvements left after the fact or do you want those improvements removed because people like, some people may like the way it was and not want to see that road improved and increased travel on it. I don't see this as a huge obstacle to overcome. I think it will be quite easily done over a coffee in the morning.

Q I agree with you that things can happen quickly. I can also tell you things don't happen quickly. They don't happen at all.
And part of the permit, Ms. Farrington, is a traffic plan detour shown so that you can solve the problem when somebody can't get up part of Bear Rock, whatever part it is, correct?

A (Farrington) Correct.

Q And so now you're saying that part of the detail is that this improvement of, and I'd call it three quarters of a mile of dirt road, partially in Stewartstown and then it goes into Colebrook, it's going to be to repair that to a point where it's passable, in particular, two vehicles can pass each other wide enough which now it's a, it makes North Hill in the picture you saw look like a pretty good road. This thing is a mess.

Have you gone to the towns of Colebrook and Stewartstown yet? Have you instigated this thing? When does this process start? And I question that it's a simple process. It needs some, it needs work. I mean, I can ask this question, Sam. Is the town of Colebrook going to just say yes to you're going to go do it or are they going to want plans and details, the Road Agent?

A (Johnson) As the Road Agent in whatever town, I
would assume that plans need to be created, and that it would have to meet DOT standards or at a minimum DOT standards for that class of road. You may argue that we're even improving that class of road from a VI to a V so it would meet whatever that standard is as well.

But, yes, we would certainly have to do all of the engineering and surveying and whatever else needed to be done to ensure that we were doing this in a safe and to the standards that are required.

Q This is a town road. Ultimately, is the permitting process put back to the SEC, would you say?

A (Bowes) I believe so. Yes.

Q So it's the SEC that's going to make the call. Final decision.

A (Bowes) About whether we improve it or not?

Q Well, I guess it's the permit. RSA 231:160, they talk about the permitting process. You need a permit. I mean, you've got to get some kind of permit. Got to have some authority, get some approval.

A (Johnson) So I believe what we're requesting
from the SEC is the use of this road as a
detour. I think we've all agreed that this road
has challenges as far as being able to handle a
detour type of traffic, and we want to work with
the Road Agents of those towns to improve this
road for the safety of all, but, ultimately, I
believe that the SEC is going to approve the
detour itself.

A (Bowes) Those same elderly residents you talk
about, those neighbors, could see an increased
benefit if this road were improved after the
construction is all done, and it was maintained
as a higher class road. It would certainly
provide other options for access to those homes.

Q You're speculating. I mean, it's hard to say
what they would want or what would be best for
them. It's up to them. Isn't it?

A (Bowes) I'm just saying it provides another
pathway to their homes for emergency vehicles
and for day-to-day travel.

Q And emergency vehicles certainly are a concern.
And I've talked to, I anticipate that at least
two representatives, these are some of the
witnesses that I kind of tried to sneak in, is
the Road Agent from Stewartstown and the Road
Agent and the Fire Chief in Colebrook that will
be writing letters stating -- so we're hopefully
planning on seeing that.

PRESIDING OFFICER HONIGBERG: Mr. Thompson,
it feels to me like you want to argue with them
about a legal question that has been raised by a
lot of people with respect to who has the
authority to approve whatever happens on those
town roads as part of this process. I think I
can speak with some confidence that you and they
are probably not going to agree on this today.
So arguing with them about it probably isn't
going to be very effective. I think we
understand what your and a lot of other people's
positions are. I think we understand what the
Applicant's position is on this. So --

MR. THOMPSON: Time to let it go.

PRESIDING OFFICER HONIGBERG: Not let the
issue go, but I'm not sure how productive
questioning them about it is.

MR. THOMPSON: I'm fine. Thank you.

BY MR. THOMPSON:

Q Getting back to McAllaster Road, Ms. Farrington,
it's unclear as to what will happen during that HDD, but I need to ask what your response to my asking you that there's absolute need for a milk truck to get up McAllaster Road every other day every day all year and also a grain truck, Poulin Grain, give or take once a week. Tractor trailer trucks. The immediate obstruction is the HDD, but the supplement obstructions are any time that there's work up and down the road. How do we handle that necessity of getting in and out?

A (Farrington) So we have maintained that all businesses and residents will have access to their homes. It may be slightly delayed. For instance, if there was trenching directly in front of your driveway the time it would take to slide the plate across it. The McAllasters will have access. They may need to use a detour route, but I don't see a specific concern here.

Q So one way or another, keeping it open at least part of the time.

A (Farrington) That is certainly our goal. And I guess if there was ever an emergency situation or something completely blocked the road, there
would be a claims process for that.

Q Have you spoken to Rod McAllaster and talked to him about the issue and what might be worked out?

A (Johnson) To date we have not. I've had a discussion with a different milk farmer about this situation because we recognize that Mr. McAllaster has a unique location where he is, and the fact that he does deliver, as you said, 5,000 gallons of milk a week or twice a week or whatever the number is. Again, as Ms. Farrington alluded to, this would a classic case of a business interruption where we would have to ensure that Mr. McAllaster was either able to get his truck in there or that we would buy that milk as the Project from him and keep him, if you will, whole.

Again, that produces a different issue for the Project because then we have 5,000 gallons of milk that we need to move off of his site, such that he can refill those tanks. The cows don't stop producing milk just because we pay him for his milk. But the Project would most likely do that with much smaller trucks and then
arrange for a delivery to some other either milk
establishment or we would arrange for disposal.

A You make sense. It's logical. Buy the milk and
then do whatever you've got to do to get rid of
it or I don't know what you do with it. What
about his customer who needs the milk?

A (Johnson) So --

Q If he's shut down, let's say it takes a month to
get access back in, and he's not supplying to a
customer.

A (Johnson) Um-hum. We would certainly have to
talk to the milk co-op long before we did
anything in this area to let, you know, them
know that this milk could be interrupted.

Ideally, the interruption would be for a day or
two, meaning we might miss one truck cycle. As
Ms. Farrington has discussed, this is a rolling
or the road closures, if they exist, would be a
rolling closure, and so at any one time a
vehicle could come from a detour route to get to
Mr. McAllaster's property.

Q Of equal concern is haying. They hay from June,
some time early June until middle/late August
doing 1, 2 or 3 cuts and everything is out of
his driveway so --

A (Johnson) Sure.

Q Do you think that it would be very smart to contact him now and get the ball rolling?

A (Johnson) Certainly.

Q Or are you going to wait until after approvals?

A (Johnson) We can do either. I can certainly get on the phone with Mr. McAllaster when we're done here and start those conversations.

Q I've talked to him about it. I haven't warned him you're coming or anything, but I would think it would be good.

Ms. Farrington, what about the Town of Colebrook and Stewartstown concerning upgrading that road? Isn't it something that should be dealt with now rather than later?

A (Farrington) I think either is fine. I guess I don't, I don't know what you mean.

Q Well, to my way of thinking, and tell me if I'm wrong, but as a businessman, and maybe this is the approach, after you've got your approvals, and everything is ready to go, then you go talk to them, there's nothing to talk about. You're going to do it. Aren't you?
A (Farrington) We would talk about whether or not they wanted it to remain in place after the Project is over.

Q You give them that option, but if they said no, that would not be an option.

A (Bowes) So we'd still talk about how we would do it and when we would do it, and, again, as Ms. Farrington said, if they wanted it to be a permanent repair to the road or a temporary repair to the roads. There's still a lot to talk about in that initial meeting.

Q There is.

A (Bowes) But until there's an agreement that it's going to be done, some of these other discussions tend to be premature with people that may not want to meet with us.

Q It's definitely a catch-22.

A (Bowes) It is.

Q But most people, in my opinion, tell me if I'm wrong, would just soon not be pushed into a corner when there really is only one decision and would like to partake in the decision making.

A (Bowes) So I think there's a threshold decision,
yes, but after that there's still plenty of
decisions and plenty of discussion to have.

Q We'll see. Okay. Let me just quickly look.

In the proceedings, one question keeps
haunting me, and I just want to ask it. Really
isn't relative to too much of what I've been
concentrating on, but the Coos Loop. If for
some reason you decided to go down or were
instructed to go down Route 3 from Halls Stream,
Pittsburg, down the railroad tracks or whatever,
the 39 miles to Groveton, and saving about 13 or
14 miles by going east/west and south and west,
and didn't go into the Wagoner Woodlot or
anywhere near the Coos Loop but did the Project,
would you still go over and spend $50 million on
the Coos Loop?

A (Bowes) I think I can answer the question. Not
at this point in time. I mean, there may be
future upgrades to that loop in years to come
that are paid for by generators, but I think
Mr. Quinlan made the statement on the first day
of testimony that at this point there's no
reliability need to improve the capacity of the
Coos Loop.
Q From Northern Pass's point, from Eversource's point of view.

A (Bowes) From PSNH or Eversource's point of view. Yes.

Q Thank you. I appreciate everything. Thank you.

PRESIDING OFFICER HONIGBERG: Mr. Baker, I think you're up next.

CROSS-EXAMINATION CONTINUED

BY MR. THOMPSON:

Q I have to backtrack one little thing, Ms. Farrington. This occurred to me about, late last night.

Are you aware that Heath Road and Bear Rock Road, North Hill Road are major ATV trails and part of what we call Ride the Wild? ATV being an all-terrain vehicle? Sam?

A (Johnson) Yes. We are aware. We do have the maps and have had preliminary conversations with some of the ATV groups in the area. Again, it's a little bit premature, but we've talked about access along those roads during construction and how we could accommodate ATVs. Obviously, they're much smaller and maybe 3 to 4 feet wide as opposed to a full lane of traffic, but we
have discussed the fact that that is a major 
tourism, if you will, up in the area, both 
snowmobile and ATV depending on the season. So 
we are aware of them and we have talked to them, 
yes.

Q So that is something that you've initiated 
conversations on.

A (Johnson) Yes, we have. They actually reached 
out to us early on in the process.

Q All right. Thank you.

PRESIDING OFFICER HONIGBERG: Now,
Mr. Baker, I think you can proceed.

CROSS-EXAMINATION

BY MR. BAKER:

Q Good afternoon. My name is Bob Baker. I 
represent land owners in various locations 
including two in the Clarksville/Stewartstown 
combined group. I'm going to stay away from the 
areas that Mr. Thompson has covered, and I'd 
like to draw your attention to Counsel for the 
Public's Exhibit 2, page 1, which is on the 
screen, and it's a fairly good location map for 
what I want to talk about. It's the Pittsburg 
area and environs.
Looking at the map, Transition Station 1 is located on the northwest shore of the Connecticut River towards the upper right-hand side. Do you all agree with that and you can see that point?

A (Johnson) Yes.

Q And then from there, over to the Canadian border to the west, or left on this exhibit, all the way to Halls Stream Road and Halls Stream, there will be a series of transmission towers instructed on the hillside, is that correct?

A (Johnson) Correct.

Q And there will be approximately 20 structures including Transition Station 1?

A (Johnson) Yes.

Q And you agree that those structures or at least several of them will be visible from the Connecticut River and the Cultural and Scenic Byway on Route 3?

A (Bowes) Yes.

Q You don't have any dispute with that, that they're going to be visible from these Byways?

A (Johnson) I believe only a select portion will be visible.
Q Yes. But towers will be visible. I'm not asking you to concede to a certain number, other than multiple towers will be visible from the Connecticut River Route 3 Cultural and Scenic Highway which is a designated federal Cultural and Scenic Highway, correct?
A (Johnson) I would say portions of towers, yes. Probably only the very tops, but --
Q Including, in fact, Transition Station 1.
A (Johnson) I'm not so sure, but if you have a drawing you'd like to show us --
Q We'll get to that later when there's testimony on the scenic issues. I don't expect you to verify any more than you can, and apparently you'd like to reserve judgment on Transition Station 1?
A (Bowes) So I think the area from around where AR-2 is up to AR-3 is the area that portion of the towers will be visible. And the transition station is back into the woods off Beecher Falls Road. I'm not sure if you will see that from Route 3 or from the Connecticut River.
Q I understand your reservation, but there will be
approximately 20 structures built between the
Canadian border and Route 3.

A  (Bowes) Correct, but only a few of them would be
visible from Route 3.

Q Right. Depending on where you are.

A  (Bowes) No. I think there's only one location
on Route 3 where you can see them.

Q Now, there'll be a structure right on the east
side of Halls Stream Road. Is that correct?

A  (Bowes) Yes.

Q And it will be within how many feet of the road?

A  (Bowes) Hold on just a minute. Less than 50
feet.

Q Now, you, I'm sure, will agree that there are
several residential properties on Halls Stream
Road in Pittsburg?

A  (Bowes) Yes.

Q And that the only way to access those
residential properties or to leave them is via
Halls Stream Road traveling into Canaan,
Vermont, correct?

A  (Bowes) That is correct.

Q And this is particularly where Halls Stream Road
crosses the Vermont border, that is the Beecher
Falls section of Canaan, Vermont, correct?

A (Bowes) I'm not aware of that but I will agree with it.

Q Now, where you're going to be constructing these towers from Halls Stream over to the Connecticut River, you'll be building a new road, won't you?

A (Johnson) A temporary access road.

Q I'm sorry? I didn't hear.

A (Johnson) Sorry. Temporary access road.

Q Right. But it will be a construction project to build a road, and it will be running about 200 yards north of the Vermont border, correct?

A (Johnson) Are we now talking about the west side of Halls Stream Road?

Q We're talking about the construction of the towers from Halls Stream Road over to Route 3.

A (Bowes) Right. So those are basically in almost a straight line across. So the closest one is actually the second tower off Halls Stream Road, and that distance to the Vermont border is about 650 feet.

Q 650 feet. So 200 yards wasn't a bad estimate?

A (Bowes) Pretty good, yes.

Q Okay. Now, much of the terrain under the
transmission line from Halls Stream Road to Route 3 slopes to the south, does it not?
A  (Bowes) Yes.
Q  And drainage from that area will be draining south into Vermont, won't it?
A  (Bowes) I'm not sure what you mean by drainage.
Q  Well, any water runoff from the Project site, the construction of the roads, could run into, run downhill, I would think. It goes downhill, doesn't it?
A  (Bowes) I would think it will definitely travel in that general direction.
Q  Here's the question. Have you done anything to obtain authority from Vermont wetlands officials to conduct these activities above their territory along this transmission line where you propose to build a road and 20 towers?
A  (Bowes) We have not.
Q  Have you discussed these activities with the town of Canaan, Vermont?
A  (Bowes) I don't believe we have.
Q  You have not then discussed with them the road closure on what I'll refer to as the Old Canaan Road but this map labels the Beecher Falls Road?
A (Johnson) As was mentioned yesterday or the day before, we are defining or determining with the DOT or working with the DOT to find an engineering solution so that we will not have to close that road.

Q So you're still working on whether or not that road will be closed.

A (Johnson) The road will not be closed. That's an affirmative. The question is which methodology do we use such that it will not be closed.

Q Okay. Now, to reach your construction sites for towers, let's talk about just the one, right at the corner of the Project on Halls Stream Road 50 feet off the road, you have to go through Canaan, Vermont, don't you?

A (Johnson) No.

Q You said no?

A (Johnson) Correct.

Q Oh, okay. Yes, I'm sorry. I do have a hearing problem, and I apologize for it. It's probably why I'm speaking a little loudly.

A (Johnson) I will enunciate.

Q Do you know whether or not you need permits from
the Town of Canaan to use their roads to conduct these construction activities in Pittsburg?

A (Johnson) So public access on public roads right now, we plan on using New Hampshire Route 3 up to our transition station. If we go south on Old Canaan Road to access road number 2, that provides us access at that point entirely in New Hampshire. Not in Vermont.

Q Are you saying that you will not be using Halls Stream Road to access your construction site?

A (Johnson) No. I'm just staying that there is a possibility that we could keep 100 percent of the access within the State of New Hampshire.

Q Okay. My question was do you, have you, I think you've already answered the fact that you have not talked with the Town of Canaan. Do you know whether or not you will need any permits or permissions or licenses to use their roads for these construction activities if you choose to use Halls Stream Road?

A (Johnson) So I believe the answer is no. But I will state that we're, if heavy loads are required or anything that's above a normal weight, those have their own permits that need
to be obtained and those will be obtained by the contractor. I can tell you it's not anticipated that there will be any heavy loads in excess of normal loads for this type of construction.

Q I understand what you're saying, but I'm trying to ascertain whether or not the Town of Canaan or the State of Vermont has been involved by you in any way in this Project which may have an impact on that state?

A (Johnson) They have not.

Q Okay. Thank you.

I would then assume that the answer to my next question is negative but have you investigated with any authorities in Vermont or Canaan the prospect of coming through the town of Beecher Falls underground on Route, it says 253 which is the Vermont side of the Canadian boards and it says QC.

A (Johnson) Quebec.

Q Quebec Route 253 on the north side of the border. Have you investigated undergrounding them?

A (Bowes) We have not.

Q Would it be of interest to you if I told you
that by going through the Town of Canaan, underground, you could save two miles on your route and still get to Dixville?

A (Bowes) I'm not sure of the question. Would I be interested?

Q Yes.

A (Bowes) Sure. I'm always interested.

Q Okay. Let's talk about that then for a minute. If you follow Route 253 down to Route 3 which is on the other side of the Connecticut River, have you investigated the possibility of going under the river, just like you would have to do it over in Pittsburg, in Beecher Falls to Stewartstown?

MR. NEEDLEMAN: Mr. Chair, I'm going to object. Two purposes. One, this panel is here for construction issues. These sounds like routing and alternative issues, not the subject of this panel; and then, second, I don't think these sorts of questions about these types of alternatives are appropriate.

PRESIDING OFFICER HONIGBERG: Mr. Baker?

MR. BAKER: I think that in the Supplemental Affidavits of one of these
gentlemen they talked about, they did say that
they're not required to show the SEC an
alternative but we'll discuss it anyway, and
they did go into it. I don't have it in front
of me because I didn't anticipate that
objection, but I believe one or more of them has
talked about alternatives.

A (Bowes) It was in my Track 1 Supplemental
Testimony. I'm not sure how you handle Track 1
and Track 2 here.

PRESIDING OFFICER HONIGBERG: Well, how
much more do you want to ask him about this
alternative route that they haven't considered?

MR. BAKER: I think I can be done with that
subject in about 3 minutes.

PRESIDING OFFICER HONIGBERG: Okay. The
clock is running.

MR. BAKER: Thank you.

BY MR. BAKER:

Q If you will follow the map down to Route 3 and
then go east on Route 3 on the south side of the
Connecticut River here, you'll come to a road in
Stewartstown called Bishop Brook Road. It's not
on the map, unfortunately, but are any of you
familiar with Bishop Brook Road?

A (Johnson) I am not.

Q Has there, I assume because of that answer none of you would know whether or not an underground route along Bishop Brook Road has been investigated?

A (Johnson) You would be correct.

Q Which would lead to Route 145 and then to Bear Rock Road. That's my only point is that there is a shorter route to get to where you want to go, and it would involve undergrounding.

Would you be interested in not having to build two or three transition stations?

A (Bowes) In the theoretical, yes.

Q Theoretically, you could do that by keeping the whole Project underground and going through Canaan and Stewartstown and eliminating Pittsburg and Clarksville. Do you follow me and do you understand why on this map I'm suggesting that that is an alternative?

A (Bowes) I understand your suggestion, and I've had many other discussions made about the routing for the Project. Unfortunately, what we have in the SEC Application is the Project that
we've proposed.

Q  Well, yes, but you've got a lot of changes that you are still incorporating into your Project, don't you?

A  (Bowes) But those are along the existing route, and they're like Halls Stream Road, the structure we talked about previously.

Q  For instance --

A  (Bowes) We agreed -- could I finish?

Q  I'm sorry. Finish your answer.

A  (Bowes) We'd actually in my Supplemental Testimony agreed to move that structure off of Halls Stream Road. That was one of the alternatives that we looked at. It would necessitate some wetlands impact, but that type of modification to the Project, I think, is where we are at this point in the process.

Q  Do you know whether any of the people, either you or anyone on your team has talked with Hydro-Quebec about whether or not they're going to be building a transition station in Canada in order to avoid crossing the conservation area of Mt. Hereford?

A  (Bowes) I know they're a little bit of ahead of
us in the siting process, and they've been asked to look at alternatives to mitigate the visual impact in that specific area.

Q Right. Now, if they were to build a transition station on the west side of Mt. Hereford which is off to the west of this map, would that make a difference to your thinking about routing this through Canaan?

A (Bowes) Probably not.

Q And why do you say that, sir?

A (Bowes) Because that would trigger a second state involvement in the process as well.

Q Well, you're here telling us today that you don't have details on where you're going to do blasting, correct?

A (Bowes) Yes, we have been pretty specific about where we know we're going to do blasting. We've disclosed that.

Q But you have to do geotechnical testing in many places before you know exactly where you're going to be doing the blasting, correct?

A (Bowes) That is correct, but it's along the proposed route.

Q So we're supposed to be flexible with you on
planning the future for our clients and our lives in the North Country. Why can't you also be flexible with respect to changes that may occur in your Project?

A  (Bowes) So I thought I was when I said I was interested in hearing your proposals.

Q  Okay. Good. So if Hydro-Quebec were to build a transition station on their side of the border, it is something that you would consider, is it not, to continue the undergrounding of the Project into the northern area of New Hampshire?

A  (Bowes) It's not something we're considering at this point, but, again, I would find it interesting.

Q  Okay. Good. I think Mr. Thompson has covered the issue of town permitting, but I just want to make it clear. None of you have had any discussions with the Road Agents or the Selectmen of Pittsburg, Clarksville or Stewartstown, am I correct?

A  (Bowes) I have not, but I know Project representatives have.

Q  And who would that be? Who specifically is a Project representative that has talked with any
of those officials?

A (Bowes) Part of our Community Relations and Government Relations team.

Q Do you have a name for me?

A (Bowes) I don't. I can probably get one.

Q Okay. I have no further questions.

PRESIDING OFFICER HONIGBERG: All right. I think SPNHF was up next, correct, Mr. Reimers?

MR. REIMERS: Correct. Thank you for your patience.

CROSS-EXAMINATION

BY MR. REIMERS:

Q Good afternoon. My name is Jason Reimers. I represent the Forest Society in this matter.

A (Johnson) Good afternoon.

Q Mr. Bowes, last time you were here, I had asked you some questions about Franconia Notch, do you recall that? Or to be more specific, I had asked you questions about potential burial through Franconia Notch. Do you recall that conversation?

A (Bowes) Vaguely, yes. I'm sure you'll refresh my memory.

Q Okay. Do you recall that on redirect, Attorney
Needleman introduced Appellant's Exhibit 85 and asked you about the part of House Bill 626 that mentions Franconia Notch?

A (Bowes) Yes.

Q And we ended the day on that, do you recall?

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

Q And you looked at the language in the bill, and I believe you testified that the bill meant that the Northern Pass could not be buried through Franconia Notch. Is that correct?

A (Bowes) That was my interpretation, yes. I believe that's accurate.

Q Let's look at the language of that bill.

MR. NEEDLEMAN: Do we have a copy of the transcript because that's not my recollection.

PRESIDING OFFICER HONIGBERG: I don't have a memory of it. I mean, I remember the exchange, but let's go off the record.

(Discussion off the record)

MR. REIMERS: I would point out that the witness, in his answer he agreed with my characterization of his testimony.

PRESIDING OFFICER HONIGBERG: I think what he said is I don't know, but I'll accept what
you're telling me for purposes of what you're doing. I really don't think he was intending to say, oh, yeah, that's right that's what I said. So you, when you started this, I wasn't sure I should let you go at all because you seemed to be, you seemed to be about to be resuming a line of questioning that you, that this witness was done with the last time he was on the stand. You want to tell me what it is you're planning on doing with this?

MR. REIMERS: I do intend to do that. The questions I had asked the witness last time, I ended my cross-examination, and Attorney Needleman on redirect at the end of the day introduced Appellant's 85 which was a brand-new exhibit that no one had seen until then, and the witness was asked about what that bill said, and to the best of my recollection what that bill meant. So we ended the day and --

PRESIDING OFFICER HONIGBERG: We're talking about a state statute here.

MR. REIMERS: Right.

PRESIDING OFFICER HONIGBERG: Whether a witness has an interpretation of a state statute
or not isn't very helpful to anybody. Do you want to make a legal argument about what this statute allows or prohibits?

MR. REIMERS: Yes.

PRESIDING OFFICER HONIGBERG: You don't need him to do that then.

MR. REIMERS: Okay.

PRESIDING OFFICER HONIGBERG: If you want him to assume a state of the law for purposes of some questions about construction plans which is the reason he's testifying right now, that would seem to be appropriate. If you want him to assume a state of the law for purposes of asking him about route selection, it seems to be something you should have asked him about the last time you were questioning him.

MR. REIMERS: I agree with you generally, but I didn't have the opportunity given that I had just gotten Appellant's Exhibit 85 --

PRESIDING OFFICER HONIGBERG: A state law passed in some year recently. 2015 or '16.

MR. REIMERS: But then the witness was asked about it.

PRESIDING OFFICER HONIGBERG: What point do
you want to make? That they should be burying it under 93 through Franconia Notch? Because in your view, and I don't know, I don't remember what the statute says, but in your view the statute allows that?

MR. REIMERS: Yes. But my point is that we had gone through the Underground Alternatives Manual that Burns & McDonnell prepared, and the testimony from Mr. Bowes was along the lines of this line could not be buried through Franconia Notch because of, for example, the Forest Society and AMC being staunch opponents of the Project and due to the consent decrees, for lack of the precise term, and that it was that that was preventing burial through Franconia Notch, and this bill that establishes energy infrastructure corridors was introduced at the end of the day and the language of it is -- and Mr. Bowes was specifically asked by Attorney Needleman about the language in it that said, that talked about a certain 1.7 miles that was excepted from the energy infrastructure corridor, and it's north of Franconia Notch State Park which is what the bill says.
And I wanted to ask him how could this bill that talks about a 1.7 mile exclusion north of Franconia Notch State Park prevent burial within the State Park which is south of the excluded area. And then I wanted to ask him whether they had contacted the owner of that property which is the White Mountain National Forest to discuss the possibility of burying it through that 1.7-mile excluded area.

PRESIDING OFFICER HONIGBERG: What prevented you from asking him these questions the last time you were questioning him?

MR. REIMERS: I had just seen Senate Bill 626. I hadn't looked at it. It was a brand-new exhibit.

PRESIDING OFFICER HONIGBERG: No. No. You were asking him before that became an exhibit. You were asking him questions about the burial before Mr. Needleman asked him any questions on redirect. So what prevented you from asking about burial through or above Franconia Notch the last time you were asking him questions? Nothing, because you, in fact, asked him questions about that during your time, correct?
MR. REIMERS: Correct.

PRESIDING OFFICER HONIGBERG: So what changed is you were reminded of a law that's been on the books for some number of months, and you want to follow up on that issue that you could have dealt with the first time you were talking to him, right?

MR. REIMERS: Yes. But may I add that my questioning of the witness, I do not believe, talked about this bill, this 1.7 miles as being an impediment. It was only after my questioning regarding some of the other documents in the record.

PRESIDING OFFICER HONIGBERG: Okay. So he identified some impediments. Mr. Needleman identified, in your view, your memory of how the exchange went, an additional impediment.

MR. REIMERS: Correct.

PRESIDING OFFICER HONIGBERG: And you wanted to say, well, if that's not in fact an impediment, does that change your testimony from before.

MR. REIMERS: More or less. Yes.

PRESIDING OFFICER HONIGBERG: Why don't you
have him assume that this bill does whatever you think it does and ask him if that changes his view of whether they can go underground in that area. And depending on what his answer is, we'll see if you get to ask another question.

MR. REIMERS: Thank you, Mr. Chair.

BY MR. REIMERS:

Q Mr. Bowes, assuming that this statute establishes energy infrastructure corridors, one of which is along I-93, and excepts from that energy corridor a 1.7 mile section of I-93 owned by the White Mountain National Forest north of Franconia Notch State Park, if that is the case, does that leave open Franconia Notch as a potential alternative for burial of the Northern Pass?

A (Bowes) I don't know.

Q Were you aware that the White Mountain National Forest owns that 1.7 miles?

MR. NEEDLEMAN: I'm going to object at this point. This is all related to my redirect and so now we are having rebuttal to redirect which I think is improper, first of all. Second of all, the reason that I introduced this bill on
redirect is specifically because this issue was raised on direct. I can't raise anything on redirect that isn't raised on direct. So, in fact, I think Mr. Reimers had a full opportunity to explore this.

PRESIDING OFFICER HONIGBERG: Mr. Reimers, make an offer of proof because I don't think, I don't think we're going to let you ask any more questions on this topic.

If you were allowed to ask him questions, what do you think he would say?

MR. REIMERS: I would make an offer of proof that the Applicants did not explore or make an attempt to explore the possibility or feasibility of burying the Northern Pass route through the 1.7 miles on I-93 owned by the White Mountain National Forest.

PRESIDING OFFICER HONIGBERG: Okay. You may proceed.

BY MR. REIMERS:

Q These questions are not just for Mr. Bowes. In Pittsburg the proposed route is mostly overhead. Is that correct?

A (Bowes) Yes.
Q And the underground portion in Pittsburg is the leadup to the crossing of the Connecticut River?
A (Bowes) And under the Connecticut River and then to Transition Station number 2.

MR. REIMERS: Dawn, I'm going to use the ELMO now.

BY MR. REIMERS:
Q I'm using Appellant's Exhibit 2, Attachment 2, which are the Project Sheets updated in February 2015. You can ignore these right now. Those are my additions. Okay. The right-of-way enters the United States here. Is that correct? By crossing over one of the oxbows of Halls Stream?
A (Bowes) Yes.

Q And then it continues for 2.1 miles until the first underground section?
A (Bowes) Sounds approximately right. Yes.

Q And this would be a new right-of-way?
A (Bowes) So a portion of it has some existing utilities on it.

Q Which portion of that 2.1 miles has existing utilities?
A (Bowes) I think right by Halls Stream Road.
Q Which would be around here?
A (Bowes) No. It's in the same corridor as the Northern Pass line. I believe the gas line is there.
A (Johnson) Can you point at the paper and not the screen?
Q You're talking about this area, right? Near Halls Stream Road?
A Yes.
Q There's an existing -- you say the --
A (Johnson) Portland Natural Gas transmission system crosses as well in that exact area.
MS. DORE: We're looking at Sheet 1 of Attachment 2 of Applicant's Exhibit 2.
BY MR. REIMERS:
Q And as the right-of-way continues -- sorry. I'm pointing at the screen rather than the --
As the right-of-way continues through Pittsburg toward Clarksville, it would be clear to 120 feet? Is that right?
A (Bowes) Yes.
Q And there would be 21 towers in Pittsburg ranging in height from 65 feet to 115 feet?
A (Johnson) That sounds correct.
Q And 15 of the 21 towers would be 80 feet tall or
taller; is that right?
A (Johnson) Subject to check, I'll take your word
for it.
Q Okay. In Clarksville, which is the next town,
the right-of-way would be approximately 4.1
miles with underground and overhead
construction?
A (Johnson) That seems reasonable, yes.
Q And the Northern Pass would enter Clarksville
from Pittsburg by drilling under the Connecticut
River, like you said.
A (Johnson) Correct.
Q I'm looking at Sheet 2 of the same exhibit. Is
that better? That crossing is right here. Is
that correct? The Connecticut River?
A (Bowes) Yes, and actually my statement before, I
guess it does transition right in the middle of
the river. I said it went all the way to
Transition Station number 2. It really doesn't.
Changes the property line right there.
Q The Forest Society's Washburn Family Forest is
on the Clarksville side, isn't it?
A (Bowes) Yes.
Q  And are you aware that the Forest Society owns both sides of Route 3 at this location?

A  (Bowes) It appears that way, yes.

Q  Are you aware that when a town or a state has a road easement that the landowner generally owns to the center line of the road?

A  (Bowes) Yes.

Q  How deep under the river are you proposing to drill?

A  (Bowes) Mr. Scott has that detail.

A  (Scott) From the bed of the river, about 55 to 60 feet.

Q  Why so low? Why so deep?

A  (Scott) The geotechnical characteristics of the area.

Q  Does it have anything to do with resources along the river or the river itself?

A  (Scott) Can you clarify that question?

Q  Does the depth of the drilling have anything to do with sensitive resources such as river banks or other, you know, aboveground or river resources?

A  (Scott) I'd say that those things would be a concern. However, typically the depth required
is based upon the geotechnical requirements and the lengths required to get to that depth would put you out of the zone where that is a concern anymore.

Q Okay. Is it your understanding that the right-of-way extends to that depth?

A (Scott) Yes.

Q You testified, someone testified that the drilling would cause lane closures along this portion of Route 3 for 4 to 6 weeks; is that correct?

A (Scott) Yes. I believe we said 3 to 5 weeks.

Q Three to five. And that was due to the HDD entry and exit locations?

A (Scott) Correct. As well as open cut trenching.

Q Did that also have anything to do with the splice box?

A (Scott) Yes, but those were in different durations than that 3 to 5 week time frame. The three to five weeks was specifically for the HDD activities.

Q Okay. And then how much time for the splice box?

A (Scott) The splice pit itself we said would be
about a week.

Q Would that week be contained within that three
to five weeks?

A (Scott) As I stated, 3 to 5 weeks is only for
the HDD activities.

Q So the one week would be in addition to that 3
to 5 weeks?

A Yes.

Q The Forest Society has a 20- to 30-car parking
lot on the east side of Route 3 just after the
river crossing. Are you familiar with that?

A (Scott) Yes.

A (Bowes) Yes.

Q The entrance to that parking lot could be
blocked for what, up to six weeks? Is that
possible?

A (Scott) I do not believe so.

A (Johnson) The path of the drill doesn't surface
until we're past that driveway.

Q Okay.

A (Johnson) Correct me if I'm wrong.

A (Scott) Well, I'm specifically looking at the
laydown space for the HDD which is on the Plan
and Profile Drawings, Drawing Route 3 009-3
which shows the work space requirements, and it does not show passing the entire road width there.

Q When you were talking about, Mr. Scott, when you were just talking about the closures and the splice box and the HDD entry or exit pits, you were talking about around this area, right?

A (Scott) Correct. Perhaps you could draw up something with more detail for discussion.

Q Because Mr. Johnson just mentioned that, you know, the underground doesn't daylight until well after this area. But you were talking about impacts and work that would happen within this area, right?

A (Scott) Correct. And I was disagreeing with your time frame.

Q So the underground route would surface here. Is that correct? At DC 23?

A (Scott) Near there. I can't really say specifically if it's that location on this map.

Q Okay.

A (Johnson) Just to be clear, the directional drill would be only underneath the river and trenching activities would take it from the
splice box, or the end of the directional drill, I'm sorry, into the splice box, out the splice box, and up the hill to that transition station. So it's not one continuous drill. It's a drill under the river, and then trenching activities to connect the dots.

Q Okay. And after the line becomes overhead again, it continue as a new overhead line in a new right-of-way. Is that right?
A (Bradstreet) Yes.

Q That right-of-way through Clarksville will be cleared up to 120 feet?
A (Bradstreet) That's right.

Q And is it still true that the proposed towers in Clarksville would range in height from 65 to 105 feet in height?
A (Bradstreet) I don't have the figures, but if you pulled it off the plans then yes.

Q I pulled those off of the February 2015 Project maps. Would that be the accurate place to get those?
A (Bradstreet) It should be. Yes.

Q So if those Project maps indicated that 17 of the 23 towers in Clarksville would be 80 feet
tall or taller, that would be correct?


Q Oh, I'm sorry. You're correct. 2016. Yes. Thanks for that.

So soon after the new overhead right-of-way begins in Clarksville, the right-of-way runs adjacent to the Washburn Family Forest again for a while, doesn't it?

A (Bowes) Yes, to the north.

Q What's to the north, the line or the Washburn Forest?

A (Bowes) The Forest is to the north of the line.

Q Right. May I go off the record for a moment?

(Discussion off the record)

Q Okay. So the overhead line soon after it comes up begins to run adjacent to the Washburn Family Forest, and are you aware that that's owned by the Forest Society?

A (Bowes) Yes, I am.

Q I've marked the height of the towers for my convenience, and that is what you can see underneath in the white boxes. It's not as technologically proficient as Ms. Pacik's, but
it works.

So let's look at the towers next to the Washburn Forest. Starting with DC 26, tell me if these heights are still accurate. 105 feet, 90 feet, 65 feet, 95 feet, 80 feet, 75 feet, 85 feet, 100 feet, 90 feet, 70 feet? If those were taken from the Project maps, that would be accurate?

A (Johnson) It looks accurate to me, yes.

Q And then this is the next Project map as it continues. And we've got a 90 feet, 95 feet, 75 feet, 75 feet, and 90 feet. And if those are from the Project maps, I assume those, you would agree that those would be accurate heights?

A (Johnson) They are.

MS. DORE: Are you going to file those documents as exhibits because the ones we have do not have them.

MR. REIMERS: Yes, I'll mark them when we're done. Thank you.

BY MR. REIMERS:

Q And then the right-of-way turns at DC 40. Do you see that?

A (Bowes) Yes.
Q  And it heads toward a transition station?
A  (Bowes) Yes.
Q  Do you see this property right here?
A  (Bowes) Yes.
Q  Do you know that that is owned by Donald and
   Diane Bilodeau?
A  (Bowes) Yes.
Q  And that adjacent to that is Young's Cemetery
   which would be starting right here?
A  (Bowes) Yes.
Q  Are you familiar with Young's Cemetery?
A  (Bowes) Yes.
Q  So take a good look at this image of where
   Washburn Family Forest is, where there's the
   turn, and then it heads toward the transition
   station that I mentioned which would be right
   here; is that right?
A  (Bowes) Yes. That's the transition station.
Q  And that's marked DC 4C 1A?
A  (Bowes) Yes.

   MR. REIMERS:  Dawn, could you turn on the
   hard wire, please?

BY MR. REIMERS:
Q  Terry DeWan is a visual consultant hired by the
Applicants; is that right?
A (Bowes) Yes.
Q This is a photograph from his report taken from the area of Young's Cemetery; do you agree?
A (Bowes) Yes.
Q And this would be the existing view?
A (Bowes) Yes.
Q Okay. And then this is a photo simulation that Mr. DeWan did from there. Have you seen this before?
A (Bowes) Yes.
Q And when we were looking at that Sheet 4 that showed the turning of --
MS. DORE: I just want to make sure. Do you want to identify where we could find this document?
MR. REIMERS: Yes. This would be Applicant's 1, appendix 17, pages I-16 to I-19.
BY MR. REIMERS:
Q Do you see in this photo simulation where the towers turn and then head towards the left of the page?
A (Bowes) Yes.
Q Would you agree that as they're heading left of
the page they're heading down to that transition station that we've just looked at on the Project map?

A (Bowes) Yes.

Q And where it turns, and then I guess recedes into the distance, that's heading, that's the line that's running south of the Washburn Family Forest; is that right?

A (Bowes) Yes.

Q Okay. And Mr. DeWan also took a photograph and then did a simulation using panorama. Do you see the house in the photo?

A (Bowes) Yes.

Q That's the Bilodeaus' home, isn't it?

A (Bowes) Yes, it is.

Q And as the Construction Panel, do you feel that these photo simulations accurately depict what you intend to build?

A (Bowes) Yes. I would say we do.

Q And at the transition station that I'll call down the hill off the picture down to the left of the photo simulation, what will be in that transition station?

A (Bradstreet) So there will be a termination
structure that looks very similar to the structure that you're showing on the photo sim here where the overhead conductors will terminate, and they will transition down to underground. In that transition phase, there will be small run of bus that's supported by post insulators from the ground. Surge arrestor. So there will be some small equipment typical to what you would see inside of a substation but at a much smaller scale.

You will see the termination for the underground cable that will attach to that bus work, and that's where the transition will complete to go to the underground cable. There will also be a small enclosure for some equipment. That will be surrounded by a fence. And the subsurface of the inside of the fence would be of a rock, crushed rock.

Q So the transition, the bus work that you mentioned and the other parts, will they be inside or outside?

A (Bradstreet) They're inside the fence, is that what you mean? You mean, inside a building?

Q Correct.
A (Bradstreet) No. They're open air. They're outside.

Q Okay. And what of the parts that you just mentioned either include or are machinery with moving parts?

A (Bradstreet) Zero.

Q Zero? Will there be any lights associated with the transition station?

A (Bradstreet) I believe there will be lights available in case something needed to be worked on in an emergency situation, but they would not be used in the day-to-day.

Q Only for emergencies lights will be used?

A (Bradstreet) I believe that was the typical approach, yes.

A (Bowes) That is correct.

Q And then at Transition Station number 4, the line would go back underground for the remainder of Clarksville; is that right?

A (Bradstreet) So Transition Station --

Q Maybe I called it the wrong number.

A (Bradstreet) Yes. So this is 3, and then it stays underground until it hits Transition Station number 4.
So the next municipality is Stewartstown?

I believe so. Yes.

And the Northern Pass would enter Stewartstown underground coming from Transition Station number 3? Remain underground for the first, for its first portion in Stewartstown?

(Bradstreet) Yes.

And that underground portion that we're talking about coming from the transition station here, that would continue under Old County Road, North Hill Road and Bear Rock Road that we've been discussing the last few days?

(Bradstreet) That's right.

Okay. Dawn, can you turn it back over to ELMO, please?

And when the line returns to being overhead, that would be in this area in Stewartstown just before Coleman State Park?

(Bradstreet) One second. We're refreshing. Yes. It just showed up. So yes. I mean, there's a few structures before you're near Coleman State but yes.

Right. DV 4C 1B. That's where it comes aboveground?
A (Bradstreet) Correct.

Q And as you said, you've got a few structures before you get to Coleman State Park which is this?

A (Bradstreet) That's right.

Q And this is a brand new right-of-way?

A (Bradstreet) Yes.

Q And it will be cleared up to 120 feet?

A (Bradstreet) That's right.

Q I take that back. I didn't mean up to 120 feet. Will 120 feet be cleared?

A (Bradstreet) The current plan is 120 feet, yes.

Q And the proposed towers would be 70 feet to 120 feet in height in Stewartstown?

A (Johnson) Subject to check but yes.

Q What is the height of the tree line, the general tree line along this portion?

A (Bradstreet) I don't know if I have an accurate number available to me.

A (Johnson) I would say that it's variable by species, but mature maples can be up to 65 feet. Mature pines can be up to 120 feet. It depends what's there.

MS. DORE: Could you identify the Sheet
number, please?

MR. REIMERS: The Sheet number is 12.

MS. DORE: Thank you.

BY MR. REIMERS:

A (Bradstreet) So I guess I could say the project has information on it, but I don't have it available to me.

Q I'm sorry?

A (Bradstreet) The Project has information related to the height of the trees, but I don't have it available to me.

Q Okay. And then as the right-of-way approaches Coleman State Park, you've got a tower here that would be 90 feet, 70 feet, 90 feet, 85 feet, 80 feet?

A (Johnson) Correct.

Q 90 feet, 85 feet, 75 feet, 75 feet. Is that correct?

A (Johnson) Yes.

Q And then the route continues along on towers of 90 to 85 feet or so through Stewartstown and continues, and it comes relatively close to two additional sections of Coleman State Park. Is that right?
A (Bradstreet) Yes.

Q And here is the boundary between Stewartstown and Dixville. Do you see that?

A (Bradstreet) I do.

Q And the heights of the towers in this general vicinity are 85 feet, 90 feet, 130 feet and 130 feet?

A (Bradstreet) Correct.

MR. REIMERS: Hard wire, please.

Q So we were just looking at towers in the vicinity of Coleman State Park, and this is from Mr. DeWan's report. It's the existing conditions. And is that photo taken from within Coleman State Park?

A (Bowes) Yes, I believe it is.

Q And you obviously don't see the towers in that photograph. In this photo simulation, do you see the towers?

A (Bowes) Yes, I do.

Q And this is what he calls the "normal view" photograph. And then, again, do you see the towers in that photo simulation?

A (Bowes) Yes, I do.

Q Would you expect that those are some of the
towers that we just went through the heights of?

A (Bowes) Yes.

Q In this view from Coleman State Park the towers would be realistically well above the tree line, wouldn't they?

A (Bowes) Yes.

Q So in this location, going to Mr. Johnson's example, is not filled with 120-foot maples; is that correct?

A (Johnson) Pine trees, but yes.

Q Pine trees. That would be a tall maple.

A (Johnson) Yes, it is not.

Q And from this view of Coleman State Park, the Northern Pass towers and line would be silhouetted against the sky?

A (Bowes) I guess I can agree to that. I'm not sure what your definition of silhouetted is. In the background? Certainly. You can see the sky beyond it.

Q And as the Construction Panel who would oversee the construction of this Project, does this look like an accurate depiction of what you intend to construct?

A (Bowes) Yes. This is one area where we, I
actually talk about it in my Supplemental Prefiled Testimony as well where we attempted to acquire additional land rights to take it off the ridgeline but were unable to do that.

MS. DORE: Could you please identify what we're looking at?

MR. REIMERS: That is Appellant's 1, Appendix 17, and it is pages I-34 through I-37.

MS. DORE: Thank you.

BY MR. REIMERS:

Q The next municipality after Stewartstown is the unincorporated place of Dixville; is that right?

A (Bowes) Yes.

Q And 9.1 miles of the proposed route would run through Dixville?

A (Bowes) Sounds accurate, yes.

Q And all overhead, right?

A Correct.

Q And all in a newly cut 120-foot right-of-way?

A (Bowes) I think that's correct. Yes.

Q And is it still true that the heights of the towers in Dixville would range from 70 to 130 feet in height?

A (Johnson) If you took that from the plans, then
they have not changed.

Q And then after Dixville, the next municipality is the incorporated place of Millsfield; is that right?

A (Johnson) Correct.

Q And in Millsfield, you're proposing 9 miles of overhead line in a newly cut 120-foot right-of-way?

A (Johnson) Sounds about right.

Q And there would be 80 towers in Millsfield?

A (Johnson) I believe you. Subject to check, yes.

Q And the heights of the towers in Millsfield would be 65 feet to 105 feet in height?

A (Johnson) Again, subject to check but sounds about right.

Q And if the Project maps show that only four of those 80 towers would be 65 feet in height, would you agree?

A (Johnson) Sounds about right. Yes.

Q And if the Project map showed that 46 of the 80 towers would be 80 feet tall or taller, would that be correct?

A (Johnson) Again, subject to check but seems reasonable.
Q The next town is Dummer. Is that right?
A (Johnson) Correct.
A (Bradstreet) Yes.
Q And the Northern Pass would run for a total of 8.9 miles through Dummer?
A (Johnson) That sounds about right.
A (Bowes) Yes.
Q And the first six miles would be a newly cut 120-foot right-of-way?
A (Johnson) Correct.
Q And the second section in the south of Dummer would be a 2.9-mile section where there is an existing right-of-way currently occupied by 115 kV transmission line?
A Yes.
Q Is that kV line a transmission line or a distribution line?
A (Bowes) It's a transmission line.
Q And in Dummer, the new Northern Pass towers would range in height from 70 to 135 feet in height?
A (Johnson) Subject to check, again, sounds reasonable.
Q Beginning where the new right-of-way would meet
the existing right-of-way, well, the current
right-of-way in that 2.9 miles in the south,
that's 150 feet wide?
A (Bradstreet) Yes.
Q How much of that 150 foot right-of-way is
currently cleared?
A (Bradstreet) I believe in general the majority
of it, but we'd have to double check, and it's
also case by case.
Q Will there be additional clearing along that
right-of-way?
A (Bradstreet) I believe there will be additional
clearing, probably more in the line of trimming
for the majority of it. Maybe some tree
clearing, cutting.
Q Is that because the majority of it is already
cleared?
A (Bradstreet) It looks to be, yes.
A (Bowes) Looks like the trimming and tree
clearing would be on the southern portion of
that right-of-way.
Q In the existing right-of-way with the 115 kV
line, what are the heights of the existing
towers?
A (Bowes) So it's a horizontal H-frame construction so probably in the 43 to 50?

A (Bradstreet) I would say 40 to 50 feet probably is the most common. There could be taller.

Q So 40 to 50 feet that would be taller, excuse me. That would be shorter than, for example, the 60-foot tree that Mr. Johnson referred to when I asked about tree line?

A (Bradstreet) Yes.

Q So that, would you agree that the existing 115 kV line in Dummer is below the tree line?

A (Bradstreet) If the tree line is 60 feet, then yes.

Q In Dummer, are you aware of the actual tree line height?

A (Bradstreet) Not currently.

A (Bowes) There are also some open areas in Dummer as well so there's no tree line, but in general I would say that's probably accurate, 60 feet.

Q The relocated line that is currently on towers 40 to 50 feet in height would be on towers ranging from 74.5 to 106 feet in height, is that correct, if the Project maps provide that information?
A (Bradstreet) That sounds right.

Q So where the Northern Pass and the rebuilt 115 kV line would coexist, there would be two transmission lines with the relocated 115 kV line as high as 106 feet and the Northern Pass as high as 135 feet whereas now there is no tower in that right-of-way taller than 50 feet; is that correct?

A (Bradstreet) The numbers for the proposed sound correct. We'd have to double check on the tallest structure for the existing line, but it's in the range of 40 to 50 feet probably.

Q So after Dummer the next town is Stark. Is that correct?

A (Bradstreet) Yes.

Q And the Northern Pass would run for 8.5 miles through Stark?

A (Bradstreet) I think that's right.

Q And the entire way currently has the 115 kV line?

A (Bradstreet) Yes.

Q And those existing towers, do they range from 40 to 50 feet?

A (Bradstreet) They would be similar, yes.
Q: If the tree line was 60 feet, they would be below the tree line?
A: (Bradstreet) I would agree.
Q: How wide is the existing right-of-way in Stark?
A: (Bradstreet) It's the same 150 feet.
Q: Would you agree that it's like your answer to the prior town, the majority of it is cleared?
A: (Bradstreet) I believe so. Yes.
Q: And there will be additional clearing?
A: (Bradstreet) Select. Yes.
Q: And the relocated kV line that's currently on towers of 40 to 50 feet would be on towers ranging from 74.5 to 110.5 feet?
A: (Bradstreet) That sounds accurate.
Q: So even the lowest new 115 kV tower would be approximately 24 and a half feet taller than the tallest existing tower?
A: (Bradstreet) Assuming the tallest existing structure is 50 feet. Yes. We'd have to check that.
Q: And the Northern Pass towers would range from 70 feet to 130 feet in height?
A: (Bradstreet) Sounds correct.
Q: In Stark, the right-of-way traverses several
conservation areas, doesn't it?

A (Bradstreet) I believe so. Yes.

PRESIDING OFFICER HONIGBERG: Off the record.

(Discussion off the record)

MR. REIMERS: ELMO, please.

BY MR. REIMERS:

Q This is Sheet 42 of Appellant's 2, Attachment 2. I just asked you about conservation areas in Stark. Looking at Sheet 42, the Northern Pass would go through the Nash Stream Forest; is that correct?

A (Bradstreet) Yes.

Q And that's a State Forest, isn't it?

A (Bradstreet) Yes. I believe so.

Q Proposed or relocated structures would be as high as 92.5 feet through the Nash Stream Forest, is that right?

A (Bradstreet) Subject to check, that's what it looks like, yes.

Q What is the tallest tower currently in the Nash Stream Forest? In this particular right-of-way, obviously.

A (Bowes) Just a minute. They range from 43 to 47
and a half. I believe 47 and a half is the highest.

Q And you had just said that the proposed or relocated structures would be as high as 92 and a half feet?

A (Bradstreet) Yes. I don't believe that's correct.

Q And after the Nash Stream Forest, the next conservation area that the Project would go through is labeled on Sheet 43 as the Yankee Forest Tract. Do you see that?

A (Bradstreet) I do.

Q Are you aware that that's owned by the Forest Society?

A (Bradstreet) Not specifically but yes.

Q Is anyone on the panel aware that that's owned by the Forest Society?

A (Bowes) I believe it is. Yes.

Q And are you aware that this is part of what's referred to as the Kauffmann Forest?

A (Bowes) Kauffmann. Yes. There's several tracts here that are in the Kauffmann Trust.

Q Correct. What is the tallest tower currently on the Yankee Forest section?
A (Bowes) Looks like it ranges from 47 and a half to 52, 52 being the tallest structure.

Q And the proposed structures associated with the Project range from 70 to 97 feet in height?

A (Bradstreet) Yes, looks like the proposed Northern Pass line is between 70 and 80, and the relocated line is between 75 and 97.

Q So in that area, the relocated line is significantly taller than the Northern Pass.

A (Bradstreet) In certain cases it looks like it is, yes.

Q And after the Yankee Forest Tract, the right-of-way goes along the Lamphere Tract? Is that correct?

A (Bradstreet) That looks correct. Yes.

Q Are you aware that the Lamphere Tract is part of the Kauffmann Forest which is owned by the Forest Society?

A (Bowes) Yes.

Q And in the Lamphere Tract, if the Project maps are correct, the heights of proposed towers would range from 80 to 101.5 feet in height; is that correct?

A (Bradstreet) You said 80? All I'm seeing is 85
to 101.5, and I guess I would point out that all those structures are not on that tract, but --
Q Correct. Continues over to here.
A (Bradstreet) Okay. Then yes, you're right.
Q And then the next conservation area affected by the right-of-way would be the Percy Lake Club conservation easement?
A (Bradstreet) Yes.
Q Are you aware that that conservation easement is held by the Forest Society?
A (Bradstreet) Yes.
MS. DORE: It's Sheet number?
MR. REIMERS: Sheet number 44.
MS. DORE: Thank you.
BY MR. REIMERS:
Q And then after the Percy Summer Club easement, the right-of-way enters what's labeled as the Damiani Tract; do you see that?
A I see it, yes.
Q Are you aware that that tract is owned by the Forest Society as part of the Kauffmann Forest?
A (Bradstreet) Sounds right.
Q What is the tallest tower currently on the Damiani Tract?
A (Bowes) Looks like 52 feet.
Q And what you propose for that tract range from 75 feet to 100 feet; is that correct?
A (Bradstreet) Looks like 70 to 100, but yes. There's one right to your left. Oh, sorry. That's on the other tract.
Q Correct.
A (Bradstreet) Yes. 75 to 100.
Q And then the right-of-way enters Percy State Forest?
A (Bradstreet) Correct.
Q And in Percy State Forest there would be 8 either Northern Pass or relocated 115 kV lines; is that correct?
A (Bradstreet) That looks correct. Yes.
A (Bowes) I think structures you mean as well.
Q What did I say?
A (Bowes) You said lines.
Q Yes. I meant structures. And the proposed structures would range in height from 88 feet to 115 feet in height?
A (Bradstreet) That looks correct, yes.
Q What is the tallest tower currently in Percy State Forest along this right-of-way?
Q And if the tree line were 60 feet, the existing
line would be below the tree line; is that
right?

A (Bradstreet) That is correct.

Q And if the tree line were 60 feet, the proposed
towers with the lowest being 88 feet would be
all above the tree line; is that right?

A (Bowes) That is correct.

A (Bradstreet) I guess define all above. The
portion would be above. The difference.

Q They would rise above the tree line; is that
correct?

A (Bradstreet) Parts would. Yes.

Q And then the right-of-way enters what is labeled
on the map as the Kauffmann Tract? Is that
correct?

A (Bradstreet) Yes.

Q That is Sheet 45. And what is the tallest tower
currently in this Kauffmann Tract?

A (Bradstreet) 52 feet.

Q And the proposed towers would range in height
from 80 feet to 110 feet, is that right?

A (Bradstreet) That looks correct.
Q And there would be 24 Northern Pass or relocated 115 kV towers in this Kauffmann Tract; is that right?

A (Bradstreet) Sounds right, but I can't see the other piece of it. If you pulled it off, then yes. I see 20 on the map that you've shown.

A (Bowes) On our maps we show it as a parcel in between.

Q Rather than trying to sort out of maps now --

A (Bradstreet) I'll take your word for it.

Q We'll move on.

MR. REIMERS: I'm ready to stop.

PRESIDING OFFICER HONIGBERG: I suspect you're not the only one.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: So we'll end the day today. Let's go off the record for a second.

(Discussion off the record)

PRESIDING OFFICER HONIGBERG: So we'll adjourn now. We'll reconvene at 9 o'clock tomorrow morning.

(Hearing recessed at 5:00 p.m.)
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 3rd day of May, 2017.

___________________________
Cynthia Foster, LCR